



EU-JAPAN CENTRE FOR INDUSTRIAL COOPERATION

CERAMIC Products Market in Japan

Tableware, Wall & Floor Tiles, Bio-ceramics

Challenges and Opportunities for European Companies

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Executive Summary

This Report provides to potentially interested European companies some useful information on the Japanese ceramic market, with a main focus on Ceramic Tableware, Wall and Floor Tiles and Bio-ceramics..

Chapter1 “Trade Trends” is intended to draw a general picture of all ceramics traded in Japan during the last six years (2010 – 2015), by analyzing the imports and local production of each group of products (Tableware; Wall & Floor Tiles; Sanitary-ware; Fine Ceramics; Refractory goods).

Chapter2 “Tableware” is treated from the Consumer Goods perspective as many aspects can be extrapolated, especially to other interior design products; *Chapter2.1*. “Market Overview & Trends” can deepen the understanding of the Japanese consumers` buying behavior and their expectations regarding the products.

Chapter3 “Construction and Housing” is presenting the new trend in Japanese consumers` behavior: their tendency to choose re-housing instead of the traditional “new house for a new family”, trend that is also influencing the choice of construction materials.

Chapter4 “Bio-ceramics” is dedicated to a small part of the technical ceramic market, a promising sector with new technical developments, studying in detail the Dental Implants Market (*Chapter4.1*) and the Joint Replacement Implants Market (*Chapter4.2*). The market demand for these products is on an ascending trend in Japan since the aging society factor.

All three chapters (2, 3 and 4) also include other trade related aspects like: Regulations, Labeling, Distribution, Retail and Promotion in order to provide a complete understanding on the subjects. The Key Players chapters are intended to add value by the power of example; helping the producers to decide which products are best suited for the Japanese market in terms of what novelty they can bring in.

The final part presents a number of recommendations focusing on business practicalities, such as choosing a suitable location in a Japanese city, adapting the products to the market and finding Japanese partners.

.This Report is based on existing open sources of information, interviews, seminars and it has a non-exhaustive character, its main ambition to support European companies interested in Japanese market.

List of Abbreviations

B2B = Business to Business
B2C = Business to Consumer
BL = Better Living Labeling System
BU = Business Unit
Ce/PE = Ceramic-on- Plastic
Ce/Ce = Ceramic-on-Ceramic
D-MAH = Designated Marketing Authorization Holder
FAP = Foreign Average Price
FY = Fiscal Year
GMP = Good Manufacturing Practices
GOJ = Government of Japan
GQP = Good Quality Practices
GRP = Glass Reinforced Plastic
GVP = Good Vigilance Practices
HORECA = Hotel/Restaurant/Café
IPSS = the National Institute of Population and Social Security
JFCC = Japan Fine Ceramic Center
JIS = Japanese Industrial Standards
JNTO = Japan National Tourism Organization
MAH = Marketing Authorization Holder
Me/PE = Metal-on-plastic
MHLW = Ministry of Health, Labor and Welfare
MLIT = Ministry of Land, Infrastructure, Transport and Tourism in Japan
Me/Me = Metal on Metal
OEM = Original equipment manufacturer (a company that makes another company's branded products)
PAL = Pharmaceutical Affairs Law
PHM = Prefabricated Housing Manufacturers
PMDA = Pharmaceuticals and Medical Act
PMDL = Pharmaceuticals and Medical Devices Law
THA = Total Hip Arthroplasty
TKA = Total Knee Arthroplasty
UHMWPE = Ultra High Molecular Weight Polyethylene

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Introduction

Definition:

Ceramic is an inorganic, non-metallic, hard brittle material, containing metal or nonmetal compounds that have been shaped and then hardened by heating to high temperatures. Most ceramics are crystalline and poor conductors of electricity, though some recently discovered copper-oxide ceramics are superconductors at low temperatures.

The earliest known ceramics made by humans were pottery objects and figurines date from 27,000 years ago; there were made of clay or clay mixed with silica, then hardened and sintered in fire.

Later ceramics were glazed before being fired, in order to create a smoother, colored surface and to decrease its porosity through the use of ceramic coatings on top of the crystalline ceramic substrates.

Nowadays, ceramics include a wide variety of products of domestic, industrial and construction use, including artistic objects. In the 20th century, new ceramic materials were developed to be used in advanced ceramic engineering; the research and development processes are still continuing¹.

Properties:

The following properties of ceramic materials make them useful for engineering applications:

- high melting temperature;
- high hardness, low ductility;
- completely resistant to oxidation even at high temperature;
- poor conductivity in general, with some exceptions;
- high modulus of elasticity;
- high resistant to all chemicals and organic solvents (glazed porcelain ceramics is used for chemical vessels).

Classification by Applications²

With its wide range of applications, from construction to consumer goods, industrial processes and high-tech technologies, the ceramic industry consistently develops innovative and high-value solutions that improve the quality of life and facilitate vital progress in downstream sectors.

¹ <http://materialsscience.conferenceseries.com/europe/events-list/ceramics-polymers-and-composite-materials>

² <http://cerameunie.eu/ceramic-industry/applications/>

Type of products

Products used in Construction and Housing

Ceramic-based building materials have an average service life of over a century and enhance energy efficiency and thermal comfort in all climates; they are resilient to corrosion and versatile, playing a fundamental role in the construction and housing sectors.

- Wall and floor tiles
- Bricks and roof tiles
- Vitrified clay drainage pipes
- Sanitary ware

Consumer Goods

- Tableware and ornamental ware
- Household appliances (Ceramic-coated frying pans, Ceramic water filters...)

Products with Industrial Applications

The ability of ceramics to withstand extremely high temperatures, as well as their durability, strength and non-corrosive properties, make them essential for a number of specific applications required in metallurgical processes, glass production and many other key processes across all industries.

- Abrasives
- Refractories (essential for all high-temperature industrial processes, they provide mechanical strength, protection against corrosion and thermal insulation)
- Porcelain enamel (it is a high tech coating, that shares many characteristics with ceramics; ceramic glazes are used to coat clay while porcelain enamel is used to coat metal products such as hot water tanks, appliances, pots, pans and sanitary-ware)

Technical ceramic products

- Healthcare (Medical, laboratory and pharmaceutical instruments as well as ceramic components)
- Electronics (Ceramic heat-sinks provide the perfect climate for high-power electronics, while ceramics' electrical insulation properties allow them to be used in microchips, circuit boards and circuit breaker technology)
- Security and transport (high thermal insulation and wear-resistant properties)
- Renewable technologies

Coverage

This report covers the trade trends for all groups of ceramic products in one chapter, and the Tableware, Wall & Floor Tiles, Sanitary-ware and a small part of the Technical Ceramics - Bio-ceramics in more details, in three separate chapters: Tableware, Construction & Housing and Bio-ceramics.

Figure1. HS Codes and their description

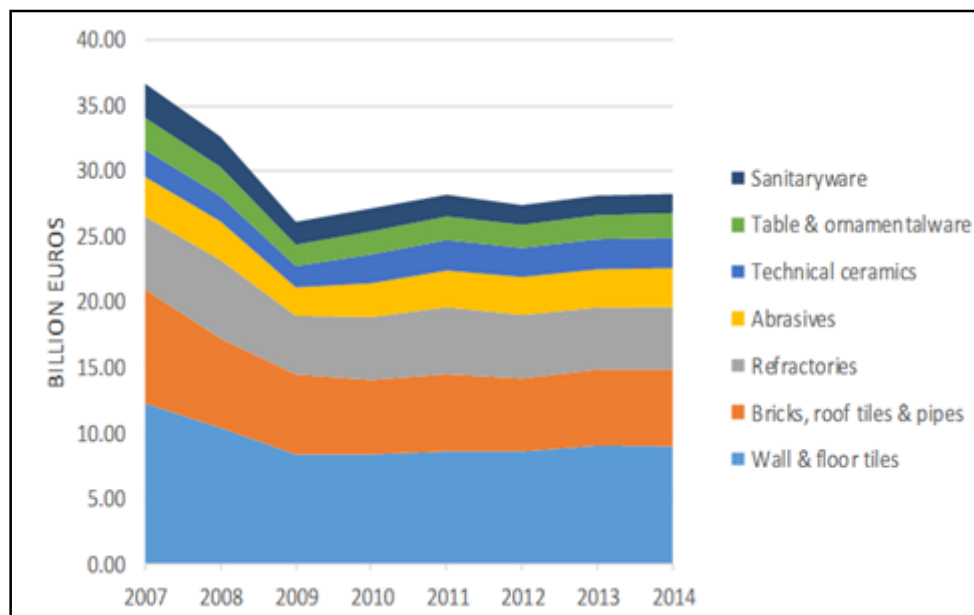
Item	HS code	Description
Tableware	6911	Tableware, kitchenware, other household articles and toilet articles, of porcelain or china.
	6912	Ceramic tableware, kitchenware, other household articles and toilet articles, other than of porcelain or china.
	6913	Statuettes and other ornamental ceramic articles.
Wall&Floor Tiles	690710	Unglazed Ceramic Tiles, Cubes and Similar Articles
	690790	Unglazed Ceramic Flags
	690810	Glazed Ceramic Tiles, Cubes and Similar Articles
	690890	Glazed Ceramic Flags
Brick&Roof Tiles	690410	Ceramic Building bricks
	690490	Ceramic Flooring Blocks, Support or Filler Tiles and the Like
	690510	Ceramic Roofing tiles
	690590	Cowls, Architectural Ornaments, Other Ceramic Constructional Goods
Clay pipes	690600	Ceramic pipes, conduits, guttering and pipe fittings
Sanitaryware	691010	Ceramic sinks, washbasins, wash-basin pedestals, baths, similar sanitary fixtures, of porcelain or china
	691090	Other sanitary fixtures
Technical ceramics	690911	Ceramic wares for laboratory, chemical or other technical uses , of porcelain or china
	690919	Other Ceramic wares for laboratory, chemical or other technical uses
	690990	Other Ceramic Troughs, Tubs for Agricultural Uses; Ceramic Pots for Packing
Refractories	381600	Refractory Cements, Mortars, Concretes and Similar Compositions
	690100	Bricks, blocks, tiles and other ceramic goods of siliceous fossil meals or similar siliceous earths
	690210	Refractory bricks, blocks, tiles, containing by weight, singly or together, more than 50% of the elements magnesium, calcium, or chromium, expressed as MgO, CaO or Cr2O3
	690220	Refractory bricks, blocks, tiles Containing by weight more than 50% of alumina (Al2O3), of silica (SiO2) or of a mixture or compound of these products:
	690290	Other Refractory bricks, blocks, tiles
	690310	Refractory ceramic goods, Containing by weight more than 50% of graphite or other forms of carbon or of a mixture of these products
	690320	Refractory ceramic goods, Containing by weight more than 50% of alumina (Al2O3) or of a mixture or compound of alumina and of silica (SiO2)
	690390	Other refractory ceramic goods , Containing by weight more than 50% of alumina (Al2O3) or of a mixture or compound of alumina and of silica (SiO2)
Abrasive	680410	Millstones and grindstones for milling, grinding or pulping
	680421	Other millstones, grindstones, grinding wheels and the like, Of agglomerated synthetic or natural diamond
	680422	Other millstones, grindstones, grinding wheels and the like, Of other agglomerated abrasives or of ceramics
	680423	Other millstones, grindstones, grinding wheels and the like, Of natural stone
	680430	Hand sharpening or polishing stones
	680510	Natural or artificial abrasive powder or grain, On a base of woven textile fabric only
	680520	Natural or artificial abrasive powder or grain, On a base of paper or paperboard only
	680530	Natural or artificial abrasive powder or grain, On a base of other materials

1. TRADE TRENDS

1.1. E.U. Ceramic Production

E.U. total ceramic production is worth 28 million Euro, approximately 23% of the global industry; with the biggest amount produced by “Wall & Floor Tiles” field, as we can see in Figure2. The biggest quantity of ceramic exported to Japan is falling into the same category: “Wall & Floor Tiles”, with a total quantity of 505.496 metric tons in 2014.

Figure2. E.U. Ceramic Production by Value (2007-2014)



Source: Cerame Unie

The E.U. ceramics industry is a world leader in producing unique design of high quality ceramic products, such as “Wall and Floor Tiles”, “Sanitary-ware” or “Tableware” items; most manufacturers are small and medium-sized enterprises (SMEs).

Concerning potential markets for ceramics, high weight products of low price, like “Bricks and Roof Tiles” usually stay in local or regional markets, while “Tableware” and “Wall & Floor Tiles” are traded over long distances; around 30% of the output of tableware and tiles is exported outside E.U. The E.U.’s biggest export markets for ceramic products are USA, Russia and Japan, while 70% of all imports are from China, followed by USA and Thailand³.

The main challenges for E.U. ceramic industry are:

- competition in mass volumes of low-cost products (tableware) from emerging economies;
- high energy prices and reliance on raw materials from non-EU producers;
- lifestyle changes and substitution by other products;
- trade barriers such as tariffs or testing and certification schemes.

³ http://ec.europa.eu/growth/sectors/raw-materials/industries/non-metals/ceramics/index_en.htm

1.2. E.U. Ceramic Exports to Japan

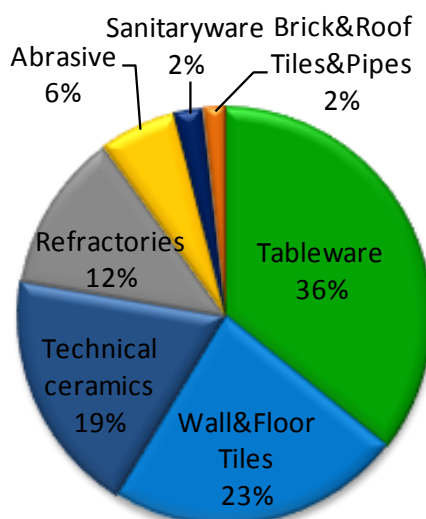
E.U. export of ceramic products to Japan slightly increased during the studied period (2010 to 2014) with 9% per total; the major increase was supported by “Wall & Floor Tiles” with 75% and “Sanitary-ware” with 78%, as the construction and re-housing market in Japan are set on an ascending trend. The “Sanitary-ware”, even if it shows a spectacular increase, it reflects only 2% of the total exports value.

The ceramic “Tableware”, despite a 23% increase by value until 2012, in 2014 returned to a similar value as in 2010 and maintained a 35% share of the total value of ceramics exported to Japan, while “Wall and Floor Tiles” grew from 13.9% share in 2010 to an almost double 22.4%.

Table1. EU Ceramic Exports to Japan by Value (2010-2014)

Item	Value in Euro	2010	2011	2012	2013	2014	2014		
							Share	'14/'13	'14/'10
Tableware	€59,411,620	€61,144,129	€73,288,699	€64,591,669	€59,851,751	35.6%	93%	101%	
Wall&Floor Tiles	€22,209,690	€25,465,750	€31,032,979	€33,620,856	€38,853,899	23.1%	116%	175%	
Brick&Roof Tiles&Pipes	€2,359,219	€2,722,067	€2,425,967	€2,462,793	€2,847,579	1.7%	116%	121%	
Sanitaryware	€2,021,310	€2,204,073	€2,496,320	€2,913,595	€3,594,614	2.1%	123%	178%	
Technical ceramics	€36,998,509	€48,640,969	€39,080,921	€34,007,864	€31,688,990	18.9%	93%	86%	
Refractories	€21,957,587	€30,740,231	€29,944,585	€19,482,818	€20,679,614	12.3%	106%	94%	
Abrasive	€8,320,312	€15,680,811	€16,630,890	€9,734,445	€10,375,197	6.2%	107%	125%	
Total	€153,278,247	€186,598,030	€194,900,361	€166,814,040	€167,891,644	100%	101%	110%	

Figure3. EU Ceramic Exports to Japan by Value (2014)



Source: Eurostat 2015

1.3. Japan Ceramic Production Quantity and Sales Value

Tableware

As almost everywhere in the world the ceramic tableware production in Japan has decreased significantly due to various factors, well known in the industry:

- the high costs of energy;
- the market is overflowed by imported mass low-cost products;
- the changing lifestyle.

Table2. Ceramic Tableware Production in Japan (2010-2014)

Tableware		2010	2011	2012	2013	2014	2014		
							Share	'14/'13	'14/'10
Quantity (tonnes)	Japanese style	48,562	44,379	47,314	47,730	40,887	72%	86%	84%
	Foreign style	19,284	21,061	15,259	14,246	13,765	24%	97%	71%
	Others	3,436	3,161	2,788	2,570	1,830	3%	71%	53%
	Total	71,283	68,601	65,362	64,546	56,482	100%	88%	79%
Value (mil.¥)	Japanese style	...	...	22,208	22,045	18,201	68%	83%	
	Foreign style	...	...	6,904	6,828	6,712	25%	98%	
	Others	...	...	1,679	2,046	1,686	6%	82%	
	Total	...	...	30,791	30,919	26,599	100%	86%	

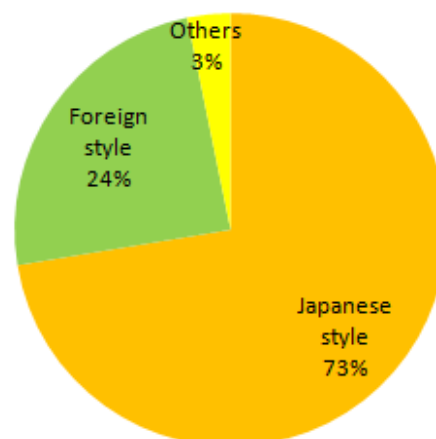
Source: Yearbook Ceramics Production 2014 METI

The production of Japanese styled ceramic Tableware could be described more as a pottery style; producers have less than 100 employees; their facilities are concentrated in areas with tradition in ceramic manufacturing.

This part of industry is also suffering from the effect of aging population: the decreasing interest of younger generation for the traditional products, their opening and curiosity for the foreign influences regarding food and consumers` interest in assorting foreign food with the ambient of serving it, including tableware products.

On the other hand all the biggest producers, like Noritake, Nikko, even with a long history of producing ceramic tableware, turned towards lowering their production costs by moving their facilities in other Asian countries with lower production costs.

Figure4. Ceramic Tableware Style, by Quantity Produced



Wall & Floor Tiles

The effects of construction trends can be seen in the tiles consumption evolution; as the demand for tiles increased the internal production of “facing tiles” by 27% during the studied period (2010-2014), the decrease by 15% of interior wall tiles production can be explained by the changing in beneficiaries` preferences for stylish imported tiles.

Table3. Ceramic Wall & Floor Tiles Production in Japan (2010-2014)

Tiles		2010	2011	2012	2013	2014	2014		
							Share	'14/'13	'14/'10
Production Quantity (SM)	Facing tiles (>50cm ²)	3,553,480	3,877,000	3,995,202	3,460,941	4,379,875	20%	127%	123%
	Interior wall tiles (>50cm ²)	2,781,029	3,057,987	2,619,837	2,392,747	2,368,814	11%	99%	85%
	Floor tiles (>50cm ²)	4,675,810	4,799,043	4,378,249	4,120,025	4,545,307	21%	110%	97%
	Mosaic tiles (>50cm ²)	10,089,942	11,814,673	12,825,876	11,274,603	10,375,361	48%	92%	103%
	Total	21,100,261	23,548,703	23,819,164	21,248,316	21,669,357	100%	102%	103%
Sales Value (mil.¥)	Facing tiles (>50cm ²)	15,597	15,220	15,829	14,102	16,666	34%	118%	107%
	Interior wall tiles (>50cm ²)	6,817	5,914	5,828	5,829	6,017	12%	103%	88%
	Floor tiles (>50cm ²)	12,450	9,125	9,763	9,239	8,749	18%	95%	70%
	Mosaic tiles (>50cm ²)	11,511	12,527	15,302	14,784	17,022	35%	115%	148%
	Total	46,376	42,786	46,722	43,955	48,454	100%	110%	104%

Figure5. Ceramic Wall & Floor Tiles Type, by Quantity (m²) (2010-2014)

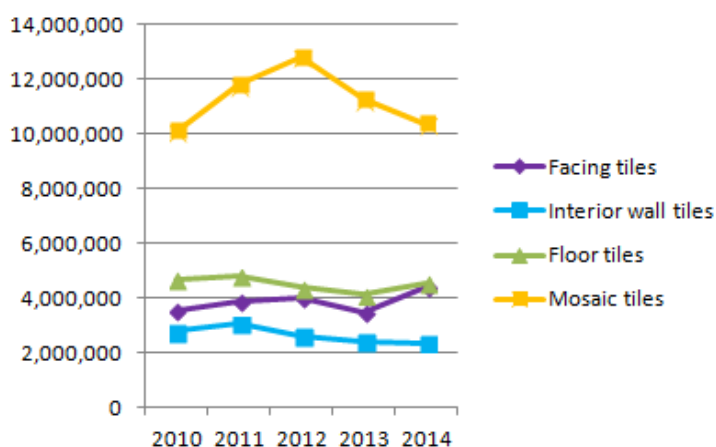
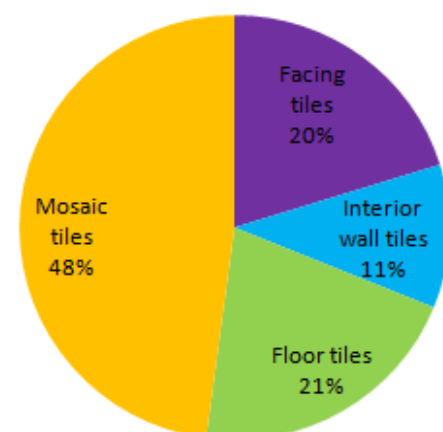


Figure6. Wall & Floor Tiles Type, by Quantity % (2014)



Source: Yearbook Ceramics Production 2014 METI

Sanitary ware

The production of “Sanitary-ware” remained almost unchanged, as the preferences of local consumers remained unaffected, with very little chance of foreign products to overcome the well known Toto products.

Table4. Sanitary ware Production in Japan (2010-2014)

Sanitaryware	2010	2011	2012	2013	2014	'14/'13	'14/'10
Production Quantity (items)	4,739,087	5,214,056	4,845,382	4,795,424	4,841,938	101%	102%
Sales Value (thou.¥)	50,306,857	53,150,622	54,965,781	52,942,028	50,038,075	95%	99%

Source: Yearbook Ceramics Production 2014 METI

Fine Ceramics

As the fine ceramics is considered to be a super material with yet unexplored potential, in Japan the explored potential is mostly seen in the area of technical ceramics developed for functional use, manifested through a continuous growth of 28% by quantity in the studied period (2010 – 2014) (33% if we consider the information for 2015, 32.478.290 thou. items).

Figure7. Fine Ceramics
Production Sales Value (2014)

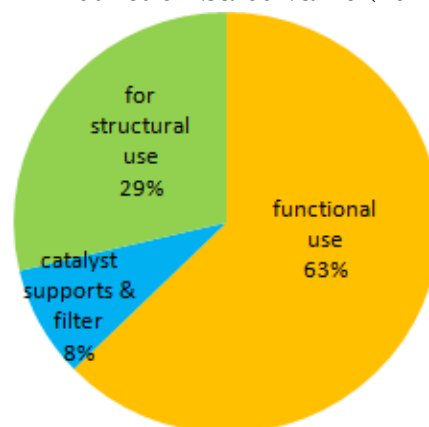


Table5. Fine Ceramics Production in Japan (2010-2014)

Fine Ceramics		2010	2011	2012	2013	2014	2014		
							Share	14/13	14/10
thou. Items	for circuits use	10,434,497	9,336,645	8,611,661	10,676,035	10,879,965	35%	102%	104%
	ceramic substrates	5,966,243	5,627,462	7,804,287	6,836,014	8,562,079	27%	125%	144%
	piezoelectric devices	7,207,929	7,623,789	8,803,245	9,446,751	10,827,004	35%	115%	150%
	gas sensor devices	207,095	230,379	207,082	425,241	451,151	1%	106%	218%
	bioceramics	...	199	205	255	268	0%	105%	
	other	543,209	472,451	415,366	392,824	422,835	1%	108%	78%
Total (for functional use)		24,358,973	23,290,925	25,841,846	27,777,120	31,143,302	100%	112%	128%
kg	catalyst supports&filter	15,189,959	15,773,070	16,571,615	15,316,878	15,310,380	...	100%	101%
thou. items	heat-resisting materials	405,841	357,024	357,748	350,788	320,963	24%	91%	79%
	tools	61,232	76,419	76,976	76,903	88,191	7%	115%	144%
	wear & corrosion resisting materials	678,542	669,494	644,719	572,165	644,699	48%	113%	95%
	other materials	333,835	247,178	264,480	280,788	287,851	21%	103%	86%
	Total (for structural use)	1,479,450	1,350,115	1,343,923	1,280,644	1,341,704	100%	105%	91%
Sales Value (mil.¥)	for circuits use	128,544	113,395	117,317	120,425	126,156	31%	105%	98%
	ceramic substrates	16,522	16,712	13,657	13,198	14,519	4%	110%	88%
	piezoelectric devices	110,562	100,358	88,543	97,980	121,250	30%	124%	110%
	gas sensor devices	121,986	117,954	123,010	121,728	121,356	30%	100%	99%
	bioceramics	...	5,495	5,368	5,464	6,044	2%	111%	
	other	16,244	14,284	11,595	11,920	12,330	3%	103%	76%
	Total (functional use)	393,858	368,198	359,490	370,715	401,655	100%	108%	102%
	catalyst supports&filter	48,234	48,893	46,482	51,130	54,989	...	108%	114%
	heat-resisting materials	20,132	19,490	20,505	21,695	25,961	14%	120%	129%
	tools	23,213	26,730	26,212	28,927	33,829	18%	117%	146%
	wear & corrosion resisting materials	42,644	45,429	40,545	40,672	44,115	24%	108%	103%
	other materials	20,822	20,105	18,933	20,949	24,812	14%	118%	119%
	Total (structural use)	155,045	160,647	152,677	163,373	183,706	70%	112%	118%
General Total		597,137	577,738	558,649	585,218	640,350	...	109%	107%

Refractory

Table6. Refractory goods production in Japan (2010-2014)

Refractory		2010	2011	2012	2013	2014	2014		
							Share	14/13	14/10
Quantity (tones)	refractory bricks	379,441	378,061	347,804	341,445	350,988	32%	103%	93%
	monolithic refractories	724,134	717,017	714,605	711,651	734,595	68%	103%	101%
	Total	1,103,575	1,095,078	1,062,409	1,053,096	1,085,583	100%	103%	98%
Value (mil.¥)	refractory bricks	106,976	102,648	96,253	91,188	94,936	56%	104%	89%
	monolithic refractories	75,466	74,265	72,517	71,028	73,483	44%	103%	97%
	Total	182,442	176,913	168,770	162,216	168,419	100%	104%	92%

1.4. Japan Ceramic Imports by Quantity and Value (2010-2015)

Table7. Imports by Quantity per group of products

H.S. code	Item	Unit	2010	2011	2012	2013	2014	2015	15/`10
6911	Porcelain	T	38,323	41,095	39,888	41,153	31,677	31,459	82%
6912 6913	Ceramic	T	36,919	35,136	32,906	27,529	30,331	27,063	73%
6907;6908	Wall&Floor Tiles	SM	11,686,466	14,109,866	16,365,837	14,985,665	18,186,652	17,223,791	147%
6904;6905;6906	Brick&Roof Tiles&Pipes	MT	65,891	59,985	52,363	39,948	39,319	33,878	51%
6910	Sanitaryware	T	31,022	38,015	39,380	38,417	51,318	44,784	144%
6909	Technical ceramics	T	10,115	13,325	11,485	9,523	14,033	13,817	137%
6901;6902	Refractory Bricks&Tiles	MT	275,607	230,443	177,568	113,755	138,361	177,909	65%
6903	Other Refractory goods	T	5,718	6,664	5,378	4,397	4,174	4,413	77%
3816	Refractory compounds	T	63,444	61,002	68,341	55,426	56,583	40,692	64%
6804;6805	Abrasive	T	11,173	11,349	12,100	9,293	11,929	11,611	104%

Table8. Imports by Value (mil Yen) per group of products

H.S. code	Item	2010	2011	2012	2013	2014	2015	15/`14	15/`10
6911	Porcelain	14,555	15,402	16,122	19,152	18,596	18,990	102%	130%
6912 6913	Ceramic	11,540	11,219	11,389	13,372	14,315	14,125	99%	122%
6907;6908	Wall&Floor Tiles	12,502	14,130	17,224	18,918	25,416	26,697	105%	214%
6904;6905;6906	Brick&Roof Tiles&Pipes	1,871	1,703	1,466	1,484	1,428	1,529	107%	82%
6910	Sanitaryware	6,651	8,139	8,122	8,793	12,998	14,076	108%	212%
6909	Technical ceramics	21,336	24,426	21,172	25,146	39,621	36,784	93%	172%
6901;6902	Refractory Bricks&Tiles	25,827	22,777	20,207	13,176	15,709	20,444	130%	79%
6903	Other Refractory goods	3,818	3,204	3,243	3,370	3,700	4,353	118%	114%
3816	Refractory compounds	3,701	3,725	4,177	4,248	4,167	3,458	83%	93%
Total refractory goods		33,346	29,706	27,627	20,794	23,576	28,255	120%	85%
6804;6805	Abrasive	10,925	10,685	11,237	10,819	14,463	14,582	101%	133%

Source: e-Stat (Statistics Japan) Trade Statistics Data by all Customs

Tableware

Even if, in terms of imported quantity, both porcelain and non-porcelain (earthenware, stoneware) products categories decreased during the studied period, the value of these imported “Tableware” increased significantly, not as value per quantity, but as a change in the types of products imported; the demand shifted towards more valuable items, branded products with special shapes, unusual patterns, combination of colors.

Wall & Floor Tiles

The imported quantity of tiles in Japan increased by 47%, despite a minor 5% setback in 2015 compared to 2014. The general trend is ascending as the total value of the imported goods continued to grow unhindered, to a more than double value over the past 6 years.

Sanitary ware

The sanitary goods followed the trend of wall and floor tiles, increasing by 44%, with similar growth and setback related to the imported quantity, 13% in 2015 vs. 2014, with also more than a doubled value.

Technical ceramics

As the material is given more and more functions the quantity of imports grew by 37 %, while their value grew by 72% during the studied period.

Refractory goods

The value of imported refractory goods declined by 15% in 2010 vs. 2015, although it was on an ascending trend for the last two years (2014 – 2015), with a 20% growth of imported value in 2015 compared to 2014.

1.5. Japan Ceramic Imports by Place of Origin

Tableware: Porcelain

For porcelain tableware, China is the major source of imports with 88% of total imported quantity and 63% of the total imported value in 2015, followed by other Asian countries like Thailand, Indonesia and Sri Lanka. E.U. countries such as Germany, UK, France, Finland and Italy are claiming a rather large share of the imports value as the products bear notorious brand-names.

Table9. Main places of origin of porcelain (2015)

Country	Value thou.¥)	Share	Country	Value thou.¥)
Germany	904,708	24.3%	China	11,893,465
UK	792,119	21.2%	EU	3,728,436
France	512,461	13.7%	Thailand	1,376,695
Finland	488,053	13.1%	Indonesia	886,133
Italy	448,146	12.0%	Sri Lanka	857,079
Hungary	350,438	9.4%	others	248,180
others	232,511	6.2%	Total	18,989,988
Total	3,728,436	100%		

Figure8. Share of importers, by place of origin (2015)

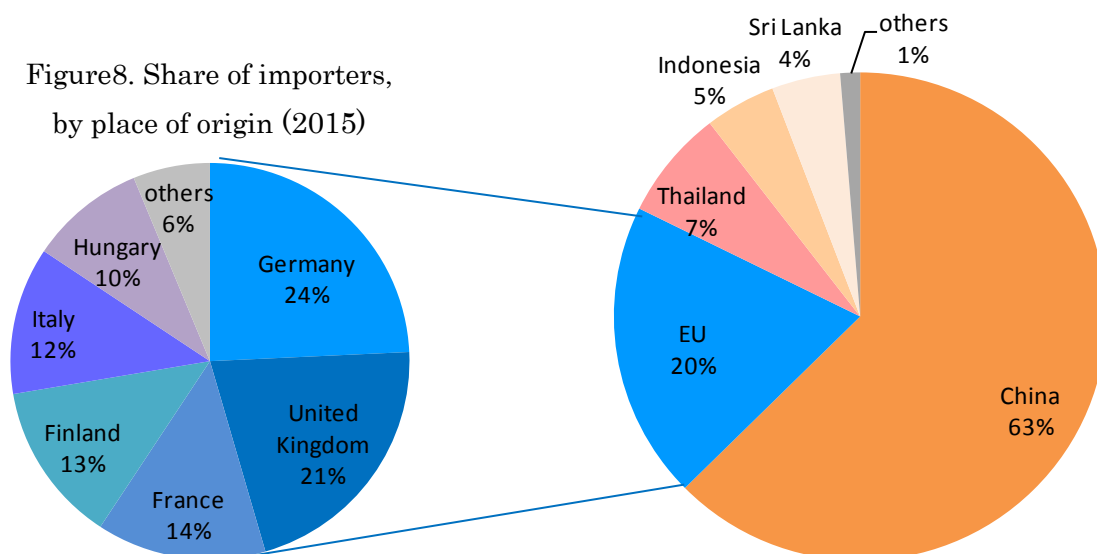
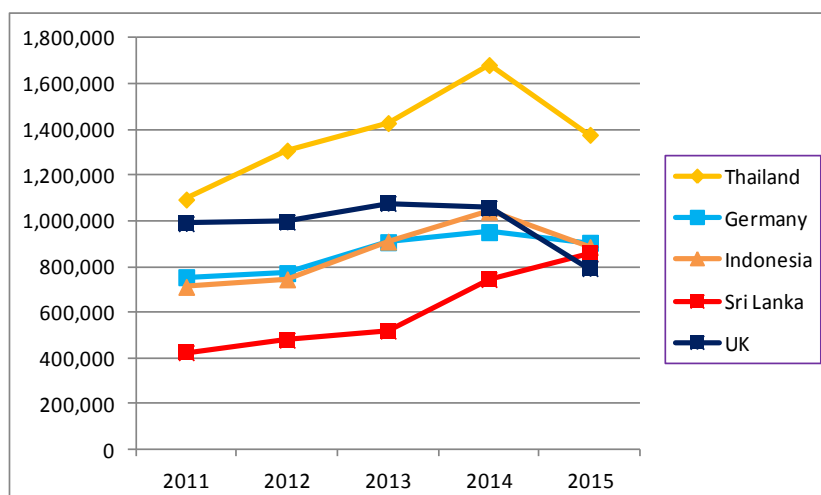


Table10. Trends in leading importers, by place of origin (2011-2015)

Country	2011	2012	2013	2014	2015		
	Value thou.¥)	Value thou.¥)	Value thou.¥)	Value thou.¥)	Volume (t)	Value thou.¥)	Average unit price (¥/kg)
China	8,983,158	9,539,222	11,710,969	10,292,188	27,823	11,893,465	427
Thailand	1,093,850	1,307,833	1,428,088	1,681,829	1,124	1,376,695	1,225
Germany	754,484	772,183	907,343	951,487	369	904,708	2,452
Indonesia	712,331	745,228	910,059	1,041,429	570	886,133	1,555
Sri Lanka	424,543	479,306	519,138	744,376	579	857,079	1,480
UK	988,335	995,637	1,077,078	1,056,599	156	792,119	5,078

Figure9. Trends in Porcelain imports of leading exporters (2011-2015)



Source: e-Stat (Statistics Japan) Trade Statistics: Imports by Country

Tableware: other Ceramics

The non-porcelain products (earthenware, stoneware) share the same trends with porcelain; the main country of imports is China with 86% of total imported quantity and 62% of the total imported value in 2015, followed by other Asian countries like Thailand, Republic of Korea, Malaysia and Vietnam. E.U. countries of origin are more diversified: Spain, Finland, Germany, France and others; the products bear more traditional designs and European styled colors, shapes and not the least, brand-names.

Table11. Main places of origin of other ceramics (2015)

Country	Value thou.¥)	Share	Country	Value thou.¥)
Spain	460,208	19.7%	China	8,825,509
Finland	365,035	15.6%	EU	2,336,798
Germany	321,731	13.8%	Thailand	1,503,924
France	297,608	12.7%	Korea	328,440
Sweden	190,147	8.1%	Malaysia	303,095
Poland	183,197	7.8%	Vietnam	292,896
Italy	118,020	5.1%	others	533,766
U.K.	116,336	5.0%	Total	14,124,428
Portugal	91,485	3.9%		
Hungary	87,815	3.8%		
others	105,216	4.5%		
Total	2,336,798	100%		

Figure10. Share of importers, by place of origin (2015)

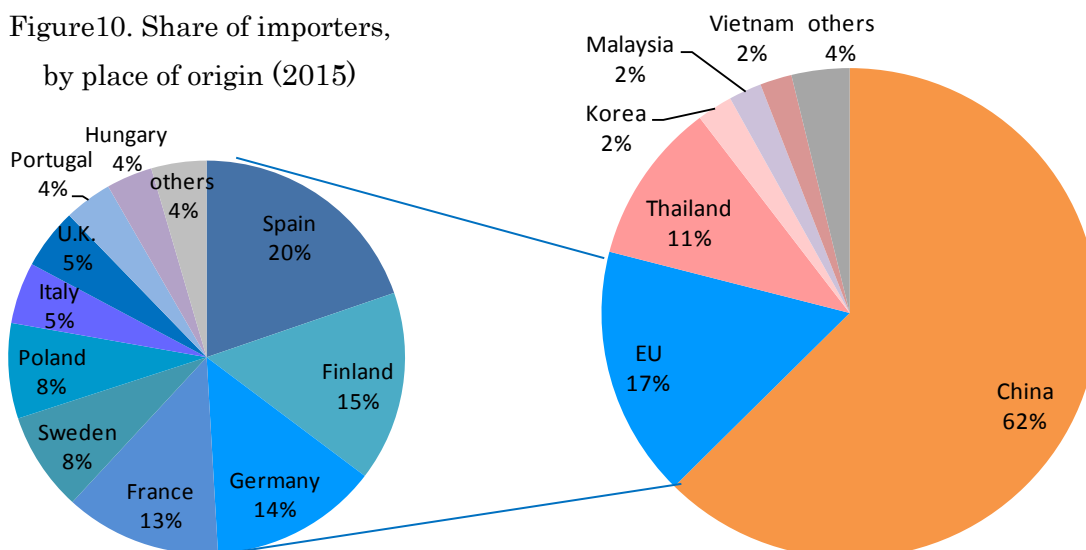
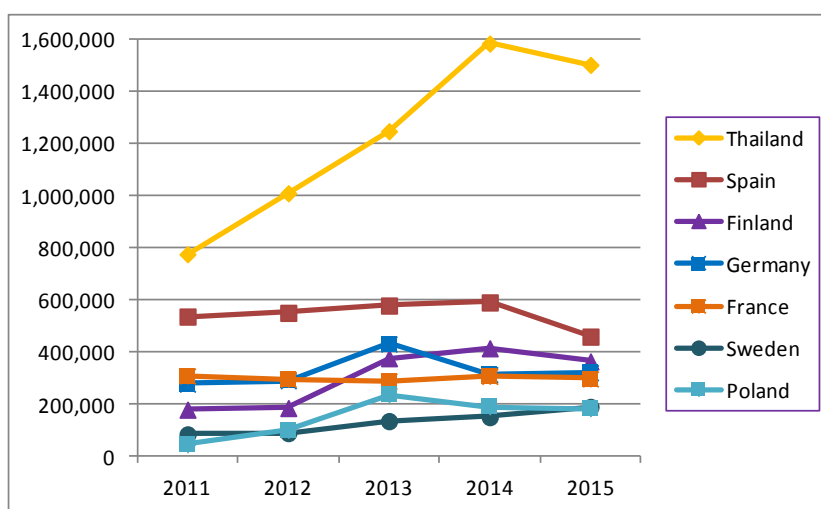


Table12. Trends in leading importers, by place of origin (2011-2015)

Country	2011	2012	2013	2014	2015		
	Value thou.¥)	Value thou.¥)	Value thou.¥)	Value thou.¥)	Volume (t)	Value thou.¥)	Average unit price (¥/kg)
China	7,331,654	7,231,898	10,815,108	8,971,760	23,211	8,825,509	380
Thailand	776,600	1,010,789	1,249,103	1,585,769	1,379	1,503,924	1,091
Spain	537,289	551,564	579,592	591,551	41	460,208	11,225
Finland	179,731	185,927	377,333	415,503	128	365,035	2,852
Germany	277,732	290,775	431,932	314,160	38	321,731	8,467
France	308,961	296,039	289,309	307,460	74	297,608	4,022
Sweden	84,606	89,728	135,623	151,100	18	190,147	10,564
Poland	44,749	99,987	236,969	190,523	88	183,197	2,082

Figure11. Trends in other ceramics imports of leading exporters (2011-2015)



Source: e-Stat (Statistics Japan) Trade Statistics: Imports by Country

Wall & Floor Tiles

By total imported value the main sources for imported tiles in Japan are: China 53%, Italy 19% and Philippines 16% (2015). The main source for interior tiles is Italy, as China is for exterior tiles.

In 2015, the imported quantity was in proportion of 69% from China, 13% from Italy, 7% from Philippines, followed by Thailand with 5% and other.

Figure12. Share of importers by place of origin (2015)

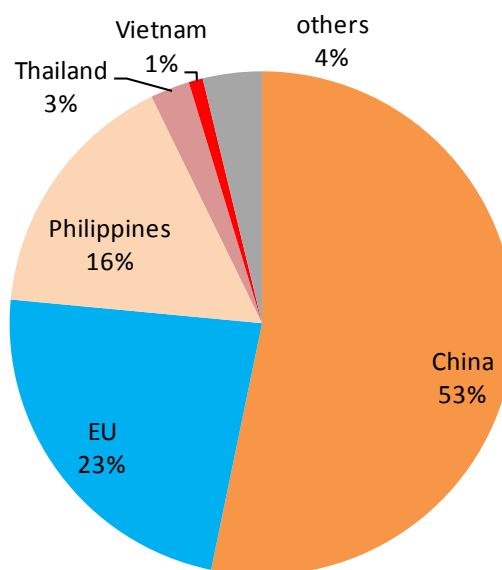


Table13. Main places of origin of tiles (2015)

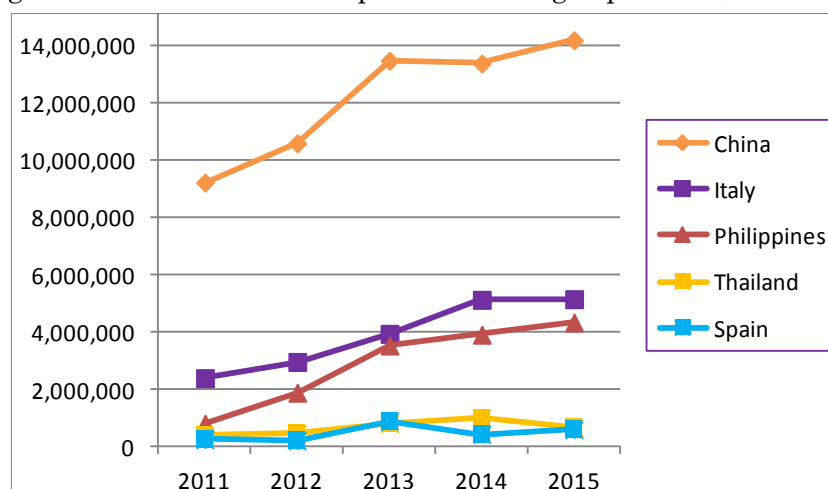
Country	Value thou.¥	Share
Italy	5,163,647	83%
Spain	601,355	10%
Germany	212,251	3%
others	232,328	4%
Total	6,209,581	100%

Country	Value thou.¥
China	14,213,638
EU	6,209,581
Philippines	4,349,281
Thailand	673,567
Vietnam	242,216
others	1,009,269
Total	26,697,552

Table14. Trends in leading importers, by place of origin (2011-2015)

Country	2011	2012	2013	2014	2015				
	Value thou.¥	Value thou.¥	Value thou.¥	Value thou.¥	Quantity (SM)	Quantity (MT)	Value thou.¥	Average unit price (¥/SM)	Average unit price (¥/MT)
China	9,238,280	10,613,218	13,498,177	13,400,528	11,893,911	215,002	14,213,638	1,195	66,109
Italy	2,403,498	2,969,277	3,952,000	5,141,805	2,261,001	44,865	5,163,647	2,284	115,093
Philippines	812,655	1,895,611	3,544,001	3,922,874	1,174,976	26,088	4,349,281	3,702	166,716
Thailand	396,869	456,598	811,209	1,005,837	811,110	13,744	673,567	830	49,008
Spain	247,506	214,389	897,862	436,512	204,503	3,794	601,355	2,941	158,502

Figure13. Trends in tiles imports of leading exporters (2011-2015)



Source: e-Stat (Statistics Japan) Trade Statistics: Imports by Country

Sanitary ware

The Sanitary-ware imports are dominated by the Asian countries; in 2015 considering the total imported value, Vietnam was the leader (50%), followed by China (19%), Thailand (18%) and others.

The importers of Sanitary-ware are looking for inexpensive products to carry out the needs of the budget concerned consumers.

Table15. Main places of origin of sanitary ware (2015)

Country	Value thou.¥)	Share
Italy	284,539	58%
Germany	157,843	32%
others	48,692	10%
Total	491,074	100%

Country	Value thou.¥)
Vietnam	7,070,129
China	2,709,110
Thailand	2,551,688
Korea	901,680
EU	491,074
others	352,164
Total	14,075,845

Figure14. Share of importers by place of origin (2015)

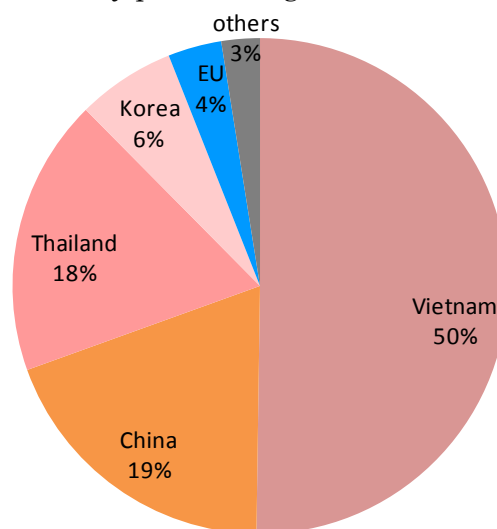
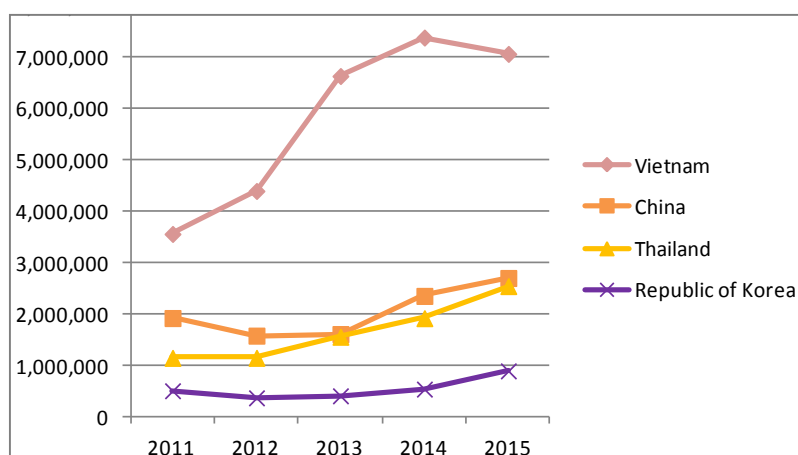


Table16. Trends in leading importers, by place of origin (2011-2015)

Country	2011	2012	2013	2014	2015		
	Value thou.¥)	Value thou.¥)	Value thou.¥)	Value thou.¥)	Volume (t)	Value thou.¥)	Average unit price (¥/kg)
Vietnam	3,566,250	4,402,872	6,639,583	7,388,184	29,751	7,070,129	238
China	1,929,625	1,587,312	1,617,812	2,360,570	3,499	2,709,110	774
Thailand	1,154,919	1,155,747	1,565,657	1,927,170	8,438	2,551,688	302
Republic of Korea	514,213	377,134	416,455	546,681	1,568	901,680	575

Figure15. Trends in tiles imports of leading exporters (2011-2015)



Source: e-Stat (Statistics Japan) Trade Statistics: Imports by Country

Fine Ceramics

As Technical Ceramics have so many usages, it is more challenging to understand the specifics of products by country of origin, but as seen before, the most significant origins are also located in Asia: Taiwan, China, Indonesia and the Republic of Korea with a total of 75% by value. Although Taiwan is leading by value with 37%, by volume, it is supplying with only 11%, while China is leading with 51% by volume. As of the E.U. exporters, Poland and Germany distinguish themselves with a total of 85% by value of all E.U. exports.

Table17. Main places of origin of fine ceramics (2015)

Country	Value thou.¥)	Share	Country	Value thou.¥)
Poland	2,170,189	56.6%	Taiwan	13,713,049
Germany	1,058,248	27.6%	China	8,124,399
France	188,434	4.9%	EU	2,336,798
Netherlands	158,253	4.1%	USA	3,729,893
Austria	88,318	2.3%	Indonesia	3,694,048
UK	81,687	2.1%	Vietnam	292,896
Czech Republic	53,304	1.4%	others	1,609,903
others	33,004	0.9%	Total	33,500,986
Total	3,831,437	100%		

Figure16. Share of importers by place of origin (2015)

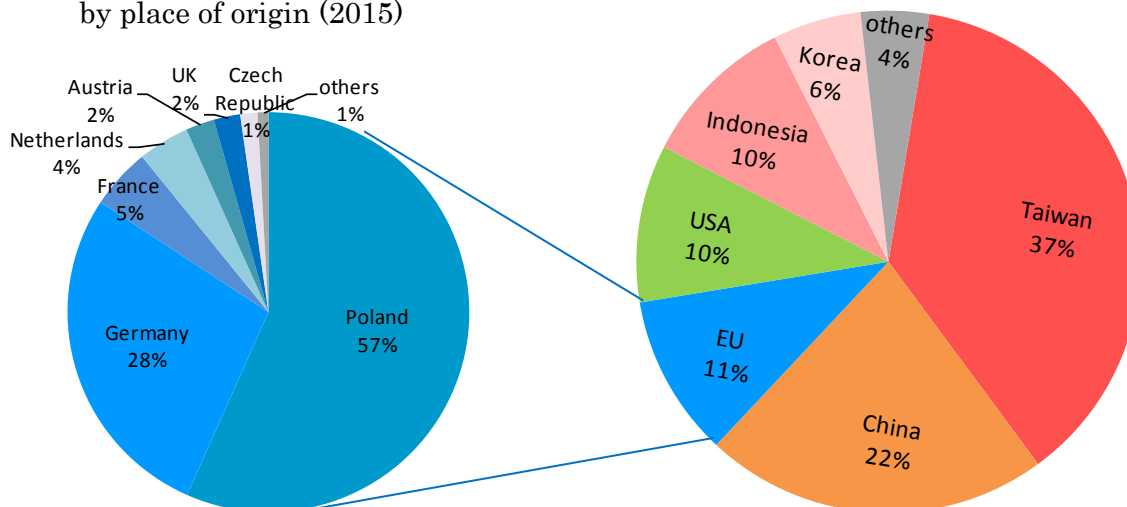
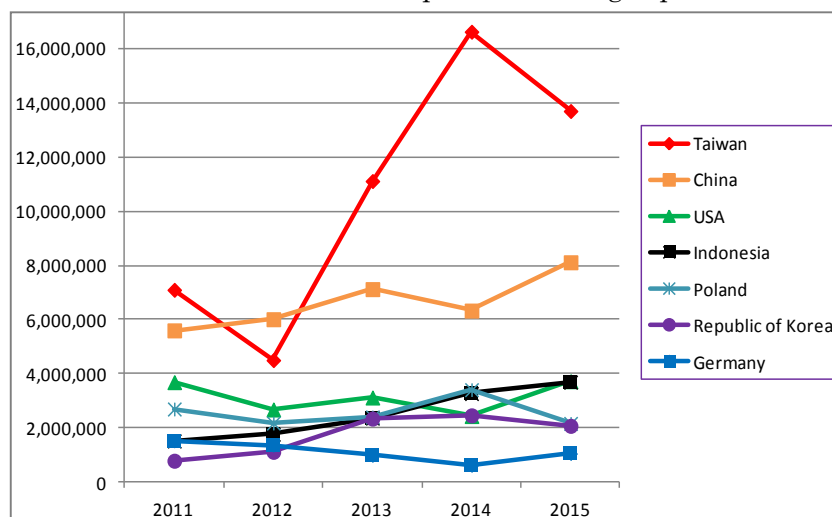


Table18. Trends in leading importers, by place of origin (2011-2015)

Country	2011	2012	2013	2014	2015			
	Value thou.¥)	Value thou.¥)	Value thou.¥)	Value thou.¥)	Volume (t)	Value thou.¥)	Share of total Volume	Average unit price (¥/kg)
Taiwan	7,106,357	4,508,690	11,125,878	16,643,124	1,098	13,713,049	8%	12,489
China	5,608,295	6,020,601	7,132,304	6,339,191	7,094	8,124,399	51%	1,145
USA	3,695,127	2,685,075	3,127,789	2,443,387	833	3,729,893	6%	4,479
Indonesia	1,521,638	1,773,203	2,368,912	3,274,934	1,991	3,694,048	14%	1,855
Poland	2,703,449	2,183,365	2,409,558	3,416,718	549	2,170,189	4%	3,951
Republic of Korea	791,732	1,121,267	2,348,848	2,468,533	422	2,081,158	3%	4,927
Germany	1,529,464	1,371,483	991,609	622,926	826	1,058,248	6%	1,281

Figure17. Trends in fine ceramics imports of leading exporters (2011-2015)



Source: e-Stat (Statistics Japan) Trade Statistics: Imports by Country

Refractory goods

The imports of refractory goods in Japan, by value, are 51% covered by China, followed by 26% USA and E.U. countries with 15%, out of which the dominant was Germany until 2015, when imports from Czech Republic grew spectacular, unaligned with the previous years.

Table19. Main places of origin of refractory goods (2015)

Country	Value thou.¥)	Share
Czech Republic	1,634,749	40%
Germany	871,216	21%
United Kingdom	452,437	11%
Sweden	442,872	11%
Belgium	304,004	7%
France	212,092	5%
others	217,627	5%
Total	4,134,997	100%

Country	Value thou.¥)
China	14,527,356
USA	7,324,729
EU	4,134,997
Malaysia	565,249
Taiwan	449,869
Korea	443,794
others	808,638
Total	28,254,632

Figure18. Share of importers by place of origin (2015)

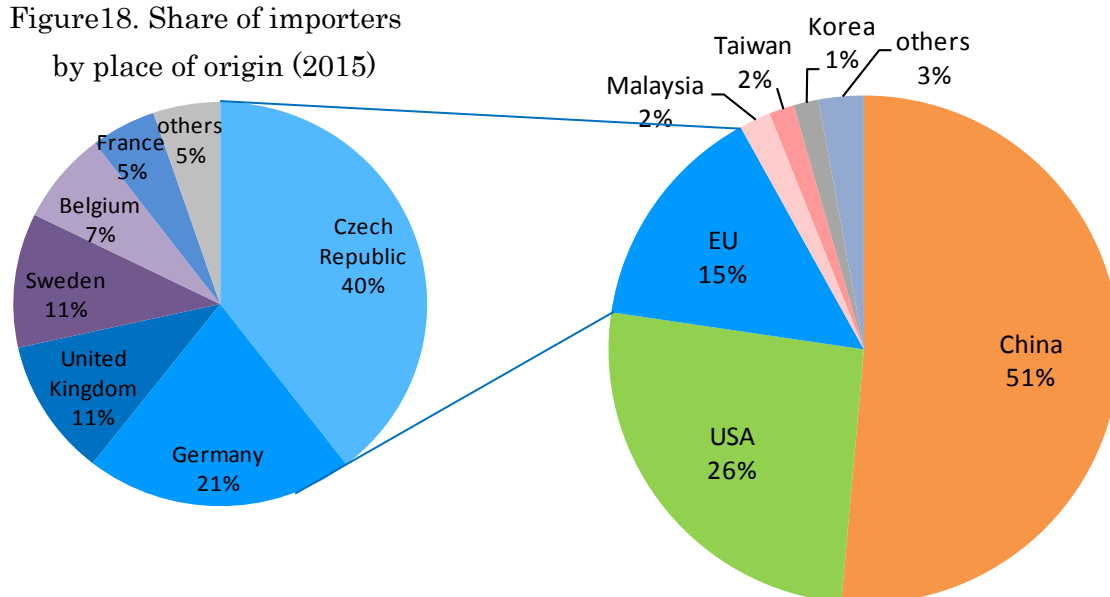
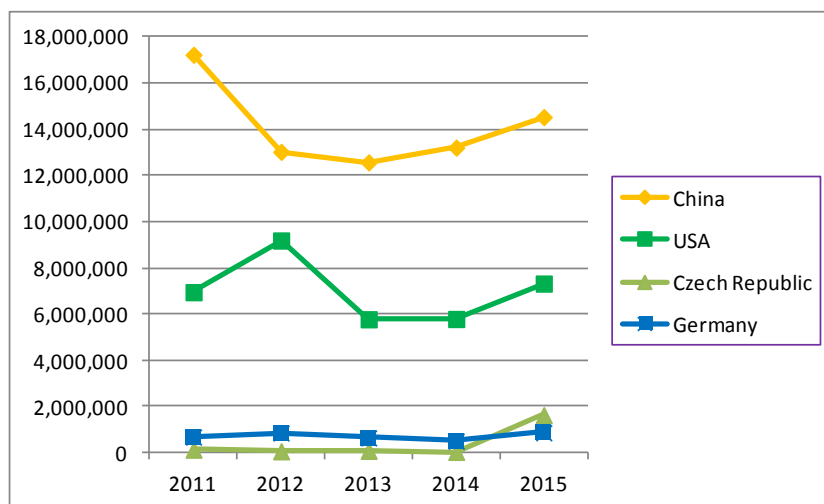


Table20. Trends in leading importers, by place of origin (2011-2015)

Country	2011	2012	2013	2014	2015
China	17,224,935	13,025,078	12,569,333	13,206,492	14,527,356
USA	6,953,789	9,189,225	5,781,205	5,793,354	7,324,729
Czech Republic	139,954	69,422	91,102	44,164	1,634,749
Germany	683,835	863,307	649,477	507,426	871,216

Figure19. Trends in refractory goods imports of leading exporters (2011-2015)



Source: e-Stat (Statistics Japan) Trade Statistics: Imports by Country

1.6. Imports market share, by value

Tableware

The ceramic tableware imports market share has increased from 47% in 2010 to 65% in 2014, due to the increasing interest in foreign lifestyle and foreign products.

Tabel21. Tableware Imports market share

Tableware	Value (mil ¥)	2010	2011	2012	2013	2014
	Domestic production	36,649	...	30,791	30,919	26,599
	Imports	26,095	26,621	27,511	32,524	32,911
	Exports	7,277	6,568	6,330	6,915	8,781
	Total domestic market	55,467	...	51,972	56,528	50,729
	Imports share	47%	...	53%	58%	65%

Wall & Floor Tiles

The wall and floor tiles imports market share increased from 23% in 2010 to 36% in 2014, reflecting the grow in demand for construction materials as the construction market is on an ascending trend.

Tabel22. Wall & Floor Tiles Imports market share

Tiles	Value (mil ¥)	2010	2011	2012	2013	2014
	Domestic production	46,376	42,786	46,722	43,955	48,454
	Imports	12,502	14,130	17,224	18,918	25,416
	Exports	3,540	3,213	2,887	3,027	3,626
	Total domestic market	55,338	53,703	61,059	59,846	70,244
	Imports share	23%	26%	28%	32%	36%

Sanitary ware

Following closely the trend in wall and floor tiles, the sanitary-ware imports market share increased from 12% in 2010 to 21% in 2014, sharing the same explanation as for tiles.

Tabel23. Sanitary-ware Imports market share

Sanitary ware	Value (mil ¥)	2010	2011	2012	2013	2014
	Domestic production	50,307	53,151	54,966	52,942	50,038
	Imports	6,651	8,139	8,122	8,793	12,998
	Exports	1,684	2,024	1,725	1,538	1,846
	Total domestic market	55,274	59,266	61,363	60,197	61,190
	Imports share	12%	14%	13%	15%	21%

Fine Ceramics

The fine ceramics imports market share increased from 4% in 2010 to 7% in 2014. The imports share is lower compared to other groups because of a strong local industry presence; the biggest Japanese producer: Kyocera is one of top 10 worldwide key players.

Tabel24. Fine Ceramics Imports market share

Fine Ceramics	Value (mil ¥)	2010	2011	2012	2013	2014
	Domestic production	597,137	577,738	558,649	585,218	640,350
	Imports	21,336	24,426	21,172	25,146	39,621
	Exports	65,069	63,979	61,747	86,974	109,098
	Total domestic market	553,404	538,185	518,074	523,390	570,873
	Imports share	4%	5%	4%	5%	7%

2. TABLEWARE

Ceramic clays have been used for storing water and food ever since 10.000 B.C. and these materials will continue to provide the daily necessity for the decades to come. This industry is here to last and it is up to the producers to adapt to the market trends in order to prosper. For this reason the report is starting with this industry even if it shows quantitative decreasing demand.

2.1. Market Overview & Trends

Market Overview

In order to determine which group of clients is interested in the ceramic tableware products, we need to understand the customers` buying motivation: How they use the ceramic products, in what circumstances? Which are the desired functionalities of the tableware ceramic products and the expected features? Therefore we can see the following types of usages:

➤ *HORECA*

Commercial users such as hotels, restaurants, beverage establishments have recently put off purchasing for replacement of tableware, many of them concentrating on the idea of new investments to get prepared for the long awaited Olympics2020 and to satisfy the increasing number of tourists.

➤ *Replacing the damaged products*

The market for tableware used as necessity, in daily life, is oversaturated. For replacing the broken or damaged items many house-wives choose to buy from“100 Yen Shops”, which offer useful, low priced products, imported especially from China; ceramic and porcelain flatware made in Asia and imported to Japan is mostly regarded as inexpensive and mass-produced. The number of these types of shops increased greatly in the latest years, dominating the market and causing a serious price decline in the tableware market.

➤ *Gifting*

✧ *Bridal*

Bridal market entered a lethargic phase as the number of marriages decreased and also, due to foreign influences, an increase in free-choice gifts can be noticed (the beneficiary can choose items they want to receive as gifts, from a catalogue of their preferred shop and make their wish-list that would be recommended to their guests).

✧ *Corporate*

Demand in the corporate gift market is down as well, due to a weak overall economic situation. Nonetheless, in many households, there are still ceramics left unused as people may have received them as a wedding gift, as a present at a banquet or as corporate premium but do not like them that can be use for re-gifting.

✧ *Various celebrations*

Valentine`s Day is mostly concentrated around the high demand in chocolate, while Christmas, an also borrowed foreign celebration, gravitates more around the young couples, Amusement parks and KFC food. The ceramic tableware, along with various ceramic home decorations, may find their place in Christmas dinner party, and mature families with children houses. Halloween is also a time for interior decorative articles.

Trends

The most relevant trends to the industry are related to consumers and the characteristics of the products they are looking for.

A. Consumer

① Types of Consumers⁴

Various market researches on Japan identified the following groups:

- the “office ladies”, young working women, often living with parents,
- the housewives, that traditionally control the family budget,

Women are the traditional customers of interior goods, both young housewives and the growing number of older, single working women. Women from their 50s upwards are also significant purchasers of interior goods, having plenty of leisure time and money to shop for pleasure.

- “salary-men”, working for companies and earning a salary,
- "dankai- silver " generation, wealthy baby boomers who started to retire from 2007

Many of the post war baby boomers, upcoming the retirement age, have good pensions, savings and leisure time. Together with their children, approaching their 30`s, they form the core market for most consumer goods. However, the “junior men”, along with their wives or girlfriends, are increasingly involved in planning their living environments. On the other hand, older "salary-men" used to shop extremely rare. Meanwhile the “dankai” generation of men have started to change their consumer behavior, became consumers of high-end, niche design products, including imported interior products.

② Consumers` needs⁵

In Japan, residences that used to consist mainly of Japanese-style rooms have now become more Western-style room-oriented. As many people are moving into apartments in and near large cities, Japanese residences are considered to have smaller floor space compared to other developed countries. In terms of floor layout, while traditional layout used to be a closed layout in which the kitchen and the living room were separated, it has become popular

⁴<http://eu-gateway.archive.eu-gateway.eu/userfiles/file/Market%20Studies/2013/2012-2013%20Interior%20Design%20Japan%20Market%20Study.pdf>

⁵ https://www.jetro.go.jp/ext_images/costarica/mercadeo/3Einterior.pdf

to have a more "open" kitchen that is part of a combined "living and dining area." Such recent changes in Japanese people's lifestyle have had a large influence on their choice when purchasing interior goods.

The demand of ceramic and porcelain tableware is shifting from a volume gifts, represented by bridals and corporate premiums, to single-items for personal home use or gifting. Consequently, people place great importance on the value of the product as interior decoration and a "fun" factor when using it, in addition to its quality and functionality; with a demand for products more individualized and diversified by color, design and shape.

③ Consumers` buying behavior

In recent years, an increasing number of people started to choose their tableware more carefully; with a perfect fit in their western style home design, especially when they enjoy foreign food recipes at home and to have the whole ambient arrangement, with special attention to details. They buy provisions of immediate need at the lowest possible price, purchasing products that fit with their lifestyles, but, at the same time they spend large sums of money on things they truly want or things that have some highly distinctive appealing features. In this context the popularity and confidence in European luxury brands' tableware is increasing, while people are choosing luxury brands not necessary by brand-name, but most likely by the design of own preference and own set of values.

④ Recent Influences: Interior Lifestyle Magazines⁶

The print media still remains strong in Japan and continues to play an important role in influencing fashion and lifestyle trends. The number of lifestyle magazines and features on interior lifestyle in other consumer magazines continues to increase. Journalists from fashion and interior magazines frequently travel overseas, and feature European designers and products and make reports about all major European Interior Lifestyle Exhibitions. Magazines are an effective way to target both consumers and trade companies either through advertising or by generating editorial publicity through product placement or interviews.

The consumer magazines took the challenge and redesigned their content to be more appealing to men in order to make them comfortable when choosing to engage in buying household products, previously the target audience was only women. As a result the number of men visiting interior shops in Tokyo has serious increased in the recent years.

⁶<http://eu-gateway.archive.eu-gateway.eu/userfiles/file/Market%20Studies/2013/2012-2013%20Interior%20Design%20Japan%20Market%20Study.pdf>

B. Products

The products styles, sought by the Japanese consumers, are following these major categories:

➤ Minimalist

As the “kaizen” concept started in Japan, here people are trained to seek for neat and simple, so they do the same with their home surroundings. Recently, many residences are redesigned to reflect Western-style rooms and more people wish to have their homes coordinated in a Western-style design for a more sophisticated atmosphere. Nevertheless they still keep the principle of “simple” but following Western style in a concept of "simple and modern", concept brought into the spotlight by Ikea`s returning in 2006. Interior goods with such “a touch” are sought after by a large number of consumers, Ikea and Nitori being two of the trend setter for the pursuers of this concept; with both of them offering minimalist, inexpensive designed products.

➤ Romantic – floral

A different consumers` segment in Japan, is oriented towards a more romantic and feminine interior look, like flower patterns, with Italian and Scandinavian products meeting this Japanese tastes for more than ten years by now.

➤ Ethnic

Among today's trends of Japanese consumers, the "ethnic" designs gained popularity in recent years. This concept of "ethnic" refers to the exotic and unusual tastes of Southeast Asia and Africa, in opposition with the Western- "sophisticated" style tastes, called "simple and modern.” As household goods made in Southeast Asia are particularly common in Japan, ethnic-design household goods are also called "Asian zakka.” Although the ethnic trend is merely considered a niche market, shops specialized in household goods with such ethnic tastes have been emerging, which demonstrates a steady level of popularity.

➤ Japanese modern

Following the need to bring something new and appealing the traditional Japanese designs popularity was recently revived and evolved into the "Japanese modern,” a combination of Japanese and Western tastes.

Competition is increasingly based on value for money, design and originality. If a product is eye-catching and perceived to add value to the living environment, it would definitely appeal to consumers constantly looking for something different, something new. The Japanese perception of foreign tableware products is illustrated in Table25, bellow:

Table25. Imported Tableware Style⁷

➤ Asian products

Most imports from China and South-East Asian countries tend to be inexpensive, mass-produced goods, with an extremely narrow niche of very expensive traditional blue, white and blue-white Chinese bone china.

As producers from these areas benefitted from Japanese companies training and technology sharing and also as a result of increasing consumer interest in ethnic craft-style, they started to expand into hand-made tableware niche.

➤ European products – high priced Tableware

U.K.

Bone china brands (Wedgwood...) are well-known and favored by Japanese consumers and capture a large share of the Western imports. U.K. also exports semi-porcelain ware, stoneware and ornamental relief jasper ware (featuring white relief patterns laid over blue or green stoneware).

Italy

Italy has a number of well-known makers of fine china: Richard Ginori, uniquely Italian designs of the Majolica ceramic ware in Faenza and Deruta Dinnerware...

Denmark

Most European makers of fine dinnerware have close ties to royalty and Denmark is no exception. Danish handmade china, represented by Royal Copenhagen is popular for the high quality of its workmanship.

Germany

In Japan, German tableware is noted for its high technical skill in the production of white porcelain dinnerware. Its exports include a number of excellent new products known for their modern styling. In recent times, Meissen tableware is getting popular among young women; Bavarian ceramic tableware is also popular.

France

Blue porcelain from Limoges is well known, French products are noted for their European aristocratic style. Recently, Hermes tea cups have gained popularity among young women.

Other European Countries

Other European exports include fine china from Hungary and Austria and ceramic tableware from Spain.

Source: ASEAN Exporters to Japan

⁷ <https://www.asean.or.jp/en/trade/lookfor/top/market/200603.html>

2.2. Promotion

When trading consumer goods in Japan, it is important to reach your own understanding by visiting fairs to look for information related to the market, to prepare a well-fitted promotion plan and to build a brand name on the local market are keys to implement a successful market entry. The characteristics and the advantages of some of the most important exhibitions related to the tableware market are presented below:

✧ Tableware Festival

The Tableware Festival is a trade show of all types of tableware products: glass, ceramics, lacquer, cutlery, textile, while the main products presented (more than 80%) are ceramics and glassware products. Its duration is of 10 days, starting on a Sunday and ending on a Monday.

This festival is dedicated to consumers (B2C) with availability for sale, but also B2B transactions are being discussed, usually between exhibitors and medium to smaller interior design shops. It is usually hosting also a number of overseas famous brands, already established companies or companies exhibiting together with their local partner.

As a main attraction there is an annual contest, consisting in arranged tables, presented by around 50 participants each year, and a corner with the previous year winners. New designs, divided by two categories: specialists and amateurs are also shown. Every day there are seminars on various related subjects, in Japanese.

During the weekend the visitors are couples while during weekdays – housewives.

Date: This expo is held annually, late January/early February.

Sponsored by: Tableware Festival Executive Committee (Yomiuri Shimbun and Tokyo Dome Corporation) <https://www.tokyo-dome.co.jp/tableware/>

✧ Tableware & Dining Expo

First held in 2010, the Tableware & Dining Expo is a general trade show, gathering all kinds of tableware such as Western style tableware, Japanese style tableware, lacquer, table accessories. One of the advantages, brought by the organizer, Reed Exhibitions Japan Ltd, is a “matching” portal, a tool that helps arranging meetings with potential local partners, interested in the exhibitors’ products.

Date: This expo is held annually, in July

Sponsored by: Reed Exhibitions Japan Ltd

Visitors: 55.624 (7/2015)

Exhibitors: 1.163

<http://www.tw-expo.jp/en/about/detail/>

➤ Gourmet & Dining Style Show

It takes place during Tokyo International Gift Show, in conjunction with: Kitchenware, Giftex, Baby & Kids, Fashion Goods & Accessories, Design Tokyo, Health & Beauty and

International Stationary.

Business “match-making” program “Hot Table” is held for exhibitors to help them gain access to leading buyers, free of charge; the exhibitors can also take advantage of “pitching” their products to potential buyers, speed-dating style, to kick off business relationship.

Date: This expo is held biannually, in February and September

Sponsored by: Business Guide-Sha, Inc. General exhibition of personal gifts, consumer goods and decorative accessories; the company was established in 1976.

Visitors: 27.367 (9/2015)

Exhibitors: 172

<http://www.gourmetdiningstyleshow.com/20gds/index.htm>

➤ Interior Lifestyle Tokyo

Interior Lifestyle Tokyo is an international trade fair which propose lifestyle interior design concepts from around the world. It derives from two big trade fairs, organized in Europe: “Ambiente” – the largest consumer goods trade fair in the world and “Heimtextil” – an international trade fair for household and commercial textiles.

Date: This expo is held biannually, in June and November

Sponsored by: Messe Frankfurt, International trade fair organizer for the Japanese interior market

Visitors: 30.144 (6/2015)

Exhibitors: 769

Visitors: 15.667 (11/2014)

Exhibitors: 391

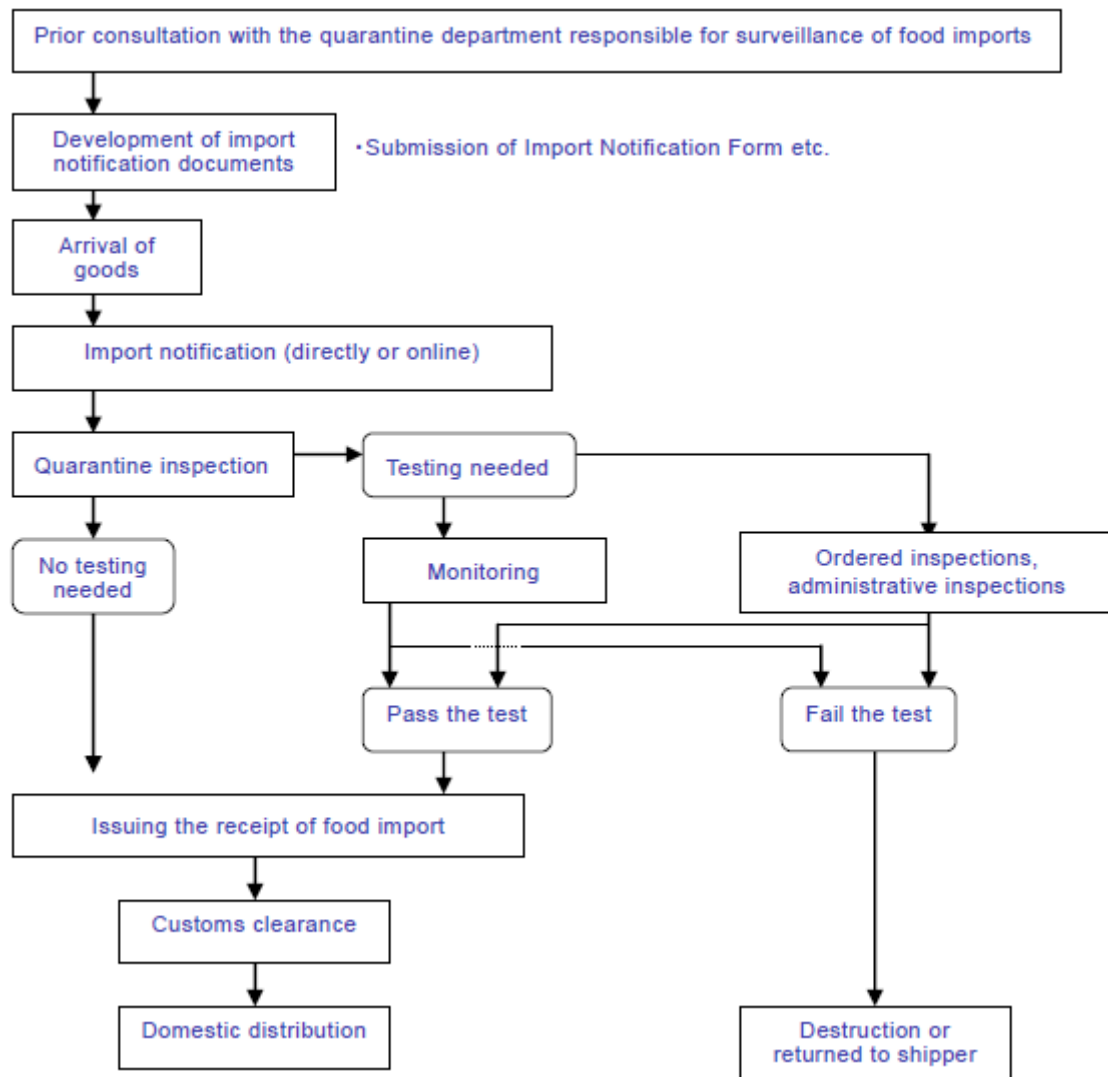
<http://www.iffit-interiorlifestyleliving.com/>

2.3. Regulation & Labeling

Food Sanitation Law

The Food Sanitation Act prohibits the importation of apparatus and container-packages that contain or have attached to them toxic or harmful substances that pose a threat to human health. Importers of tableware and kitchenware are required to submit the completed “Notification Form for Importation of Food, etc.,” along with other required documents to the Quarantine Station at the port of entry. A decision is then made, based on an examination of the documents to see whether or not an inspection at the bonded area is required.

Figure20. Procedures required by the Food Sanitation Law



Source: JETRO Guidebook for Export to Japan

Porcelain, ceramic tableware and cookware are subject to lead and cadmium leaching standards. A determination is made based on the document examination whether or not an inspection at the bonded area is required. Prior to importing, the importer may take samples of forthcoming imports to laboratories registered with the MHLW or the competent government agency of the exporting countries. Those test results may be substituted for the

corresponding inspection at the port of entry, which expedites the quarantine clearance process. Separate testing of coloring agents is required for colored tableware.

Regulations and Procedural Requirements at the Time of Sale⁸

Importing interior goods under different product categories is subject to the Food Sanitation Act, the Household Goods Quality Labeling Act, and the Act against Unjustifiable Premiums and Misleading Representations.

Products that infringe intellectual property rights are regulated by the various intellectual property laws (Trademark Act, Patent Act, Unfair Competition Prevention Act, etc.). Prospective importers must be aware of these considerations, as rights holders may initiate legal action.

In addition, web-based mail-order service and specified commercial transactions are subject to provisions of the Act on Specified Commercial Transactions.

➤ Food Sanitation Act

For tableware and kitchenware, the Food Sanitation Act prohibits the sale and use of apparatus and container-packages that pose a potential threat to the human health. The distribution stage is also subject to oversight and guidance by food sanitation inspectors from local government health centers.

➤ Act on Specified Commercial Transactions

Selling "specified products, rights, or service" to general consumers through "specified commercial transactions" such as mail-order services and door-to-door sales is subject to the laws concerning specified commercial transactions. The commercial transactions specified under the Act include: (1) door-to-door sales, (2) mail order sales, (3) telemarketing sales, (4) chain sales (network-based marketing using word-of-mouth and pyramid selling), (5) specific continuous service provision transactions, and (6) sales transactions offering business opportunities. Mail order sales include Internet sales and commercial advertisement by e-mail. In order to provide consumers with accurate information, in mail order sales, operators are required to list the following information in their advertisements: (1) sales price, (2) payment period and method, (3) delivery date, (4) clauses related to the return system, (5) name, address and telephone number of operator. The Act also prohibits advertising containing false or exaggerated statements.

⁸ https://www.jetro.go.jp/ext_images/costarica/mercadeo/3Einterior.pdf

Labeling

➤ Household Goods Quality Labeling Act

The Act stipulates the format and content of quality labeling for products designed for everyday household use. The purpose is to protect consumer benefits by providing information that helps them choose products and informs them about how to use the products correctly.

➤ Act against Unjustifiable Premiums and Misleading Representations

The Act prohibits any form of improper labeling that exaggerates or falsifies labeling and misleads consumers about the nature or quality of products. Importers or resellers are required to submit reasonable grounds to prove that the labeling is not “improper.” If they are unable to do so, those claims are considered as a form of improper labeling. Vague or confusing labeling that makes it difficult to discern the actual country of origin is also prohibited as a form of importer labeling.

➤ Act on the Promotion of Effective Utilization of Resources

Under the Act on the Promotion of Effective Utilization of Resources, specific containers and packaging are subject to identifying labeling provisions, in order to promote sorted collection. When paper or plastic is used as a packaging material for wrapping of individual product items, or for labels, external packaging or elsewhere, a material identifier mark must be displayed on at least one spot on the side of the container with information where the material is used.

Labeling under Industry-level Voluntary Restraint

➤ Japanese Industrial Standard (JIS)

The JIS mark may be attached to industrial products in conformity to the relevant Japanese Industrial Standard (JIS) established under the Industrial Standardization Law (JIS Law). Heat-resistant ceramic tableware (S2400-01) manufactured at approved production facilities in accordance with quality and performance standards may display the JIS Mark.

➤ Ceramic-ware Safety Mark

The Ceramic Ware Safety Mark Supervisory Committee of the Japan Pottery Manufacturers' Federation authorizes the display of the Ceramic Ware Safety Mark on the label or packaging (for items sold by the box) of all products that are certified compliant with all legal regulations according to testing procedures set forth in the Food Sanitation Law.

2.4. Distribution channels

Domestic Tableware Distribution

In Japan, there are about 30 producing districts by combining porcelain tableware (Arita, Imari, Kutani etc.), ceramic tableware (Masiko, Hagi, Kasama etc.) and stoneware tableware (Bizen, Tokoname, Shigaraki etc.). Domestic tableware is usually distributed through wholesalers to retail outlets or to volume commercial users; there are two types of wholesalers:

- Wholesalers in producing district who collect each maker's products within the districts and deliver them to all over the nation and
- Wholesalers in consumption district who deliver to stores in big cities like Tokyo, Osaka...

The wholesalers for commercial users purchase products from the producing district wholesaler and deliver them to hotels and restaurants.

On the other hand, major western style tableware makers, such as Noritake, Nikko, Narumi build up their direct sales network by arranging sales offices in major cities and having agents all over the country.

Recently, major retail stores are increasingly doing business directly with manufacturers or Producers' Associations. As a consequence of dropping sales prices and the spread of Internet, distribution channel is getting shorter, with a reduction of profit margins as well.

Distribution of Imported Low-priced Products

Low-priced products imported from China and ASEAN are passing through the same distribution channels as domestic products; in addition, there are sold to the tableware specialty stores, to general merchandise stores, home centers, fancy goods shops, discount stores and ¥100 shops.

Distribution of Imported Tableware

Most interior goods, manufactured overseas, are imported by an importer or a Japanese subsidiary or general agent of the overseas manufacturer, then sold to wholesalers, retailers, and finally to consumers. Recently, however, direct transaction between large retailers and producers (or importers) has become more common. In addition, increasingly lower selling prices and the growing popularity of the Internet shortened the distribution channels and gradually lowered the presence of wholesalers.

For overseas goods the following types of importing methods are being used in Japan:

① Imports through a sole import agent or Japanese subsidiary

Japanese trading companies or importers are contracting "a sole import agent agreement" with the overseas maker to handle the distribution of goods to retailers. Many department stores and large retailers also function as authorized import agents. A decade or so ago, many overseas manufacturers had no Japanese import agents, but nowadays most of the

well-known brands are under contract to authorized import agents in Japan. Some of them have established Japanese subsidiaries or sales offices in order to sell their products directly to department stores and other large retailers.

② **Imports through specialty trading company**

A specialized import trading company imports goods from manufacturers and distributes them mainly to wholesalers and retailers outside the major metropolitan areas.

③ **Direct imports**

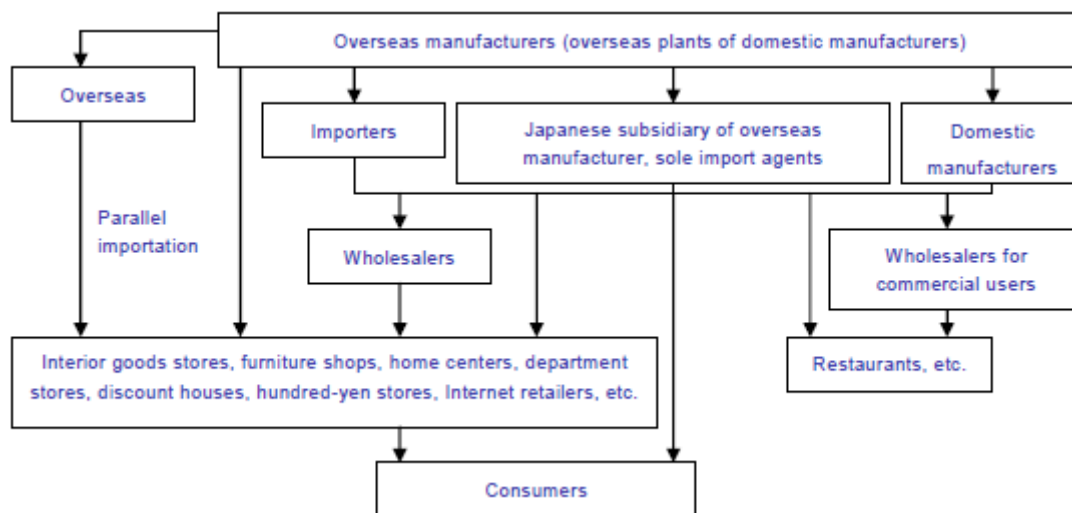
Recently many overseas manufacturers have their own Japanese subsidiaries to sell their products directly to department stores and other retail outlets in Japan.

④ **Parallel imports**

Increasingly common among high-end branded ceramic tableware products is the following procedure: purchase from wholesalers or retail outlets in a third country (such as Singapore, Hong Kong or other Asian country/area) and import to Japan, separately from authorized import agents. Parallel-importation has the advantage of products being imported at lower cost than in the case of using a conventional distribution channel.

In addition, since the parallel imports are growing, ordinary consumers have been able to purchase many famous brands' products at lower price via Internet instead of the regularly imported one.

Figure21. Distribution Channels for Interior Goods



Source: JETRO Guidebook for Export to Japan

2.5. Retail System

The “selling points” of the imported tableware are shifting, from the well known Department Stores and General Merchandise Stores towards Lifestyle Shops, e-Shops, Mail Order Catalogues and TV shopping, as Direct Marketing is widely used in Japan.

Department Stores

Department stores used to be the main retailers of imported high-end household goods, but this department sale decreased to less than 10% of total sales, in the last decade, and made them concentrate on fashion clothing, accessories, cosmetics and food as core businesses. The most important names of Japanese Department Stores are:

- **Isetan Mitsukoshi** Holdings
- **Takashimaya**
- J. Front Retailing, a merger between **Daimaru** and **Matsuzakaya**
- Millennium Retailing, part of Seven& i Holdings, merger between **Sogo & Seibu**

General Merchandise Stores (GMS)

This category of stores is represented by names like: Ito-Yokado, Aeon, Daiei and Seiyu and they can be compared to supermarkets such as Carrefour in Europe, retailing mass market household goods. They are not very likely targeted retailers for imported interior goods in Japan, but form a substantial part of the Japanese retail environment.

Lifestyle shops

As interior goods are attracting increasing attention in Japan, a large number of shops, known as home fashion stores or lifestyle stores, specialized in interior goods, have appeared in the last decade in urban areas offering lifestyle products to the younger generation.

The products, sold in these shops range from interior gifts, home furnishings and accessories for home to larger pieces of furniture, both domestic and imported.

Most shops reflect owner`s individual taste and offer a specific style to consumers. In order to maintain consumers` interest in their inventory, the products life on the shelf is quite short, more than 25% of product ranges are changed every year. Most interior shops prefer to handle imported products on an exclusive basis, to maintain the individuality of the store. Unlike department stores which mainly buy through wholesalers, lifestyle shops select and buy products directly from manufacturers domestic and abroad, manage the commercial risk and carry their own inventory.

Lifestyle shops are the most likely destination for European interior and design products, also because every large-size commercial establishments or shopping malls usually have several lifestyle shops in them.

Table26. List of Lifestyle Shops

<p>Franc franc www.francfranc.com</p> <p>Major lifestyle chain, managing over 150 stores nationwide, operated by furniture retailer BALS (Basic Art Life Style); ventured out to China, Hong Kong, Taiwan, Singapore and Republic of Korea. Their targeted customers are young working women, around 25 years old, who live alone in large urban areas, selling only interior furnishing products featuring “casual stylish”. Currently, its originally designed items account for nearly 70 % of all handled products.</p>
<p>Sazaby www.afternoon-tea.net</p> <p>Inspired from the English tradition to enjoy the 5 PM tea with snacks, the brand was launched in 1981 with an aim to produce relaxing time and the value of such culture through various ideas. They are operating over 200 stores throughout Japan, trading under the brand name “Afternoon Tea,” selling imported furniture, kitchenware, tableware and interior accessories.</p>
<p>Loft www.loft.co.jp</p> <p>Loft was opened in 1996 by the Seibu group, a department store selling contemporary interior goods and accessories, stationery and giftware. Good quality, lower prices; presently, operates a total of 94 shops nationwide.</p>
<p>Tokyu Hands www.tokyu-hands.co.jp</p> <p>Tokyu Hands was established in 1976 and it is operated by the Tokyu Department Store group and is a large-scale store catering for all home-ware needs from furniture to accessories. It also retails a wide range of hobby and leisure goods. Good quality, lower prices; operates 40 stores nationwide, including 2 overseas.</p>
<p>Muji (Ryohin Keikaku): www.muji.net</p> <p>Ryohin Keikaku was established in 1983, and it is nowadays a chain of more than 300 shops retailing their own Muji brand in many countries all over the world: Europe, Asia-Pacific, USA and Canada. Ryohin Keikaku designs, produces and retails its own range of interior products, clothing and stationery, mainly manufactured in China and South-East Asia in large volumes.</p>
<p>Tokyo Interior www.tokyointerior.co.jp</p> <p>Operating 36 large-scaled interior lifestyle shops in Kanto region and Northern Japan; very often referred to as the Japanese IKEA, they target the middle-class customers of interior goods, by offering a large variety of overseas products.</p>
<p>Nitori www.nitori.co.jp</p> <p>Biggest player by far in the casual low-end furniture business market. Originally from Hokkaido but presently operating over 300 stores nationwide and targeting 500 stores by 2017. Good quality, low end price and mainly made in China; operates shops in all 47 Japanese prefectures, since 2011.</p>

Source: EU-Gateway Market Study on Interior Design

Home Centers

Japan's home centers are large stores based in the suburbs and usually accessed by car. Their products include leisure, car and hobby goods, DIY supplies, pets and pet products, gardening goods and "home fashions." Home centers are growing as a category of stores that attract an increasing number of young families looking for good value in home accessories. Many of the products retailed here are from domestic producers or low priced Asian imports; therefore not a target for value added design lifestyle products from European sources.

Direct Marketing

The category of direct marketing includes mail order catalogues, Internet, mobile phones and TV shopping. The market for direct sales continued to grow steadily over the last decade, mainly thanks to the constant growth of online sales

Direct selling is widely used by consumers in Japan for its convenience, efficiency and affordability, due to Japan's evolved parcel delivery system. In the past few years, the delivery process has been made even easier as local neighborhood convenience stores can receive the consumers' delivery of goods bought over the Internet.

E-commerce

Presently, the e-commerce market leaders are:

- Rakuten (~29% market share), with a total of 44.201 merchants as of 12/2015 and total transaction volume of 4.294 bill ¥ in 2015
- Amazon Japan (~13% market share)
- Yahoo Japan (~6% market share)

Direct mail catalogue

With 109.6 million Internet users in Japan (penetration rate: 86.2%, in 2014), leading catalogue firms now, increasingly see their business shift to the Internet, with up to 50% of their business coming from web-based transactions.

In addition, new web-based firms are entering the competition, while specialty stores also sell through the Internet; with most mobile and Smartphone in Japan being Internet enabled, m-commerce is the rising star.

Although catalogue sales generally consist of mass market products, some companies are developing niche sales of luxury and imported goods. The operators of mail order catalogues and Internet based sales are constantly looking for new products; therefore innovative European tableware products may find a market through catalogue or other direct sales.

Table27. List of leading Mail Order Catalogue Companies

Senshukai: the largest mail order catalogue in Japan with around 7 million subscribers registered; its catalogues "Belle Maison: Shin-Sumai to Zacca" and "Homebase" specialize in household accessories, www.senshukai.co.jp

Cecile: a well-established mail order firm targeting working women, 30% of its sales

are in home goods, sold through its catalogue “Verger”, www.cecile.co.jp
Belluna has its customers based among older women, but moving towards the younger range as well; its main products are fashion clothing but, its volume of interior accessories and household goods, is increasing, www.belluna.co.jp
Mutow : large firm, focusing on fashion clothing with a separate catalogue: “Seikatsu Zacca” dedicated to interior goods, www.mutow.co.jp
Fujisankei Living Service : part of the large Fuji media group, which also operates TV shopping channels; its catalogues “Dinos Living” and “House Styling” account for their 45% sales of household goods, www.dinos.co.jp
Otto-Sumisho : a joint venture between German Otto Versand and Sumitomo trading company; its “Home Collection” catalogue specializes in interior goods

Source: EU-Gateway Market Study on Interior Design

In addition, all department stores operate catalogue sales and many interior lifestyle stores sell through catalogues and the Internet as well.

The minimum requirement for successful business in Japan is to raise customers` awareness of your products and your presence by using mainly Japanese language and an efficient distribution and customer service system.

TV Shopping

TV shopping has a share of about 10% of all direct sales in Japan, with housewives age 30-50 years old as key customers.

Table28. List of leading TV Shopping Channels

The Shop Channel : Live TV programs, supported by website and mobile phone sales; kitchenware is about 10% of total sales. www.shopch.jp
QVC : A joint venture between American QVC and Mitsui Trading Company, established in 2001, reaching over 4 million households, www.qvc.jp

Source: EU-Gateway Market Study on Interior Design

Imported products are also presented on TV shopping channels so this could be successfully used by European producers for market entry. Advising distributors to approach these channels should be considered.

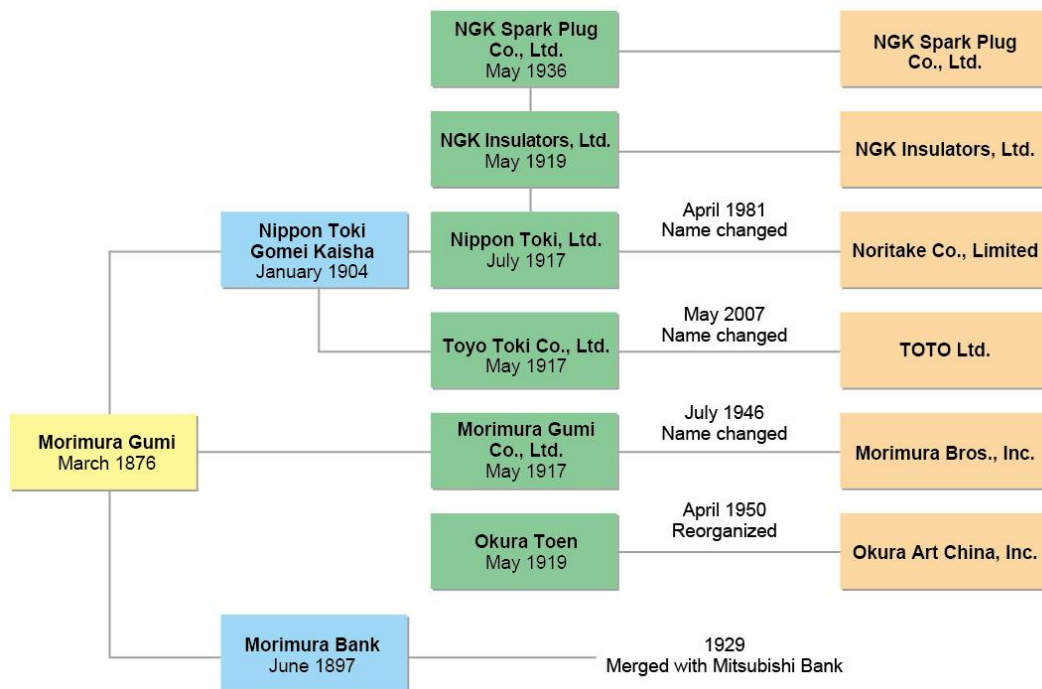
2.6. Local key producers of Western Style Tableware

When studying the Japanese tableware market it is advisable to look first at the local producers that pursue a Western dining-ware style.

Noritake⁹

In 1876, Ichizaemon Morimura set up a trading firm called "Morimura Gumi" and sent his brother, Toyo, to New York to open an imported goods store, "Morimura Brothers". It was the start of their overseas trading and the first step into Noritake's history. In the early days, their trade was focused on Japanese antiques and miscellaneous goods. As the porcelain ware demand was gradually increasing, Morimura decided to develop this business further, by investing in a production facility.

Figure22. Diagram of the Morimura Group's History



Source: Noritake Home page

In 1904, "Nippon Toki Gomei Kaisha", the forerunner of the NORITAKE CO., LIMITED, was established and a factory with modern equipment and facilities was constructed in Noritake, Takaba-village, Aichi Prefecture, Japan, After years of trial and error in 1914, that Japan's first Western-style dinner set was finally completed and exported to the United States. Their dinner-ware business proved to be of great success and it grew into the world famous brand known as "Noritake China".

As Noritake continuously cultivated and accumulated various ceramics-manufacturing techniques, they gradually ventured into new businesses with a focus on ceramics technologies. The sanitary-ware divisions of both companies were then spun off in May 1917

⁹ <http://www.noritake.co.jp/eng/>

to form Toyo Toki Co., Ltd. (currently TOTO Ltd.), which subsequently spun off its insulator department to establish NGK Insulators, Ltd. in May 1919.

The Noritake Group has established four different business fields with the application and development of a variety of ceramics manufacturing technologies:

- Industrial Products, which supports industries with grinding wheels and diamond tools,
- Ceramics & Materials, which supplies ceramic raw materials to many kinds of manufacturers,
- Engineering which develops and proposes manufacturing equipment and technologies,
- Tabletop, which offers tableware to create rich and luxurious dining.

They have several factories in Japan, but also overseas factories in China and Sri Lanka. Almost 75% of their tableware production is made in Sri Lanka, while the designs and decals are entirely prepared in Japan. Their core selling is made in Japan and USA; while the usages of their products are almost equally divided between HORECA and home usage on the Japanese market.

Their future plans regarding the tableware business are to expand sales in Asian countries and also to exploit deeper the HORECA demand in foreign countries.

*On April 1, 2015 Noritake Dental Supply Co., Limited integrated with Kuraray Medical Inc. Both headquartered in Japan, the two companies became Kuraray Noritake Dental Inc.

Narumi¹⁰ is the world-widely recognized manufacturer to produce and supply the high quality Bone China to many 5-stars hotels and national airlines. They have two most advanced factories in Japan and they were the 1st Japanese manufacturer who succeeded to export mass-production Bone China dinnerware to U.S.A. and also managed to create a market demand. Their product style is a modern expression of the ancient art.

Their products are Bone China with 47% high purity bone ash content, a lightweight and translucent “warm white” body and excellent mechanical impact resistance, specially designed for the hotel and restaurant industry.

Nikko¹¹ was established in Kanazawa, Japan in 1908. Successive lords promoted traditional culture and crafts of the city and the first kiln was established on the land of Kanazawa. NIKKO has gained an international reputation for its quality and representative designs of Japan, as a country of ceramics. They pursued a particular technique that gives their products a hand-made look.

They have a strong position in USA market with a trade showroom opened in New York, at 41 Madison Avenue building, since 1977. They debuted in Paris at Maison & Objet Fair in

¹⁰ <http://www.narumi.co.jp/en/index.html>

¹¹ <http://www.nikkoceramics.com/>

2011 and at Frankfurt Ambiente, in 2014, the year when Japan was the exhibition partner country, when a few other Japanese companies also joined.

Their products are Bone China with 50% bone ash content, having several patterns, including formal patterns with platinum banding and ironstone, a warm milky white colored material, more heat-insulating and more resistant to physical shock than conventional Porcelain ware.

European brands

Some of the well-known European brands already present on the Japanese market:

- Guy Degrenne
- Steelite International
- Gien
- Royal Crown Derby
- Villeroy & Boch AG
- Modigliani

2.7. Challenges & Opportunities

Challenges

Regarding the Products

➤ **Adaptation to the Japanese needs**

Recently, consumers have started to purchase interior goods by single item, for home, one person use; this trend, combined with an increase in products diversity are challenging the producers to decide over what kind of products or combination of products would be most adapted to the consumers` needs. Producers should bear in mind that products that do not meet consumers` needs will be discarded despite their price range.

➤ **Limitations for mass-production goods**

The conventional Japanese consumers` view is that European brands are upscale and therefore market opportunities for non-upscale brands are low, making it difficult for them to enter the Japanese tableware market.

➤ **Securing adequate inventory**

A big challenge faced by prospective importers is securing adequate inventory storage space for the fragile merchandise, restocking in due time, as from Europe it takes a longer time. Eventual new entrants should select business partners also by their capability and willingness to solve these issues.

➤ **Shorter shelve life**

When entering the market, one should make in-depth research on Japanese consumers` needs, and ensure that products, even if mass-produced, have features that differentiate them from other products when placed on the store shelves. It should also be noted that the product lifecycle is becoming progressively shorter, with a wider variety of products manufactured in smaller volumes.

➤ **Cheaper Asian copies** (*applicable to all Consumers` Goods*)

It is well known that the Japanese consumers are famous for their continuous demand for new products, new designs of the same product after a shorter period of time than other nations; therefore the European designs are required frequent renewal and innovation as cheaper copies are always arriving from some Asian countries.

➤ **Excessive/Individual Packaging**

The tableware items need to be packed individually, in many cases, for retail purposes; the easiest way is to use transportation packaging and repack, as needed for retail purposes in Japan, even if this would imply extra cost for new packaging and handling the re-packing.

Opportunities

Regarding the Product

The descending trend of the imported quantity of tableware ceramics, for the past five years, is actually reflecting the mass-production market saturated with cheap products from 100¥ Shops; more than 60% of the value of imports is from China, while the opportunities for European products are to be found in:

➤ **Design**

With unique features, individualized and diversified by color, print or shape, adapted to the Japanese sizes and functionalities, European products may find good market opportunities in Japan, considering that consumers are looking for choices that match their personal taste.

➤ **Ethnic**

The demand for products that tell a story about their place of origin, culture and traditions, with a “hand-made touch” are highly appreciated and desired.

Regarding the Japanese Consumer

➤ **Changing lifestyle**

Japanese people started to change their lifestyle from a more traditional home to a modern, western style personal space; this trend is offering an opportunity for European tableware producers to fulfill their needs for a unitary home concept.

Regarding Distribution

➤ **HORECA**

It is the ideal distribution channel for lesser-known brands of medium to high quality porcelain tableware, used for its pure white and high durability characteristics.

➤ **Lifestyle shops**

The lifestyle shops are a recent market trend that fulfills the customers` demands, a new “concept store”, where modern styled products are presented and new product lines are introduced quite often. They usually deal directly with the manufacturers.

➤ **E-commerce**

Using this channel would indeed require that the company has already established its presence on the market; opening an e-shop with one of the most visited sites: Rakuten, Amazon Japan or Yahoo Japan would be an opportunity to retain a higher profit margin. With an 86% Internet penetration rate in Japan, this shopping method is widely used.

➤ **TV Shopping**

European imported products may well find their entry point through TV shopping channels, as they are largely used in Japan, a country with a large percentage of housewives; distributors should be advised to consider approaching these channels.

Halloween Market in Japan

History

Halloween was introduced in Japan by Tokyo Disneyland for the first time in 1997, as a single-day celebration, held on 31st October. Nowadays Halloween is celebrated through various events, thematic attractions and parades (for children and/or adults). Various shops and restaurants decorate their location as early as September. Special Halloween food is served in restaurants, fast foods, bakeries and cakes shops.

Market overview

The Japanese interest in this celebration is growing year by year and adapting to the local consumers` mindset. Japanese way of seeing Halloween is slightly different, besides the typical ghosts, witches and zombies, also Disney characters are being chosen.

On Cookpad, the most famous recipes web site in Japan, almost 7.000 Halloween recipes were available (end of 2015), people started to prepare various food art for kids` bento box¹² and home parties.

Trends

Events like Halloween, Christmas, Valentine`s Day and Sakura are perceived, among younger generation, more and more as an opportunity to spend time with families and friends or as a couple. This trend is partially stimulated by the explosion of social networking services, such as Facebook and Line.

Halloween sales have grown exponentially over the last few years. In **2013**, Halloween sales were estimated at around 100.5 billion yen [**~760 mil €**], during **2014** season, the sales reached 110 billion yen [**~840 mil €**], a 9% increase. Including occasional users, the number of casual Halloween participants were estimated at 20 million, with an average spending of around 1,000 - 1,500 yen [8€-12€]. The **2015** events were expected to generate around ¥122 billion [**~930 mil.€**] in Japan, coming very close to Valentine`s Day, which has been estimated to around 125 billion yen [**~950 mil.€**].

Considering the average age of the people that spend money for Halloween, the proportion of teens, from 10 to 20`s is the highest; in 10 years from now, they will be 20`s to 30`s and as they grow older, their spending power will increase; they are the key drivers to this event growth.

Opportunity / Potential

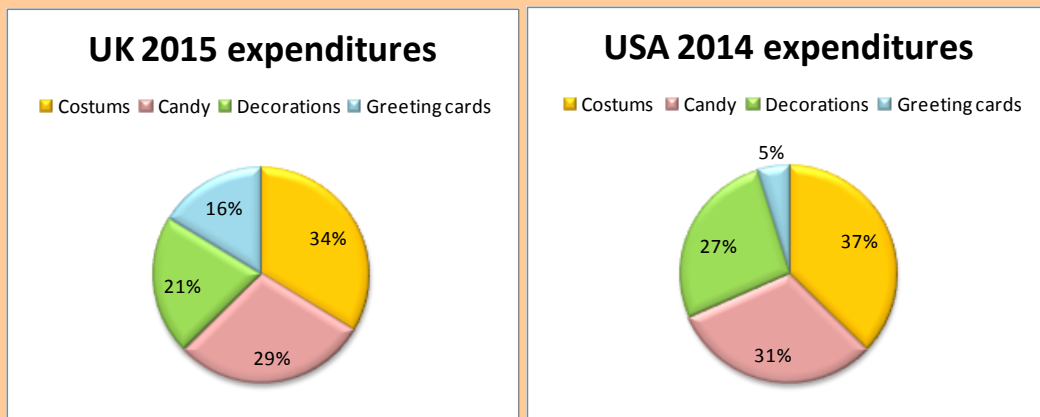
Yasushi Senoo, chief research analyst at Mitsubishi UFJ Research and Consulting¹³ in Tokyo, who has been studying the economic impact of Halloween, said that “the one Halloween area that it is likely to grow in coming years is home decoration”¹⁴

¹² a single-portion takeout or home-packed meal

¹³ <http://www.murc.jp/english>

¹⁴ <http://www.thestar.com/business/2015/10/30/even-minus-treats-japans-halloween-now-a-330-million-frenzy.html>

Considering that on Japanese market there is not yet enough data, for a better image about the home deco growth potential, below there are data from USA and UK market which are also celebrating this event.



With a population of 318.9 millions, **USA** total spending on Halloween 2014 were of \$7.49bil out of which \$2.02bil spent on decorations. The amount spent on tableware would be up to 10% of the decoration (~3% of total), around \$200mil. The average amount spent on Halloween in 2014 was of \$93.42 out of which \$24.79 on decorations.

With a population of 64.1 mil., **U.K.** total spending on Halloween grow from 421mil. GBP in 2013 to 442 mil. GBP in 2014 and 461 mil. GBP in 2015, placing this holiday on the 3rd place after Christmas and Easter. The decoration sector also grew from 87mil GBP in 2013 to 92mil GBP in 2014 and 97mil GBP in 2015, out of which, the tableware spending have been estimated to 2.4%, approximately 11mil GBP.

Extrapolating, the decorations market in **Japan** for Halloween has a high potential of growth to 20% of total spending in the next 5 years, taking 2015 spending as reference, but also picturing an overall spending growth, the home deco sector can reach ¥24 billion [~185 mil.€] spending out of which tableware may get close to ¥2.4 billion [~18.5 mil.€].

Local Key Retailers

Donki is one of the chains where Halloween was present with costumes, make-up, accessories, sweets and decorative items. They opened the online shop on Sept. 10th (2015). In 2015 they have doubled the number of costumes variety and tripled the number of make-up items sold for this event, compared to previous year. They declared that the total sales of the Halloween department in 2014 were 10 times bigger than in 2009.

Loft, a highly appreciated shops chain in Japan, has a Halloween department as well and their event related sales are growing with around 40% from year to year, during the last six years.

Amazon.co.jp, one of the nation's biggest online retailers, expects an increase in sales this year through its Halloween store section; in 2015 they have opened the Halloween section on 28th of August, two weeks earlier than the previous year.

Rakuten's Halloween section also features various goods; Japanese culture places great emphasis on gift giving to build ties and reciprocal gifts as a show of appreciation. Appearances for gifts, food and events, is also important, with concerns for the appropriate wrapping, tableware and decorations. Those organizing home parties can purchase party sets with cups, plates, utensils and balloons.

Seven & I Holdings, one of the biggest supermarket chains, for the first time this year, stepped up its Halloween sales campaign by creating Halloween sections at all of its Ito-Yokado outlets.

Conclusion

As Halloween celebration is gaining ground and starting to scatter into home decoration field, the Japanese consumer will be open to purchasing besides costumes, also tableware, decorations and other innovative products. The potential is going from small decorative items to mugs, tea or coffee cups and saucers, desert plates, with attractive shapes and designs.

3. CONSTRUCTION & HOUSING

This chapter covers the ceramic wall and floor tiles, used in construction and re-housing, as decorative material rather than for their functionalities: enhanced energy efficiency and thermal comfort.

The sanitary-ware consumption follows closely the wall and floor tiles usage, and all together the construction market trends.

Other ceramic construction materials, like clay pipes, brick and roof tiles are less aligned with the Japanese market demands.

3.1. Construction Market Overview

Residential spaces (Housing and Apartments)

Every country and every nation has its own living style; some are being similar to others.

Japanese living lifestyle on the other hand, is very different from the European living space and therefore, it is very important for the European producers to understand, in detail, what kind of materials the Japanese commonly use and how.

Housing

➤ **Average house age: 30**

The average age of a house, at time of demolition is around 30; consequently, the value of the residential building starts to depreciate quickly after construction – with many houses being estimated to retain very little or even no value after 10 or 15 years (especially wooden houses), being subject to demolition costs upon renewal. Even if the legal lifespan of wood-frame housing is 30 years, 10% of wood-frame housing, statistically vanish within 18 years after the home is newly built and almost half of wood-frame houses are destroyed within 33 years.

➤ **Brand new, bought once in a lifetime**

Japanese people love brand new houses, especially as they buy a house only once in a lifetime, comparing to Europe where, with small differences from country to country, people start from buying a one bedroom apartment when they are young and then “sell and buy” as their family grows, their income increases and their need for space is following; they also “buy and sell” whenever they decide to move from one place to another (town, region) or when they retire in a different area or a smaller space, easier to administrate.

➤ **Strong attachment to family land**

In Japan on the other hand, people have a strong attachment to family land, which often remains in the possession of an individual family over several generations. A cultural affinity with ‘freshness’ and ‘modernity’ is also a driver for re-housing, as landowners opt to replace their apparently outmoded homes with an upgraded version.

➤ **Do not fix but scrap and rebuild**

Japan rarely fix or modernize their homes themselves, normally they hire professional builders, who, if the building is approaching its presupposed lifespan of 20 to 30 years, will encourage the homeowners to ‘scrap and rebuild’. The private home-owners willingness to demolish their homes and re-build can be further explained by the separation of the value of land and zero value of the old building and also by the uncomplicated replacement due to the large “ready-made” mass produced house industry.

The previous showed characteristics of housing are indicating a low usage of tiles when constructing a house in Japan as the investment in a new house is kept to a minimum since the house value depreciate fast. Tiles are a medium to long term investment that would not add value to a house.

Types of houses

Like everywhere else in the world there are several types of constructions, following the Japanese style:

➤ **Traditional house¹⁵**

The frame of the house was made of wood and the weight was supported by vertical columns, horizontal beams and diagonal braces. In order to avoid the ground moisture, the floor was elevated several tens of centimeters. Areas like kitchen and hallways had wooden flooring, while rooms were covered with “tatami” made from woven rush grass. In the old days, the walls were made of woven bamboo plastered with earth on both sides. Nowadays, many different types of materials have been developed, and often used.

Japanese houses developed over the years by combining traditional forms with modern technology to improve their resistance to fire and their convenience. Recently though people are beginning to look anew at the traditional methods of building houses, which are environmental friendly.

➤ **Mass production housing¹⁶**

The establishment of PHM (Prefabricated Housing Manufacturers) such as Daiwa House in 1955, Sekisui House in 1960 and Pana Home in 1963 coincided with a period of consistent growth in the housing market, driven primarily by the process of replenishing the housing stock damaged during World War II. That was the beginning of using the industrialized houses; since then, the manufacture of this product improved considerable, nowadays the producers can offer large surfaces houses, with modern architecture, from standard made compartments, easy to assemble on the spot, the price though is not cheap.

Japanese housing manufacturers developed their own high-tech production rely on computerized design and inventory control systems. Their prefabricated homes are no longer merely repetitive, mass-produced housing; the interior and exterior design compositions, as well as the space arrangements are well customized by the end users themselves.

¹⁵ <http://web-japan.org/kidsweb/virtual/house/house01.html>

¹⁶ <http://discovery.ucl.ac.uk/5082/1/5082.pdf>

Today's buyers may prefer to purchase industrialized housing for the following **reasons**¹⁷:

- ↳ for their higher quality regarding durability, insulation performance, air-tightness;
- ↳ the 'reliability' of the large-scale company (brand name);
- ↳ many homeowners decide to purchase industrialized housing (selling price 8% more expensive than conventional), after being convinced by the sales staff's explanation of their product and service.

Apartments

The living space has improved considerably over the decades, even though the tiny apartments can still be found in large cities, and especially central Tokyo. Most rooms come with tatami floors or wooden floors, while fully carpeted rooms are quite rare. Most apartments come with a bathroom, a toilet room and an entrance area (“genkan”) where the shoes are taken off. Old buildings with small apartments are called “apato” ("apartment"), while modern buildings with larger apartments are referred to as "mansion".

While in Europe the tiles are used in the kitchen, bathroom and entrance hall, sometimes in the living spaces as well, in Japan the ceramic tiles are commonly used at the entrance area, “genkan”. The Japanese bathroom is a prefabricated, standard dimensions cubicle, made of GRP (Glass Reinforced Plastic); chosen for its convenience of price and time to install when the building is under construction.

Non-residential:

➤ **Office buildings**

The office buildings in Japan are concentrated in the biggest cities, where the demand is high; in general, there are skyscrapers and tall buildings covered in glass. The finishing materials used for flooring are carpet and linoleum, with consideration to the lighter weight and earthquake affects. Tiles are most likely to be found only on the 1st floor lobby (ground floor), as reach design impression and better suited materials for high traffic.

➤ **Retail buildings (Commercial Centers)**

The commercial centers have the same features as the office buildings; the newest locations are using the latest construction materials; the basement is usually utilized as a food court.

➤ **Logistics properties or factories**

Since these spaces are used for production and logistic activities there is no need to invest in an outstanding image so the finishing material would be most likely concrete.

➤ **HORECA**

In order to induce a luxury image the lobby of hotels, the restaurants and the traditional “onsen” areas, tiles are always used as finishing materials; sometimes there are also used in the rooms private bathrooms.

¹⁷ <http://www.purekvo.or.jp/English/index.html>

3.2. Trends in Construction Market

3.2.1. Construction Market

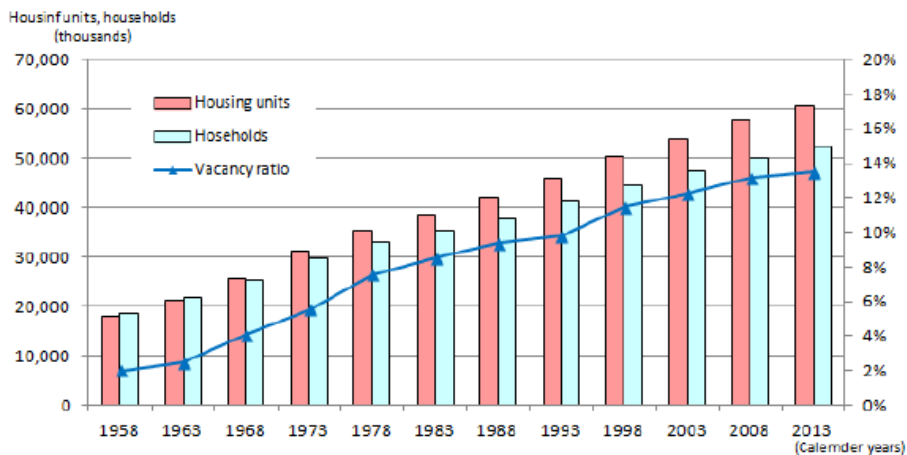
Residential – Housing

The value of the construction industry in Japan is on a growing trend, driven by investments in public infrastructure, renewable energies, commercial projects, rebuilding after the 2011 Japan Earthquake, preparing for the 2020 Olympics and also improvements in consumer and investor confidence.

➤ Stock Evolution

Although the demand for new housing is stagnating due to increasing price of houses while the incomes are stagnating, the total number of Housing Units continued to grow gradually. In 2014, before the rise of the consumption tax from 5% to 8%, a rush to purchase houses was seen.

Figure 23. Total Number of Housing Units, Households and Vacancy Ratio

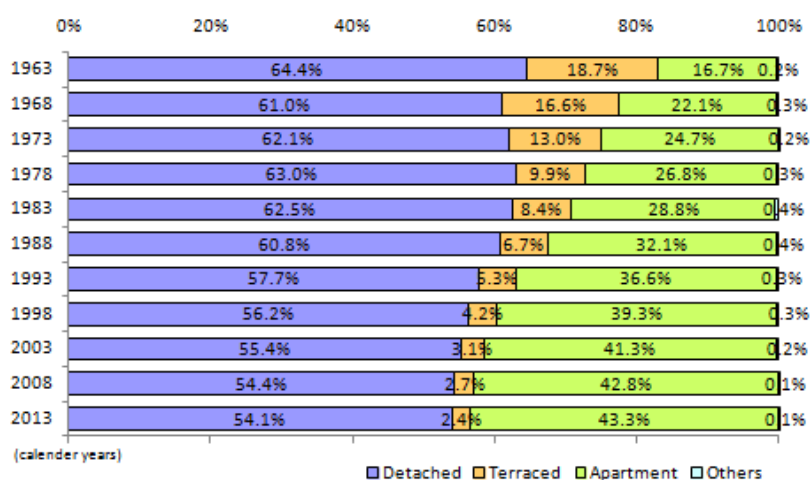


Source: Annual Report on Housing and Land, Ministry of Internal Affairs

➤ Types of Housing

During the last fifty years the Japanese inhabitants' preferences for the building structure and the construction materials have changed. While in 1963, the detached houses made up a majority of 64.4% of the housing stock, terraced houses 18.7% and apartments 16.7%, by 2013, the detached houses percentage fallen to 54.1%, while terraced houses summed up only 2.4%; the number of apartments instead, almost tripled to 43.3% of the total housing stock. The population preferences shifted towards an easier lifestyle, as life in apartments require less investment as space is usually smaller and safer as modern construction materials started being largely used.

Figure 24. Housing Types (% of house stock, exclusively residential)



Source: Annual Report on Housing and Land, Ministry of Internal Affairs

➤ Secondary House Market

The Japanese housing market is “characterized by active housing construction sustained mainly by the demolition of existing houses, leading to a ‘scrap and rebuild’ spiral”. MLIT Construction Statistics show that the ratio of demolished houses to new houses was 42% in 1963, peaking in the mid-1980s at 54% and declining to 39% in 2003.

Estimates suggest that existing (second-hand) housing market accounts for only around 14% of Japan’s housing market, very low compared with 88% in U.K. and 68% in France for example¹⁸. A general concern is that this short demolition and rebuilding cycle has an impact on the global environment as it increases the amount of generated industrial waste. Therefore, it is necessary to revitalize the secondary market for existing houses through improvements that will enable buyers to purchase second-hand housing with confidence. The Government goal is to double trade value of the existing houses and renovation market by 2020. (2012 by Ministry of Land, Infrastructure and Transport)

Initiatives to encourage Secondary House Market development

➤ Inspections

GOJ established “The Defect Insurance System on Trading Existing Housing” in FY2009, combining home inspection and warranty with promotion of the same system. In order to insure the confidence of consumers regarding the inspection of the current situation of second-hand housing before buying and selling, and to encourage the diffusion of such understanding, the Guidelines for Existing Housing Inspection was compiled in June 2013. It provides the principle points of concern regarding the inspection methodology and provision of services.

➤ Prices

Revision of the price assessment so that the price valuations, to properly reflect the quality, maintenance and management situation of the existing housing, including remodeling. The operation of a system for providing real estate transaction pricing and other information

¹⁸ http://www.bcj.or.jp/c20_international/agenda/src/QL2015_E.pdf

held by designated real estate distribution organizations via the Internet (Real Estate Information Network System, or REINS) started in FY2007.

From FY2006 "Land General Information System" started to operate on the home page of the MLIT, to provide information of individual transaction prices for real estate, based on the information of questionnaires sent to purchasers registered in the real estate register.

In 2014, the taxation system was revised by adding measures for special exceptions for reduction of registration and license taxes for persons who acquire used housing that has been improved to a specified level.

➤ **Useful life of Housing**

The Basic Plan for Housing (National Plan), drawn up in September 2006 and reviewed in March 2011, indicated a transition to a stock-based housing policy, resulting in measures that encourage initiatives to extend the useful life of housing.

To extend the useful life of housing, it is required to construct houses that boast excellent durability and that are easy to manage and maintain. At the same time, it is necessary to promote systematic inspections and repairs, and to allow smooth changes in interior decorations and facilities in accordance with the daily lives of the inhabitants.

It is also important to assist the secondary market of existing houses by development of the record maintenance system of housing information, such as records of how dwellings were built, maintained and managed, and improving information service methods on performance and quality of existing housing.

From FY2014 GOJ started to promote the development of “one-stop services” in cooperation with building lots and building transaction business companies and companies involved in the remodeling projects.

As the total number of housing units increased and GOJ initiatives to encourage secondary house market development, the market will focus on remodeling existing spaces; this could be considered as an opportunity for tile producers to emphasis the benefits of using tiles and convince the consumers to use this type of material instead of the traditional tatami or linoleum.

Non- Residential

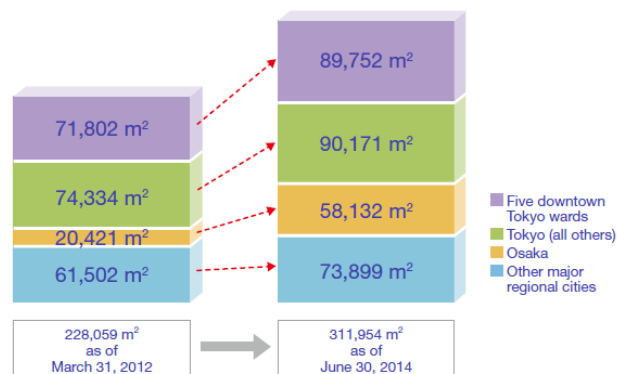
➤ **Office – raising demand due to growing companies & relocation**

Demand for office spaces in Tokyo and other major Japanese cities have been growing recently; consequently, in these areas, the number of new office buildings is expected to grow during the following years, a development likely to prompt many businesses.

As of October 2014, according to a survey by Mori Building, 37% of companies headquartered in central Tokyo were planning to relocate their offices as many companies have expanded along with their staff necessity; a 4% increase compared to 2013. Office buildings have previously been concentrated in the capital's Marunouchi and Otemachi areas, but newer buildings are more spread out.

Real estate brokerage Sanko Estate predicts that the supply of large buildings with at least 660 sqm per floor will jump 42% in central Tokyo¹⁹.

Figure25. Trends in Floor Space of Office buildings for Lease²⁰



Source: Obayashi Corporate Report 2014

➤ Hotels – new investments²¹

2020 Olympics in Tokyo is what's fueling many hotel chains management and investors to make investments in new hotels and to renovate old accommodations, in advance of the games and to fulfill the needs of the growing tourism trend in the country.

In an article, written in July 2015 for Reuters, it was mentioned that “the government is aiming to attract 20 million visitors by 2020, when Tokyo hosts the Olympics, in a bid to help revitalize the world’s third-biggest economy.”²² According to the JNTO, the estimated total number of international visitors to Japan in 2015 reached 19.7 million (+47.1% from 2014), recording the highest growth rate since 1964 when JNTO first began to collect the statistics. It seems that surprisingly, the target was almost reached.

The flow of tourists visiting Japan is stretching the ability of hotels to accommodate them; in Tokyo, which has about 100,000 hotel rooms, only 7,600 rooms are scheduled to be added in the next three years, according to STR Global, a research firm for the hotel industry. The slow pace of growth is due to rising land prices and construction costs.

Although the non-residential market is a less attractive market for tile producers it can be considered as a niche for the products suitable for high end consumers.

¹⁹ <http://asia.nikkei.com/Politics-Economy/Economy/Slew-of-new-office-buildings-coming-to-big-cities?page=1>

²⁰ https://www.obayashi.co.jp/english/ir/corporate_report/ir2014en.pdf

²¹ <http://www.hotelmanagement.net/development/u-s-company-joins-surge-to-develop-hotels-japan>

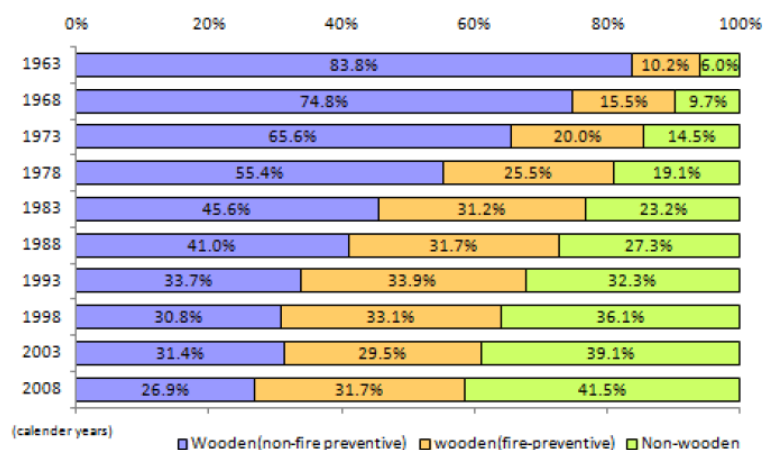
²² <http://www.japantimes.co.jp/news/2015/07/31/national/japans-tourism-boom-drives-real-estate-developers-to-convert-offices-into-hotels/#.VswNYH197IV>

3.2.2. Building Construction Materials ²³

➤ **BCM usage tendency**

Regarding the tendencies in construction materials used, wooden houses dropped significantly from 94% in 1963 to 58.6% (26.9% non-fire preventive, 31.7% fire preventive) in 2008, while the percentage of non-wooden housing expanded from 6% in 1963 to 41.5% in 2008; there has been a steady shift toward the construction of non-combustible and fire-retardant housing.

Figure26. Housing Structures (% of house stock, exclusively residential)



Source: Annual Report on Housing and Land, Ministry of Internal Affairs

The increase of using non-wooden materials for construction is implying a shift towards more resistant construction where the consumer may choose tiles for flooring.

➤ **Rising Construction Costs**

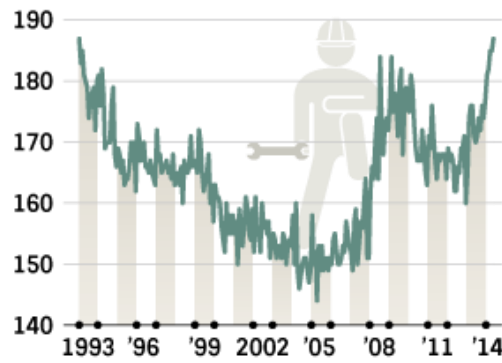
Rising construction costs are driven by a demand-supply gap that has spread quickly in the industry. The number of skilled construction workers has fallen as the country has spent less on public works projects over the medium to long term. Reconstruction after Japan's 2011 earthquake and tsunami, measures to combat aging infrastructure and facility development for Tokyo's hosting of the 2020 Olympic Games sharply increased construction demand in the past couple of years.

Construction costs in Tokyo alone, as of May 2014 were up 11 % over the same period of the previous year; the construction cost per square meter of floor space was up 9% compared to the earlier year, at 187,000 yen/m² (\$1,820)²⁴.

²³ http://www.bcj.or.jp/c20_international/agenda/src/QL2015_E.pdf

²⁴ <http://asia.nikkei.com/Politics-Economy/Economy/Japan-s-construction-costs-at-21-year-high>

Figure27. Construction cost per square meter of floor space (in thou. Yen)



Source: MLIT Japan

As a consequence of the construction costs increase, the construction building trend grew slower and the consumption of tiles followed the same trend.

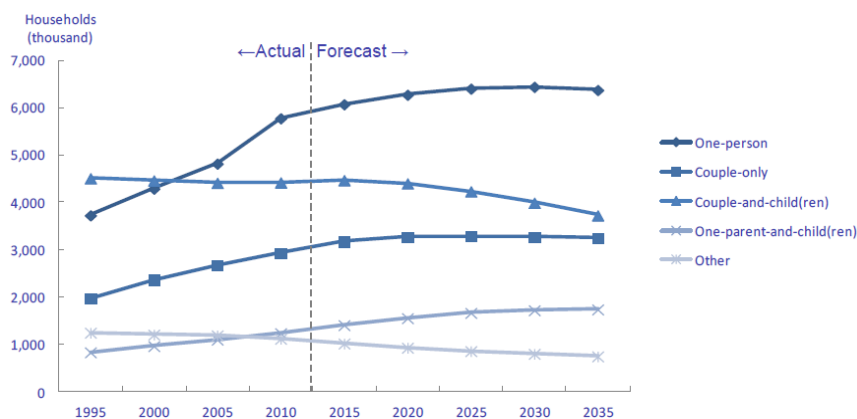
3.2.3. Consumer

➤ Increasing number of single-person household²⁵

In Japan single-person dwellings is expected to reach 40% of all households by 2035, as concluded in a Research conducted by IPSS; the total number of households in Japan was projected to rise from 51.84 million in 2010 to a peak of 53.07 million in 2019, and then drop due to the current trend of marrying late in life or not at all, with consequences in low birthrates and depopulation.

The increase of one-person household is projected to rise from 4.98 million in 2010 to 7.62 million in 2035, with a sharper raise of the elderly households²⁶.

Figure28. Number of Households by Family Composition



Source: IPSS Research

The one-person household takes different buying decisions than a family, a single person chooses alone, so he/she could be targeted as a client for European more expensive decorative tiles.

²⁵ https://www.nri.com/~media/PDF/ip/opinion/r_report/kinyu_keizai/japanreport2015_en.pdf

²⁶ http://ajw.asahi.com/article/behind_news/social_affairs/AJ201301190046

3.3. Regulation, Labeling Distribution

Regulation

1) Regulation and Procedures at the Time of Import

The special legal regulation, related to the import of tiles in Japan, refers to the products containing asbestos, which are prohibited under the "Industrial Safety and Health Act" and the "Foreign Exchange and Foreign Trade Act".

➤ Industrial Safety and Health Act²⁷

The inhalation of asbestos has the potential to cause lung cancer and other diseases. Consequently, "Art.55" of the Industrial Safety and Health Act has prohibited the manufacture, import, transfer, provision or use of asbestos or formulations or other products that contain 0.1% or more (by weight) of asbestos, since September 2006. The building materials included in this category are: asbestos cement cylinders, extruded cement plates, decorative roofing slates, fiber-reinforced cement plates, and ceramic siding.

As a voluntarily move toward enhancing safety and health, all importers are required to submit a "certificate", guaranteeing that their products do not contain asbestos, together with the "results of the analysis" of such products. When an importer conducts business in a country where the manufacture of asbestos-containing products is not absolutely prohibited, the importer should make every effort to confirm that a product contains no asbestos, both through analysis of a sample and other means.

➤ Foreign Exchange and Foreign Trade Act²⁸

"The purpose of this Act is, on the basis of the freedom of foreign exchange, foreign trade and other foreign transactions, to enable proper expansion of foreign transactions and the maintenance of peace and security in Japan and in the international community through the minimum necessary control or coordination of foreign transactions and thereby to ensure equilibrium of the international balance of trade and stability of currency as well as to contribute to the sound development of the Japanese economy."

2) Regulations and Procedural Requirements at the Time of Sale

Regarding the legal regulations governing the sale of building materials, there are labeling requirements under the terms of the "Act against Unjustifiable Premiums and Misleading Representations". In Japan, the construction of all buildings is subject to regulations under the "Building Standards Act", and the sale or contract of housing is subject to the provisions of the "Housing Quality Assurance Act".

²⁷ https://www.jetro.go.jp/ext_images/en/reports/market/pdf/guidebook_building_stone_tiles.pdf

²⁸ <http://www.stepto.com/assets/attachments/4066.pdf>

➤ Act against Unjustifiable Premiums and Misleading Representations²⁹

The Act prohibits the exaggerated advertisement or false representation of a product that would mislead consumers into believing that the product is better than it is in reality. Any business that markets its product is required to submit a reasonably evidential document, certifying that its representation is not unjustifiable. Unless relevant information is provided, the product shall be judged to have a misleading representation. Under the terms of the Act, the ambiguous representation of a product, whose country of origin is difficult to determine, is banned as being a misrepresentation.

➤ Building Standards Act³⁰

The Building Standards Act stipulates minimum standards relating to design and construction methods for building sites, equipment, structures and purposes.

The Act specifies two types of technical design standards related to the buildings structures and equipments: "specification standards" and "performance standards"³¹.

- ↳ "**Specification standards**" define building specifications such as the materials to be used, as well as their shapes and dimensions, but do not define processes for materials or construction methods.
- ↳ "**Performance standards**" define physical performance values, by which a building structure, material or equipment can be adopted provided they satisfy the values.

In recent years, the stipulation for the design standards has shifted from "specification standards" to "performance standards", due to the fact that the "performance standards" have a higher level of flexibility in terms of design and construction than the "specification standards" and allow the introduction of new technologies more easily. This aspect encourages the engineers to use their discretion in design and construction and increases technological competitiveness among them, resulting in shorter construction periods and lower costs.

➤ Housing Quality Assurance Act³²

The Housing Quality Assurance Act mandates the housing sellers to provide a 10-year warranty against defects (warranty against repair) for the basic structural elements of a house, in any agreement drawn up when a customer acquires a new house. The Act also establishes a housing performance indication standard; under which, third-party organizations (performance evaluation bodies) can assess the housing performances. If a "housing agreement" is concluded with an attached "housing performance evaluation" issued by the third party (performance evaluation body), the content of the assessment will be regarded as details of the agreement.

²⁹ http://www.cas.go.jp/jp/seisaku/hourei/data/aa_u.pdf

³⁰ http://www8.cao.go.jp/kisei-kaikaku/oto/otodb/english/houseido/hou/lh_06010.html

³¹ https://www.jetro.go.jp/ext_images/en/reports/market/pdf/guidebook_building_stone_tiles.pdf

³² http://www8.cao.go.jp/kisei-kaikaku/oto/otodb/english/houseido/hou/lh_9999-71.html

3) Regulations and Procedural Requirements at the Time of Application of Q-CAT³³

The development in standardization and regulation at national level, affecting ceramic tiles, are the introduction of Q-CAT (Quality accreditation system for Combination of organic Adhesive and exterior Tile).

The purpose of this accreditation system is to secure a higher quality installation for the exterior tiles bonded with adhesive, in order to decrease the risk of tile falling, especially during an earthquake.

The outcomes of the implementation of this standard are³⁴:

- ⇒ A decrease in the risk of tile fall;
- ⇒ High quality of design;
- ⇒ Shortening of installation method and time;
- ⇒ Small amount of carbon dioxide emission.

Labeling³⁵

➤ Japanese Industrial Standards (JIS)

JIS covers industrial and mineral products with the exception of medicines, agricultural chemicals, chemical fertilizers, silk yarn and foodstuffs, agricultural and forest products.

The clay tiles have the following symbols: JIS A5209, specifying the classification, grade categorization and representation. The letter indicates the technical area (JIS Division) and the 4-digits number are added to locate the JIS within the Division.

Under the Act, all industrial products, specified by JIS, are certified by a private third-party organization (Accredited Certification Body) and registered by the central government.

The Accredited Certification Body conducts a series of tests, to verify the products compliance with JIS, and audit the Quality Management System of the facilities where the products are manufactured. Any product manufactured at the factory that passed the audit and the testing, may carry the "JIS mark" on them. The "JIS mark" scheme is applicable to any products that satisfy all the product quality requirements, test methods for quality verification and other related conditions. All the requirements must be met at once. The JIS mark representation demonstrates that the product conforms to the JIS standards and satisfies given criteria.

³³ <https://www.q-cat.net/>

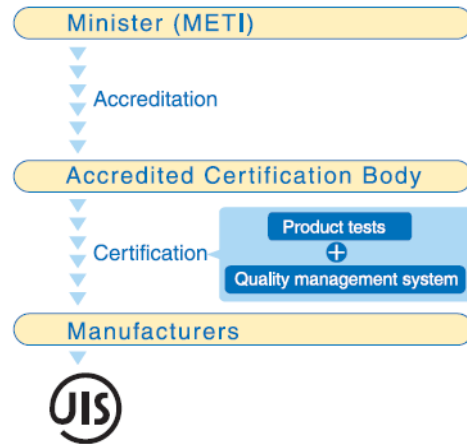
³⁴ <http://www.ceramic.com.ua/wp-content/uploads/2012/07/wctmf/japan.pdf>

³⁵ <https://www.jisc.go.jp/eng/jis-act/index.html>

Figure29. JIS Certification Procedure



Figure30. New JIS Mark Scheme



Source: Japanese Industrial Standards Committee

Any company, manufacturer, seller, importer, exporter desiring to obtain “JIS mark”-based certification need to check the scopes and geographical areas, in which the candidate Accredited Certification Bodies would provide the JIS certification service.

The scope of certification is different depending on the respective Accredited Certification Bodies; therefore, every Accredited Certification Body has the obligation to disclose necessary information such as the dealing scope and geographical area of certification on its own web site.

➤ BL (Better Living) Labeling System

The BL label is to be displayed on all housing components that have been recognized as superior in quality and performance, certified. The BL label is a symbol of safety and quality, and provides consumers with additional peace of mind. BL components with additional features, designed in particular to meet societal demands regarding energy conservation, assistance for the elderly etc., are certified as "BLs components."

All BL components displaying the BL label are covered by a repair warranty which is free of charge from two to ten years, depending on the component. In the event of an accident, BL insurance will be provided, covering the products' warranty and indemnity.



The BL label

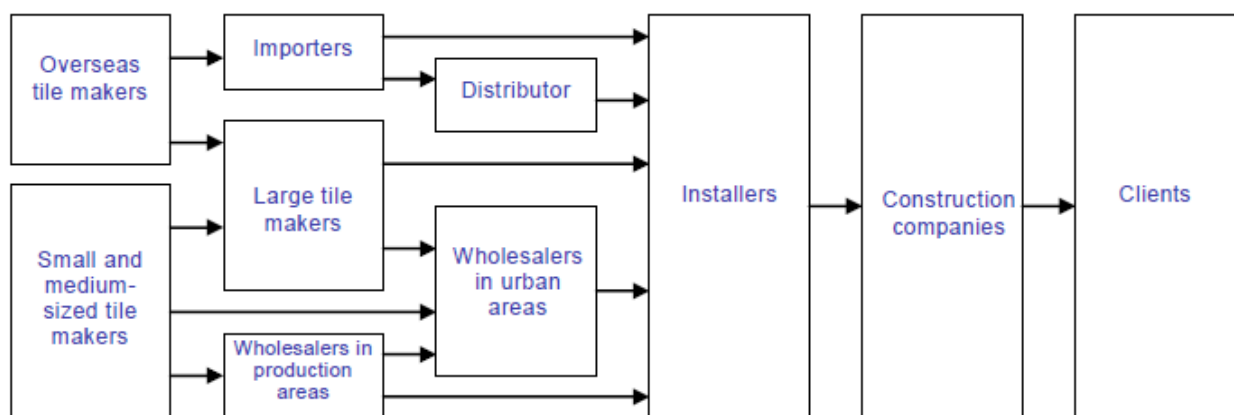
Distribution

Interior tiles are domestically produced, mainly by large manufacturers, who usually integrate production at their own factories, encompassing everything from raw materials mixing until the finished products.

On the other hand, exterior and floor tiles are frequently produced by small and medium-sized tile makers, including OEM based for the large makers³⁶.

The ceramic tiles produced by larger companies are sold through wholesalers in urban areas to small and medium-sized installers or directly to large installers, while the products of small and medium-sized makers, are collected by local wholesalers in production areas and sold directly to installers.

Figure31. Distribution channels for ceramic tiles



Source: JETRO Guidebook for Exporting Tiles to Japan, 2011

Orders for ceramic tiles installation are received, in most cases, by tile installers from construction companies (general contractors, home-builders, etc.), covering the materials and their processing. The tile installers are usually the direct users of the ceramic tile, as recently, the construction companies, aiming to shorten the distribution channels, have been procuring ceramic tiles directly from tile makers to cut costs and then separately hiring tile installers to do the installation work.

In recent years, architectural design offices and home builders have started to stipulate particular brands and even particular models to be ordered and used.

Importers generally import from abroad in container-size lots, store them in their own warehouses, and then sell them to their distributors or installers. In some cases, large domestic ceramic tile makers also import directly from abroad in order to strengthen their product lines and/or diversify.

³⁶ https://www.jetro.go.jp/ext_images/en/reports/market/pdf/guidebook_building_stone_tiles.pdf

3.4. Key Players

From the tiles producers' perspective, the key players within the Japanese market are the groups of professionals where the BCM buying decision is made. In general, the BCMs are specified by architects, except for the selection of tiles and other finishing materials which, in order to minimize dissatisfactions, are selected with the participation of the owners. The proportion of decision-makers for the selection of ceramic materials is shown below:

Table29. Selection of construction materials by decision-maker

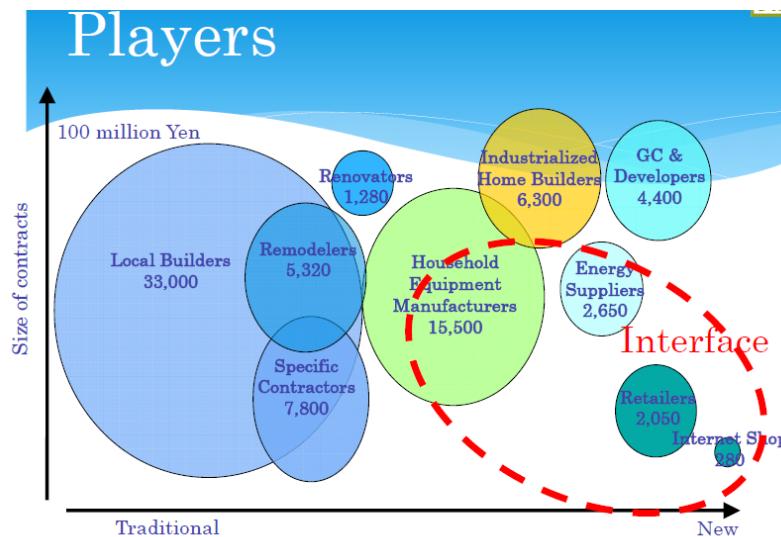
Construction material	Decision-maker			
	Owners	Architects	Contractors	Others
Tiles and bricks	20.8%	73.5%	4.9%	0.8%
Clay or ceramic roof tiles	25.9%	57.0%	15.8%	1.3%

Source: Ingerosec

Key Players in the Renovation Market

The renovation market is the most promising sector for the usage of imported “floor and wall ceramic tiles”, as the recent trends show an increase in consumers' desire to renovate rather than “scrap and rebuild”, that offering the possibility to allocate a bigger budget for the interior decoration. The major players in the Re-housing Market are illustrated below:

Figure32. Key Players in the Renovation Market



Source: “Outline to Renovation market and business strategy analysis” by Fuji Economy Co

➤ Retailers & Internet Shops

The retailers and the specialized internet shops are the newest type of interface between producers, constructors, renovators and the final users – house-owners. These shops are creating a link to the professionals that have the ability to perform the home remodeling; the e-shops (Rakuten, Amazon, ...) have pages where consumers can find all the needed information, related to materials, techniques (DIY) and professional contractors.

➤ **Renovators & Remodelers & Specific Contractors**

These contractors are connected to constructors and they are specialized in particular jobs (e.g. applying tiles); they are working locally, located by regions and sub-regions. They are not important in the decision making process but they may influence the “demand for tiles” as they can use and promote it.

➤ **Architects**

Architects can be distinguished based on the type of the organizations and the activities they get involved in:

- ↳ well-known international architects, innovative architects who participate in design competitions;
- ↳ large-scale, private architecture firms;
- ↳ small, independent architecture firms that sometimes include only a few employees.

As designers, they are fully responsible for the selection of materials and equipment.

Table30 – TOP 10 Architectural Design Offices in Japan (FY 2013)

Rank	Name of Design Office	Design+ SV Sales (MM JPY)	No of 1 st -class Architects
1	NIKKEN SEKKEI LTD	35,072	783
2	NTT FACILITIES, INC.	25,743	700
3	MITSUBISHI JISHO SEKKEI INC.	15,773	318
4	NIHON SEKKEI, INC.	14,507	443
5	YAMASHITA SEKKEI INC.	9,314	284
6	KUME SEKKEI CO., LTD.	9,245	320
7	JR EAST DESIGN CORPORATION	8,617	244
8	AZUSA SEKKEI CO., LTD.	7,433	252
9	ISHMOTO Architectural & Engineering Firm	6,743	201
10	AXS SATOW INC	6,409	171

Source: “NIKKEI ARCHITECTURE” September, 2014

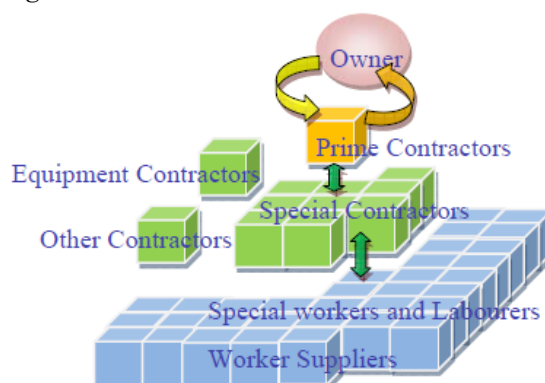
➤ **Constructors**

A few major constructing companies, with an experience of over 200 years, are granted with a vast authority, while owners and architects generally accept their cost estimation, design, feasibility and other details.

The construction sector is defined by the Construction Business Act as a business, related to undertaking construction works from either the prime contractor or sub-contractor³⁷. Construction work is divided into 28 categories by MLIT; each of them requires a specific license from MLIT or a prefectural government. These work categories are contracted as a single package by “prime contractors” and then subcontracted as presented in Figure 33.

³⁷ http://www.eu-japan.eu/sites/eu-japan.eu/files/SustainableConstruction_final.pdf

Figure33. Contractors and Subcontractors



Source: “Outline to Renovation market and business strategy analysis” by Fuji Economy Co

“Prime contractors” usually subcontract to small-scale specialists or subcontractors once the contract has been signed with clients/owners and supervise the construction planning, the quality management, the schedule management, the cost management and coordination with clients/owners. Prime contractors are liable (under Civil Code) for the integrity of structures and waterproofing for a decade-long period following construction and it falls under their responsibility to arrange insurance for that purpose. Accordingly, guaranteeing structural durability for a certain period is a strong selling point.

Table31. List of Top 10 Prime Constructor Companies, by Revenue FY 2014

Rank	Japanese Constructors	Revenue (bil¥) 2015.3
1	Obayashi Corp., Tokyo, Japan	1,774
2	Kajima Corp., Tokyo, Japan	1,694
3	Taisei Corp., Tokyo, Japan	1,573
4	Shimizu Corp., Tokyo, Japan	1,568
5	Takenaka Corp., Osaka, Japan	1,150
6	Chiyoda Corp., Yokohama, Japan	481
7	Kinden Corp., Tokyo, Japan	468
8	Toda Corp., Tokyo, Japan	420
9	Maeda Corp., Tokyo, Japan	405
10	Nishimatsu Construction Co. Ltd., Tokyo, Japan	343

Source: Japan Construction Companies³⁸

Key Japanese Wall & Floor Tiles Producers

The local producers of ceramic tiles are important in terms of understanding the Japanese market expectations, the existing products offered and the market limitations.

Nikkei Architecture published in November 2014, as a result of a Questionnaire Survey, “the most preferred local tiles makers ranking”, with scores based on the following major aspects:

- ☞ quality (functionality, durability, ease, energy reduction),
- ☞ design (design, variety, order-made),
- ☞ cost (cost performance, purchasing price, variety),

³⁸ <http://www.misonet.com/Directory/Contractors/japanese.htm>

↳ technical support (accessibility to information, availability of samples, after-service).

Table32. Ranking of most preferred local tiles makers by Architects³⁹

Rank	Name of Maker	Want to Use	Already Used	Still Unused
1	LIXIL	92.9%	86.9%	6.0%
2	TOTO	87.6%	79.1%	8.5%
3	Danto	70.9%	59.6%	11.3%
4	ABC Trading	61.7%	44.0%	17.7%
5	Advan	59.6%	47.9%	11.7%
6	Nagoya Mosaic	57.4%	45.0%	12.4%
7	Nittai Kogyo	44.7%	35.3%	9.2%
8	Kunishiro Taika Kogyosho	43.9%	24.8%	19.1%
9	Hirata Tile	38.3%	23.8%	14.5%
10	KY Tile	32.7%	24.5%	8.2%

Source: Nikkei Architecture, November 2014

Furthermore the first two choices Lixel and Toto are detailed:

LIXEL

LIXEL is the Japanese market leader of manufacture and sale of building materials and housing equipment, as well as related services, including ceramic tiles. They are a globalized brand, operating in more than 130 countries and employing more than 80,000 people worldwide. They recently (November, 2015) became the Gold Partner for Tokyo 2020 Olympic and Paralympics Games in the building components & bathroom and kitchen fixtures category⁴⁰.

The company was established in 1924 and since then, it grew steadily by combining various complementary businesses into what became in 2011 LIXIL Corporation, a brand group supported by several subsidiaries with various core businesses, business alliances and joint ventures⁴¹.

In April 2013, LIXIL Corporation's "Development and Manufacturing Divisions" were re-organized. As a result, now they have three core companies:

- ↳ LIXIL Products Company,
- ↳ LIXIL Japan Company, which is in charge of domestic sales and marketing
- ↳ LIXIL Global Company, which is responsible for overseas business divisions

In Japan, they have around 19,000 employees working in 41 locations.

LIXIL Products Company has realigned its businesses into nine strategic business units (SBUs), as seen in Figure34, which they considered to be appropriate for serving the customers, the markets, and the architects` needs. Each of these SBU is operated as a fully

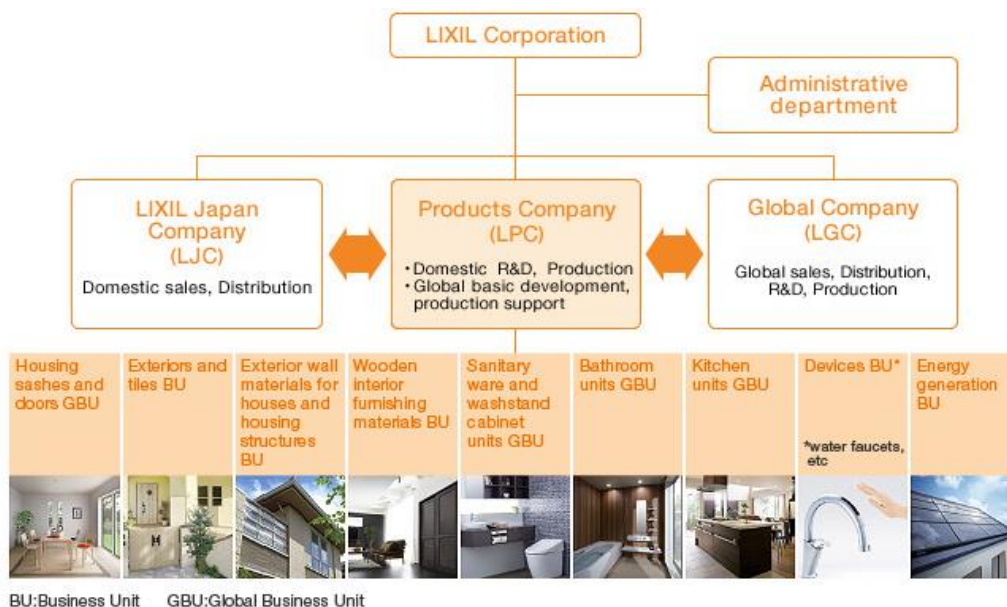
³⁹ http://www.eu-japan.eu/sites/eu-japan.eu/files/SustainableConstruction_final.pdf

⁴⁰ http://global.lixil.co.jp/pdf/20151126_Tokyo2020_Gold_Partner_ENG.pdf

⁴¹ <http://www.lixil-group.co.jp/e/about/history/default.htm>

integrated value chain extending from product marketing, development to manufacturing, sales, promotion and distribution. These SBUs have adopted the "ownership system", which makes each of the units responsible for its operating income and performance.

Figure34. Structural Reorganization of LIXIL⁴²



Source: LIXIL

They became the users` number one choice by offering “one solution – one place” where most of the building materials can be found; a single supplier for all constructor`s needs, resulting in time economy and efficiency.

TOTO

The company was established in 1912 and it became a best-known brand for ceramic sanitary products world-wide, but particularly in Asia and the US; they produced Japan's first ceramic seated flush toilet in 1914 and started mass production in 1917. Their key target group is the hotel industry, with a primary focus on the high-end market, five-star hotels that offer guests superior accommodations along with the finest technology and equipment.

As complimentary products to TOTO`s primary sanitary-ware as their core business, they developed a full range of products that can cover all the needs in a bathroom, including tiles. Regarding the tiles sector, they have developed a special range of floor tiles with anti-viral and antibacterial mechanism, antimicrobial effect, air purification, antifungal and self-cleaning mechanism⁴³.

TOTO holds the patent for HYDROTECT® – a self-cleaning technology that works on the basis of photocatalysis; this product penetrated the global industry of ceramic tile through

⁴² http://www.lixil-group.co.jp/e/special_topics/07.htm

⁴³ <http://www.toto.co.jp/products/tile/feature/index.htm#anc-02>

TOTO`s global network of HYDROTECT® Partners: Casalgrande Padana S.p.A. (ITALY), Laminam S.p.A. (ITALY) Grespania S.A. (SPAIN), Crossville Inc. (USA), Saint Gobain Performance Plastic (France), NSG Group (Nippon Sheet Glass, Japan), and Alcoa (USA) (as of end of 2014)⁴⁴. The HYDROTECT® Partnership Network`s Global Expansion members agreed to increase its worldwide use, raise awareness in the global marketplace and disseminate information about it through collaborative marketing and promotions.

TOTO`s Advanced Ceramics Division was founded in 1984; besides Japan they have an overseas office in USA. They provide optimized solutions to meet customer's individual needs and products (air bearings, precision ceramic components, electrostatic chucks, ceramic film by Aerosol Deposition Process, bonding capillaries, optical components) for the semiconductor and optical communications industries.

TOTO is also a member of the same group as Noritake although the group members have in independent management with independent business objectives and goals.

⁴⁴ http://gb.toto.com/news/news/news/?no_cache=1&tx_ttnews%5Btt_news%5D=478

3.5. Challenges and Opportunities

Challenges

Regarding the Products

➤ **Buildings short lifetime**

In Japan the buildings are considered to be only long-term consumption goods, unlike Europe where the buildings are perceived as permanent and there are generally built to last over several generations. The lifespan of most Japanese buildings (houses, apartments and offices) is one generation and it is common for them to be destroyed and reconstructed after 20 to 30 years, therefore the construction materials and incorporated designing materials are chosen accordingly.

The Japanese would choose a relatively costlier product, as the European products are, only if the product can demonstrate special features or technical improvements that makes it better suited for certain conditions.

➤ **Constant design renewal** (*applicable to most Consumers` Goods*)

Due to the well-known Japanese consumers' permanent demand for new products with new designs European makers are required frequent renewal and innovation.

➤ **After-sale Services**

In Japan, the "Product Liability Act" has been enacted in order to stipulate the liability of manufacturers, for compensation and to protect victims in the event that loss, injury or damages caused due to defects in manufactured goods is verified. For imported products, the importers needs to be liable to compensation for any damages, so they need to be extra careful with the quality control.

Regarding the Japanese Consumer

➤ **Lack of awareness**

As wall and floor tiles are not a traditional construction or decoration material usually used in Japan, the consumers might not be aware of the advantages of using tiles and the benefits brought in by this product, and also the concept of durability and "one-time spending".

➤ **Adaptation to the Japanese needs**

The European producers need to reach an extensive understanding about the construction and re-housing market in Japan in terms of style and materials used, in order to adapt to the consumer expectations. Some users complain that imported tiles, unlike Japanese-made tiles, often do not take into consideration the local needs, nor needed products characteristics. For example, a 200-mm square tile assumes that there will be joints, and so it is made slightly smaller so that it will be exactly 200 mm once installed; imported tiles however, are themselves often exactly 200 mm in size.

Opportunities

Regarding the Product

➤ **Designed products**

As Japanese consumers become aware of foreign lifestyle and they discover its benefits, they show an increasing interest in introducing modern items into their lives and in adapting their daily home living by re-housing with modern products. The demand for European products encouraged Japanese trading companies to endorse European designed goods on the Japanese market, as the image of Europe is historically positive in Japan and consists in an excellent selling advantage. Some local producers with an already developed distribution channel also showed interest in exploiting their connections by complementing their products with imported goods.

➤ **HORECA industry demand**

The increasing number of tourists (2015 ~ 20 mil.) is going to be exploited by the HORECA investors that already had plans to expand their chains in anticipation of the Olympics2020. As tiles are regarded as an image of high quality endings, this image can be used by producers with the appropriate type of products in their portfolio.

➤ **Stock not necessary** (negotiable)

In the ceramic tile market, importers maintain a continuous inventory or have only sample tiles or a tile catalog and import tiles from abroad only after an order is placed. The standard delivery time for tiles imported after being ordered is about 90 days and many times even longer for domestic tiles.

A company with good local promotion or partnerships can find significant business opportunities, particularly for niche markets or exclusive distribution channels. However, these markets are very sensitive to trends, which are also a notable characteristic of the Japanese market and Japanese culture in general. Japanese clients are not only interested in basic products, but also in European style design, despite the higher prices.

➤ **Sanitary ware – Imports Opportunity**

European Consumers regard Japanese toilets with interest; the technology developed in Japan could be introduced in Europe at a larger scale if the cost of such devices would become more affordable; these products could also be adapted to the European market.

Regarding the Promotion

➤ **Architects / Home Builders**

In recent years, architectural design offices and home builders have been increasingly stipulating that particular brands or even particular models should be ordered, as the contact with European brands and awareness about specific materials increased⁴⁵. Foreign companies started to promote their products in Japanese language, through their own web site or through their local partners' means of promotion.

➤ **Specialized Trading Companies**

Japanese architects often contact the specialized trading companies, active in the “construction materials imports” domain, when they are looking for interesting foreign products. These trading companies have often showrooms in Tokyo area and participate to trade fairs where they could be easier to reach also by the producers. Some exhibitions organizers (e.g. Reed Expo) offer “Match making services”, available for interested exhibitors and visitors.

➤ **Internet Re-housing Shops**

The increasing number of e-shops dedicating a part of their space for re-housing is one reason to acknowledge that the younger generation is more interested in re-housing rather than investing in new housing. These web sites are also addressing separately, by group age or by types of products. The e-shops should be considered a good promotion method also for tiles manufacturers and if referring to the biggest players, Rakuten, Amazon..., they can be seen as a market entry method.

➤ **Re-housing Magazines**

The interior design magazines are still largely used for inspiration and their content started to be narrowed down by focusing on a specific targeted group. They can be seen as an opportunity to raise awareness of the European styled products, to share information about how tiles are used in Europe, where can the goods be found and who can execute the installation. The more detailed the information is presented, the more appealing to take action would be for the Japanese consumers.

⁴⁵ https://www.jetro.go.jp/ext_images/en/reports/market/pdf/guidebook_building_stone_tiles.pdf

4. TECHNICAL CERAMICS

Technical ceramic products have a wide range of **applications**⁴⁶, in the following fields:

- Healthcare: Medical, Laboratory, Pharmaceutical Instruments, Biomedical implants (crowns, bridges and implants in dentistry and also in implantable medical devices such as pacemakers or bone replacements);
- Electronics: ceramic heat-sinks provide the perfect climate for high-power electronics, while ceramics' electrical insulation properties allow them to be used in microchips, circuit boards and circuit breaker technology, ceramic substrates, circuit carriers, core materials and many other components;
- Aerospace Technology: coatings of jet engine turbine blades; nuclear fuel uranium oxide pellets; missile nose cones; tiles used in the Space Shuttle program;
- Automotive Industry: ceramic disk brake for vehicles (resistant to abrasion at high temperatures); ball bearings, replacing steel (in very high speed applications, heat from friction during rolling can cause problems for metal bearings, which are reduced by the use of ceramics);
- Security and Transport: high thermal insulation and wear-resistant properties; modern armored fighting vehicles (offer superior penetrating resistance against shaped charges (such as HEAT rounds) and kinetic energy penetrators); ballistic armored vests to repel large-caliber rifle fire. (similar material is used to protect the cockpits of some military airplanes, because of the low weight of the material);
- Renewable Technologies: the semiconductor in crystalline silicon solar panels and the high-purity glass, wind turbines and other solar panel components, such as anti-friction bearings, heat sinks, fuel cells, tensiometers and insulation rings.

In the Japanese market many of the above mentioned fields present opportunities for technical ceramic producers, but due to limited time for conducting this research, the report is presenting just a glimpse of its true potential, by selecting the bio-ceramic market.

⁴⁶ <http://cerameunie.eu/ceramic-industry/applications/>

BIOCERAMICS

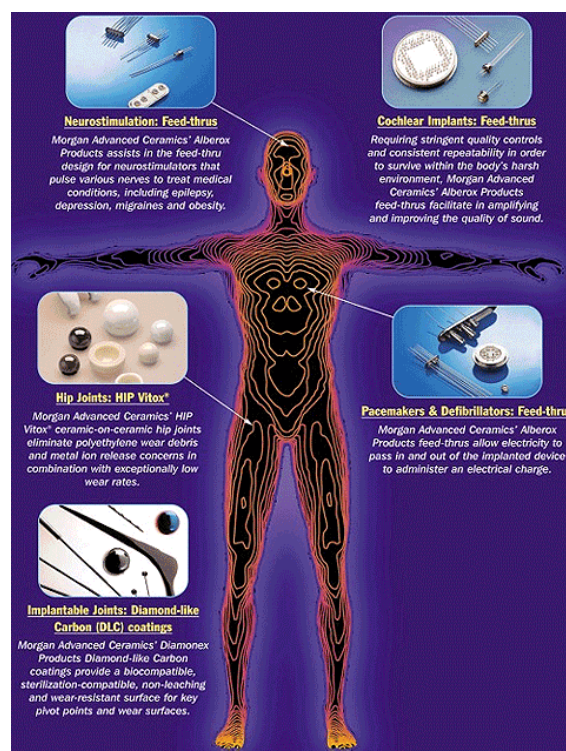
Bio-ceramics are ceramic materials, bio-compatible with human body, used in many types of medical procedures, with a primary use as dental and bone implants; other usage would be as coating for medical implants and medical equipment. The ceramic materials used are not the same as the porcelain type ceramic materials, but rather closely related to either the body's own materials or extremely durable metal oxides⁴⁷.

Previously, ceramics used in medical implants remained inert in the host and served as scaffolds or supports. Nowadays, studies show that technology development and the performance of these bio-ceramics remarkably improved; thanks to the structural and functional compatibility of these materials with live tissues in the human body and their contribution to the development of new tissue, their potential in Orthopedics and Dentistry are representing a major opportunity, for the next few years⁴⁸.

Wear resistance and biocompatibility have made ceramics suitable for various medical applications, from drug delivery devices to artificial joints, stimulators and electronic sensors. Ceramics such as zirconia and alumina are able to withstand the hostile environment of the human body.

Nano-ceramic composites hold potential in bone tissue regeneration applications. Several “in vitro” studies have concluded that bone-forming cells, called osteoblasts, have proliferated on substrates composed of nano-ceramic particles and coatings.

The primary goal of this report is to identify Japanese market opportunities for European producers in the medical ceramics sector over the next few years.



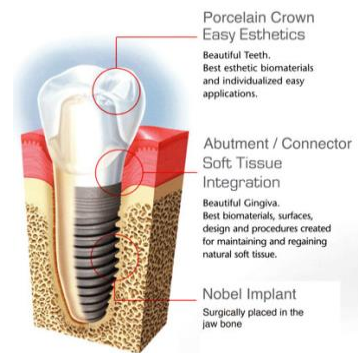
⁴⁷ http://www.worldlibrary.org/articles/Bioceramic#cite_note-1

⁴⁸ <http://www.azom.com/article.aspx?ArticleID=10666>

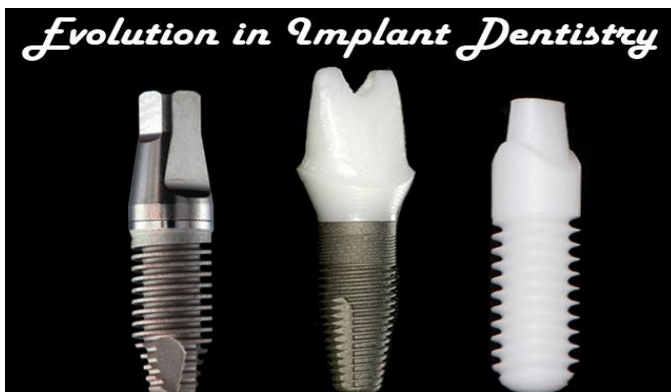
4.1. Dental Implants

A dental implant (also known as an endosseous implant or fixture) is a device, used to replace dental roots and missing teeth; it is made using three major parts:

- **implant** device itself, made of biocompatible metal, zirconium, gold or Ti-aluminum-vanadium alloys (although strengthen the implant, they have relatively poor bone-to-implant contact)
- **abutments** and
- **crown**, bridge or denture, made of gold, porcelain fused to metal (PFM) or ceramic material (zirconium).



Bio-ceramics are also used for their excellent biocompatibility, and capacity to integrate with hard tissue and living bone. Besides their fragile nature, hydroxyapatite, tricalcium phosphate and aluminum oxide ceramics are currently used as plasma-sprayed coatings onto a metallic core; this results in union of the implant with the host tissue⁴⁹.



Originally the first dental implants had two parts: the fixture (which goes screwed into the bone) and the abutment (where the prosthetic crown is cemented).

The improvements in new ceramic materials made it possible to have the abutment made of ceramic, as this material was discovered to be more tissue friendly than titanium.

Then the researchers innovated and developed the implant and abutment, all in one piece of ceramic - zirconium implant. The main advantages of a one-piece zirconium implant are:

- it has no prosthetic connections, where bacteria can grow and therefore a better gum health and the implant is 100% white;
- no metal will ever be visible when smiling or communicating with other people.

⁴⁹ <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4028797/#B8>

4.1.1. Market Overview



Global Market Overview

Great deal of progress has been made in terms of materials, techniques and design of dental implants since the beginning of modern implantology over 50 years ago. While titanium and titanium alloys have always been in use, the search for metal-free implantable materials began in the late 1960`s – early 1970`s; during the last decade, zirconia has emerged as the most reliable implantable bio-ceramic. The use of dental implants to replace teeth has increased very rapidly in the last 15 years or more.

The number of reports regarding titanium and titanium alloy intolerance has increased and this issue is constantly being investigated and demonstrated in the scientific dental literature. Based on the research available today, this intolerance of implant alloys have been attributed to the release of metal ions in the host bone and surrounding tissue, as a result of the breakdown and the corrosion of metal alloys, in the presence of body fluids and the oral environment in particular.⁵⁰

The manufacturers have rapidly evolved and adapted the material and the implant designs to clinical needs and demands, so now, a wide variety of implant designs, surface microstructures, components and prosthetic connections are available, making ceramic implants appropriate to an extensive range of tooth replacement situations.

Some of the reasons for which the patients are choosing implants as the best treatment for missing teeth, are the following:

- Demographics: the implants meet the needs of an aging population;
- The smile factor: the implants are starting to be perceived as “cosmetic dentistry revolution”, since “baby boomers” are looking for ways to maintain a youthful, attractive appearance;
- Improved dental health and overall comfort.

Better options for edentulous patients, a more natural and unobtrusive fit and feel as smiling and chewing are patients` basic desires.

⁵⁰ http://www.dental-tribune.com/articles/news/americas/25106_interview_consumers_are_pushing_dentists_toward_metal-free_implantology.html



Japan: Market Overview

The Dental Implant market in Japan was evaluated in 2014 at **49 billion Yen** and forecasted by analysts to reach **86 billion Yen** by 2019, growing at a **CAGR of 12.11 percent**.

The market size was calculated considering both the revenue generated by Titanium Dental Implants and Zirconium Dental Implants⁵¹.

Increased number of dentists

From the Report⁵² published by MHLW in 2013, report conducted every five years, we can understand that the "number of dentists" increased from 101,576 (2010) to 102,551 (2012), out of which, in 2012, 78.3% were men and only 21.7% women, with the proportion of women dentists increasing (20,8% in 2010).

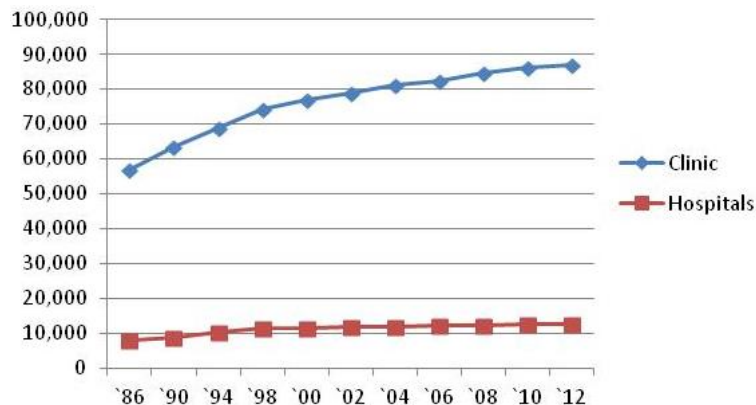
Table33. Number of dentists by Age distribution

			Total	Age					
				under 29	30-39	40-49	50-59	60-69	over 70
Total number of dentists	2012	Total	99,659	7,460	19,485	23,072	26,927	15,702	7013
		Male	78,267	4,320	13,027	18,004	22,664	13,989	6263
		Female	21,392	3,140	6,458	5,068	4,263	1,713	750
	2010	Total	98,723	7,657	20,204	24,227	26,105	13,649	6881
		Male	78,168	4,453	13,782	19,365	22,172	12,298	6098
		Female	20,555	3,204	6,422	4,862	3,933	1,351	783
% of total	2012	Total	100%	7.5%	19.6%	23.2%	27.0%	15.8%	7.0%
		Male	78.5%	4.3%	13.1%	18.1%	22.7%	14.0%	6.3%
		Female	21.5%	3.2%	6.5%	5.1%	4.3%	1.7%	0.8%

Source: MHLW 2012: Doctors, Dentists and Pharmacists Survey

Increased number of dentists working in clinics

Figure35. Number of dentists by working place



Source: MHLW 2012: Doctors, Dentists and Pharmacists Survey

⁵¹ <http://www.slideshare.net/technavio/dental-implant-market-in-japan-2015-2019>

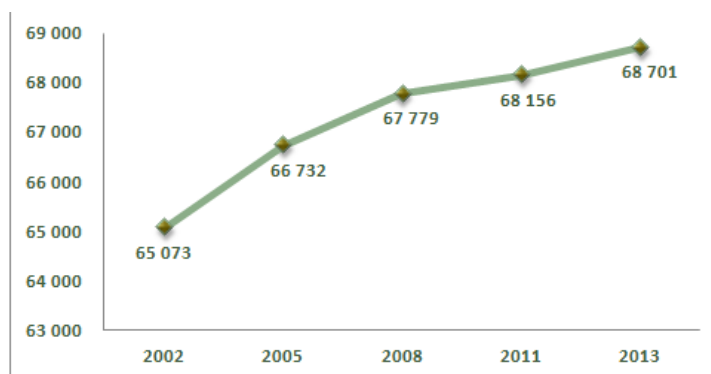
⁵² http://www.mhlw.go.jp/toukei/saikin/hw/ishi/12/dl/kekka_2.pdf

Regarding the dentist facilities, the number of dentists working in clinics, in 2012, reached 87,112, as seen in Figure35, while the total number of dentists working in “Japanese medical Institutions” was 9,656 dentists, and the number of dentists working in other hospitals was 2,891. Looking at the annual changes we can see the ascending trend of "clinics" while the other sectors encounter insignificant change.

Increased number of dental clinics

As seen in Figure36 the number of dental clinics in Japan continued to grow between the studied periods: 2002 – 2013.

Figure36. Number of Dental Clinics in Japan⁵³



Source: Statistics and Information Department, MHLW "Survey of Medical Institutions 2013"

Aging population

From 2010, when the population was totaling 127.352.000 until 2015, the number decreased to 126.818.000; it is anticipated that it will continue to diminish by 0.17% rate per year; the total population continued to decrease for the 4th year in a row.

Besides a general decreasing, the percentage of people over 65 years old is increasing; the Japanese society is facing a rapidly aging population problem.

Figure37. Number and Rate of Population change

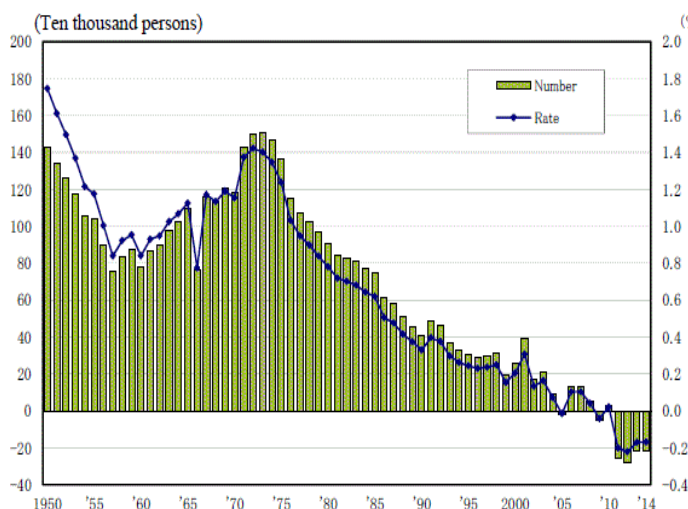
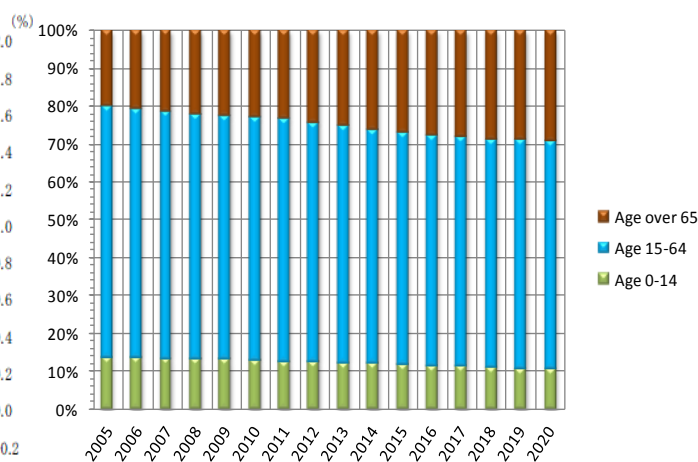


Figure38. Population age structure ratio in Japan



Source: e-stat Statistics of Japan

⁵³ <http://www.mhlw.go.jp/english/database/db-hh/2-2.html>



4.1.2. Trends in Dentistry

Global Trends

Product

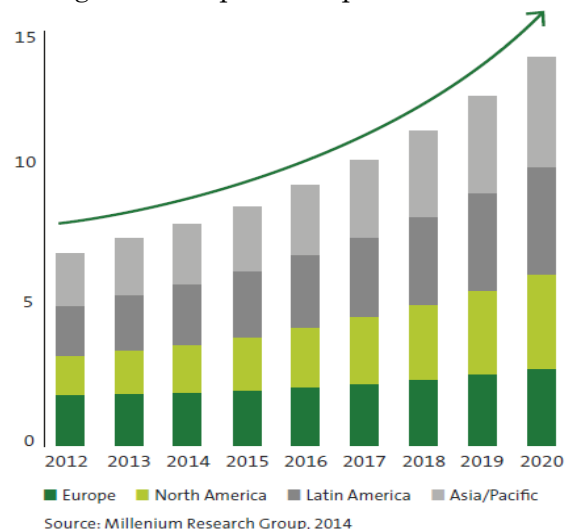
- The quality of the implants continued to be improved as producers continued to invest in research and development;
- Very high success rates for dental implants, approximately 95% and increasing during the last 10 years;
- Decrease of implant treatment contraindications: advancements in implant designs, bone grafting procedures, and analysis of extensive outcome data have seriously narrowed the range of absolute contraindications;
- Decreasing costs: an implant with a crown is usually about the same cost as a three-unit bridge⁵⁴, but statistically it lasts much longer;
- Today's implants last longer and it takes shorter time from implant to final crown;
- No substitute for dental implants will emerge in the next 10 years, so the need for maintenance will increase;
- More consumer oriented producers` marketing: most major implant manufacturers` web-sites have a section for consumers; instead of expecting the dentists to propose implant solutions, patients can find an incredible amount of information at the click of a button.

*Example*⁵⁶: a new generation of implants: “Bone Level - Tapered Implant”, with conical designs, now make up nearly 60% of the global implant market and their popularity is expected to increase, as it provides immediate stability when inserted, making it popular for accelerated tooth replacement procedures, intended to cause less disruption to patients.

Patient

- growing consumer awareness, due to: dental care public national campaigns, increased access to information about producers, products, dental clinics, methods of treatment, benefits and so on;
- More co-morbidity, the appearance of dental problems like tooth lost, co-occurring with a primary disease (e.g. diabetes).

Figure39. Tapered Implant Trend⁵⁵



⁵⁴<http://www.dentaleconomics.com/articles/print/volume-100/issue-12/features/trends-in-implant-dentistry.html>

⁵⁵https://www.straumann.com/content/dam/internet/straumann_com/Resources/investor-relations/annual-report/2014/STR_Annual_Report_2014_FINAL.pdf

⁵⁶https://www.straumann.com/content/dam/internet/straumann_com/Resources/investor-relations/annual-report/2014/STR_Annual_Report_2014_FINAL.pdf

Dentist⁵⁷

- Standard part of dental school curriculum: younger generation of dentists are familiar with implant treatments;
- Implants are becoming a very attractive economic choice for dentists;
- Productivity is growing, chair time is shortening;
- Increase usage of restorative and surgical practices – over the last 25 years implants placing and restoration procedures became easier;
- Reduction of independent labs; fewer dental technicians; many labs integrated in dental practices, dental technicians are becoming more computer skilled (CAD/CAM)⁵⁸; the digitalization is changing workflows and the value chain.

Digital technology⁵⁹:

- Digitalization is about to further change value chain and the workflows for dentists and labs;
- Dental and medical patients dossiers is about to be digitalized and integrated;
- Digital scanning will provide a complete 3D-view of the oral situation;
- Surgical and prosthetic design software will converge.

CAD/CAM⁶⁰

CAD (computer-aided design) and CAM (computer-aided manufacturing) refers to computer software that is used to both design and manufacture products. In dentistry it is used to improve the design and construction of dental implants, by increasing the speed of delivery of a well fitted product, the convenience or simplicity of the creation and insertion of processes and making possible the restorations and appliances that otherwise would have been extremely difficult. Even if, the final goal is to reduce the unit cost and to increase the affordability for restorations, since it involves extra working time for the dentist, the fee is, for the moment, higher than for conventional restorative treatments using lab services.

⁵⁷ <http://www.dentaleconomics.com/articles/print/volume-100/issue-12/features/trends-in-implant-dentistry.html>

⁵⁸ <http://docplayer.net/1013778-How-will-dentistry-look-in-2020.html>

⁵⁹ <https://www.straumann.com>

⁶⁰ <http://www.autodesk.com/solutions/cad-cam>



Trends in Japan

Product⁶¹

Predominant: Premium Dental while Discount Implants is slowly growing

Traditionally, premium implant companies have dominated the dental implant market, globally. However, in recent years, discounted implants have become increasingly popular, especially in the Asia Pacific region, except for Japan where Premium dental implant revenues are expected to increase in volume and total value, in the coming years.

Due to large investment in marketing of some companies (Korean producer: Osstem Implant), their products, part of the discount market, continue to grow in popularity. Discount implants market share was estimated to 12,5% in 2015 and it is expected to increase to 14,6% by 2021 in Japan, out of bigger market.

Patients

➤ *Aging society*

The “baby boomers” are looking for ways to maintain a youthful, healthy and attractive appearance; Japanese customers` expectations are as follows:

- ↵ Reliable services and safety;
- ↵ To become beautiful, happier, natural-looking, more than a smile, changed life;
- ↵ To feel comfortable, healthier;
- ↵ Long-lasting replacements, shorter time for treatments, minimal discomfort;
- ↵ The producers and the products to be trustworthy;
- ↵ To understand the strengths of a foreign product compare to the local choice;
- ↵ Affordability.

➤ *Change of perception*

In the past, Japanese perceptions of beauty concerning teeth were different from Europe, and they did not see any need for straightening of teeth or correction of overbite. These perceptions have changed rapidly over the last decade.

According to the “Dental Device Industry Vision”⁶², issued in 2007 by the Japanese Association for Dental Science and the Japan Dental Trade Association, Japanese people have started to change their view regarding their oral health; according to that report, more than 55 % of Japanese were willing to consider dental treatments, not covered by the National Health Insurance (NHI); dental implants have started to be perceived as a healthy solution.

➤ *Public awareness*

Japan Dental Association conducted a "General consumer awareness survey on Dental Care",

⁶¹http://www.dental-tribune.com/articles/business/asiapacific/22957_opposing_pricing_trends_to_influence_asia_pacific_dental_implant_market.html

⁶²<http://www.globaltrade.net/f/market-research/text/Japan/Hygiene-Cosmetics-Health-Medical-Equipment-Dental-Industry-in-Japan.html>

in 2011; the obtained results are the following:

➤ People`s expectations regarding Dental Care

The proportion of working people that requested and received dental checkup was 46,6% of the total number of people interviewed. The proportion of woman was higher (64,5% of total checkups); the rate of people looking for dental care increases with the age. About 90% of the people in their 70`s, both men and women, responded positive, while the lowest rate, 36,2%, of positive responses was from men in their 20`s.

➤ An increasing interest in information about Dental Care

The sources of information about Dental Care were: 30,7% from television news program, 23,8% from newspaper articles and 20,1% from friends, acquaintances or co-workers. People were interested also in aesthetic, health and beauty, besides treatments for dental diseases, prevention and correction. It is expected that more and more people to proactively select the medical care for aesthetic reasons.

➤ Increasing demand for Dental Care – Home-visits

➤ Wide-spreading understandings of Dental Oral Health

8020 Campaign⁶³ (Dental Care & Dental Lost Prevention)

“Dental treatment” ⇒ “Happy to eat” ⇒ “Dental Care to support the worth living”

As the Japan Dental Association has proposed and the MHLW has approved, the “8020 Promotion Foundation” was established on December 2000, with the collaboration of various social organizations and business corporations. The goal was to support the elderly to improve and maintain their healthy life, using the “8020 Campaign” set out to help people keep 20 or more of their own teeth over the age of 80.

National survey of dental disease in October 2011 showed that 26.8% of the people aged over 80 have 20 or more teeth left and 56.2% of the people aged over 60 have 24 or more teeth left and the numbers are increasing.

Dentist

More women are entering dentistry; the proportion of female dentists is growing, as they can work part-time, an increasing number of young female dentists are replacing retiring dentists. With the benefit of new technologies as an incentive for the increasing number of newly opened dental practices, more young people are attracted by the dentistry studies.

Digital

An ageing population and rapidly growing numbers of elders requiring medical treatment and care services, alongside with a shortage of physicians in regional areas, have driven Japan to make major changes and improvements to its medical treatment and care service systems, aiming to maintain high quality medical care at lower costs with enhanced efficiency.

⁶³ <http://www.8020zaidan.or.jp/english/index.html#Est>

CAD/CAM

In the dental implant market, the final abutment market is undergoing an opposing pricing trend comparing to the dental implant fixtures. CAD/CAM abutments are increasingly replacing the cheaply produced stock abutments. CAD/CAM development has been relatively rapid the Asia Pacific region in recent years. A growing number of CAD/CAM milling centers have emerged to produce CAD/CAM abutments for the dental implant market. The overall region is set to demonstrate significant growth in the CAD/CAM segment, for final abutments⁶⁴.

The Japanese market is underpenetrated, but at the same time it has a large number of technologically skilled dentists, in pursuit for a marketable advantage. Because so many dentists need to invest in CAD/CAM technology, it is still in the early-adoption phase of its penetration curve, with large room for growth. The adoption and awareness of CAD/CAM is going to accelerate, as new dentists are coming out of dental school, with better knowledge and confidence in technology and take over more practices.

Price

The market price of medical equipment and devices in Japan is high compared to prices overseas. The market sustains higher profit margins; the reasons for the high market prices include: Japan's distribution system, in which an intermediary margin is taken by dealers and the extent of technical in-services required from the manufacturers. Prices are likely to remain high when sales occur via dealers.

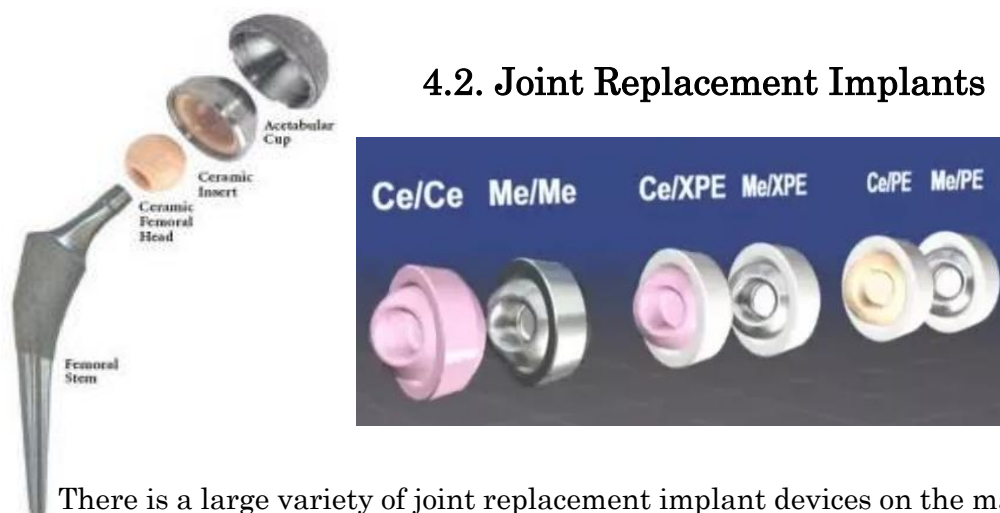
Products for Japan are often more costly to manufacture due to Japan-specific requirements, specific material preferences and a lower acceptance of defect rates. This adds significant costs to the design, development and testing phases of product manufacturing. The regulatory requirements that restrict the use of manufacturing processes commonly used elsewhere, and the regulatory delays associated with approval of products are also a reason for a higher price.

Characteristics:

- ⇒ Premium dental implant price per unit is expected to slightly decrease because of the entrance of new competition and the pressure of discount importers marketing.
- ⇒ There will be a drop in prices of CAD/CAM, which will make the market more attractive to dentists as lowered prices soften a key barrier to adoption.
- ⇒ Price difference between implant and conventional bridge solutions for single tooth replacement remains relatively small.
- ⇒ The prices are differentiated between players through innovation and services provided; brand is also making an essential difference.

⁶⁴ http://www.dental-tribune.com/articles/business/asiapacific/22957_opposing_pricing_trends_to_influence_asia_pacific_dental_implant_market.html

4.2. Joint Replacement Implants



There is a large variety of joint replacement implant devices on the market; based on the materials used for the implant bearings, the products can be categorized as follows⁶⁵:

- Metal-on-plastic (Me/PE bearings, UHMWPE), the convex femoral stem is constructed of metal and the concave cup liner of plastic (polyethylene).

Pros: the longest tried and tested bearing (from 1960), the cheapest;

Due to its durability and performance, it has been the leading material chosen by surgeons;

Cons: wear rate ~ 0.1 mm / year;

“All implants shed debris as they wear; over time, the body may see polyethylene wear particles as invaders or a source of infection; As the body starts to attack them, this leads to osteolysis, a “dissolving of the bone”, which may result in having to replace the implant (known as revision)”.

- Metal on Metal (Me/Me bearings, cobalt chromium alloy, titanium alloy or stainless steel)

Pros: used longer than Me/PE (from 1955); reduced wear rate ~ 0.01 mm / year, with less inflammation and less bone loss; available in many sizes (28 mm to 60 mm);

Cons: Although the wear is reduced, the wear products are distributed throughout the body, raising concerns about long-term bio-compatibility.

- Ceramic-on-Ceramic (Ce/Ce)

Pros: a good combination of longevity and reliability (used from 1980 but seriously improved until nowadays), the lowest wear rate of all ~ 0.0001 mm / year; usually no inflammation or bone loss, nor systemic distribution of wear products in the body. This material is used for more active individuals or younger patients, in their 40s and 50s or even in their 20s or 30s patients that suffered from sports accidents.

[Usually the bone replacement is delayed by orthopedists until an age where the hip implant will hopefully last the patient's lifetime, patients with previous types of hip replacement: 90% are still working well after 10 years, 80% still have it functioning after 20 years.]

Concerns: There are no long-term studies evaluating the newest ceramic performance over time, no proofing test records are available yet. A major concern was that a small rate of

⁶⁵ <http://bonesmart.org/hip/hip-replacement-implant-materials/>

tested Ce/Ce implants demonstrated “catastrophic failure”, as the replacement material cracked like any ceramic plate. This used to be a serious problem, but newer ceramic replacement implants have been further developed in order to correct this deficiency.

➤ Ceramic-on-Plastic (Ce/PE bearings, UHMWPE)

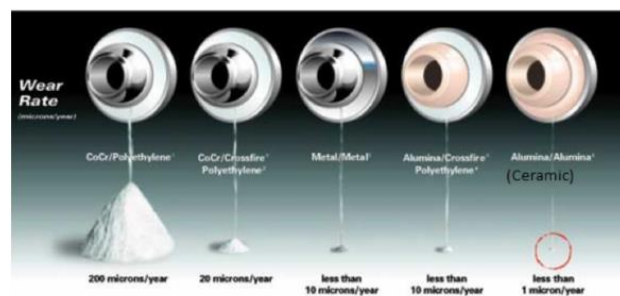
Pros: a good combination of two reliable materials. Ce/PE is less expensive than Ce/Ce. Some implants utilize a vitamin E-stabilized; wear rate ~ 0.05 mm / year.

Cons: Ce/PE is more expensive than Me/PE.

New ceramics offer improved strength, more versatile sizing options and longer lasting longevity of over 40 years (*is expected*).⁶⁶

The **benefits** of ceramic joint replacements⁶⁷:

- ⇒ Excellent biological behavior
- ⇒ No known risk of allergy
- ⇒ No metal-ion release
- ⇒ Reduced risk of infection
- ⇒ Lower wear rate
- ⇒ Resistance to third-body wear
- ⇒ No known pathogenic reaction to ceramic particles



Ceramic is the 21st century answer as it is hard and durable, it wears minimally and the material is widely considered to have no toxic or side effects in the human body. Using ceramics proved that metal sensitivity and breakage from long-term use for more than 30 years will no longer be a concern.

⁶⁶ https://www.ceramtec.com/files/mt_ceranews_2006_02_en.pdf

⁶⁷ https://www.ceramtec.com/files/mt_ceramic_knee_en.pdf

4.2.1. Market Overview



Worldwide, the total number of joint replacement implants in 2011 was estimated at 2,7 million surgeries: with around 1,1 million knees, 1,4 million hips and close to 200.000 small joint replacements.⁶⁸ By 2014 the total number grew to 4,1 million, out of which about 2 million were knee⁶⁹ (~48,5%⁷⁰), 1,75 million hips and around 350.000 small joint replacement surgeries.



Recently in **Japan**, the total number of joint replacement surgeries performed was over 200,000, out of which: 40,000 were hips replacements, 80,000 femoral heads and 70,000 artificial knee joint replacement surgeries⁷¹.

Japan's market for joint replacement devices was estimated at ¥232 billion in 2014 with an expected CAGR growth rate of 4,4%, it is projected to reach ¥290 billion by 2020⁷².

Figure40. **Worldwide** Orthopedic Products Sales by Geographic Region (2014)

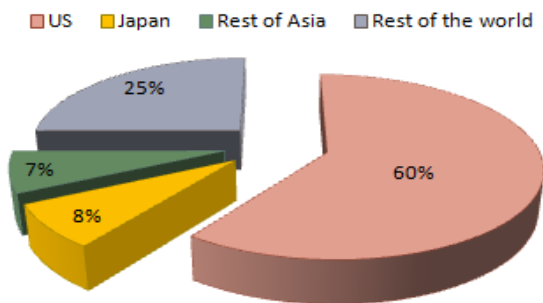
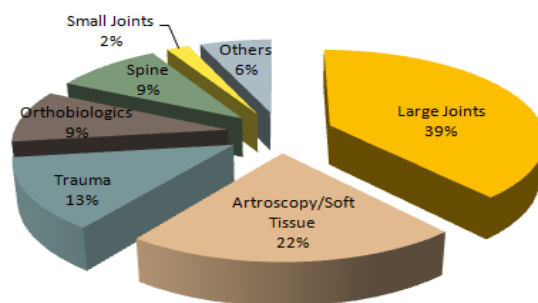


Figure41. **Japan** Orthopedic Products Sales by Segment (estimated 2014)



Source: ORTHOWORLD Orthopedic Industry Annual Report

The first generations of Ce/Ce bearings implants have been used in Japan since 1990s with proven success; by 2006 the number of Ce/Ce implants, used in Japan increased to 10 % of all the joint replacement surgeries performed⁷³.

Increased number of people opting for joint reconstruction surgeries

The number of people opting for joint reconstruction surgeries in Japan is continuously increasing due to high rate of implemented advanced technologies, an increased emphasis on hospital automation, aging population and with a rising life expectancy.

⁶⁸<https://www.orthoworld.com/index.php/fileproc/index/knowentADJADJorthoknowADJADJ2012ADJADJorthoknow1206LXLXLXpdf>

⁶⁹ <https://www.ceramtec.com/biolox/knee-joint-components/>

⁷⁰ http://www.micromarketmonitor.com/market-report/joint-reconstruction-reports-7270265346.html?gclid=Cj0KEQjAnJqzBRCWOrGWNknckOIBEiQA6qDBamrZuW43ftk8q0YPq6bdDv517Qw3QigOv7_Q5HzFO7QaAihY8P8HAQ

⁷¹ <http://www.medical-excellence-japan.org/en/hospital/040/index.html>

⁷² <http://www.micromarketmonitor.com/market/asia-joint-reconstruction-4733200833.html>

⁷³ https://www.ceramtec.com/files/mt_ceranews_2006_02_en.pdf

Increased number of medical clinics

In terms of type of facilities, even if the number of general hospitals decreased from 8.222 in 1999 to 7.474 in 2013, it has been more than compensated by the increased number of medical clinics that reached 100.528 in 2013, growing from 91.500 in 1999.

Table34. Number of Medical Institutions

Year	1 999	2 002	2 005	2 008	2 011	2 013
General hospitals	8 222	8 116	7 952	7 714	7 528	7 474
Medical clinics	91 500	94 819	97 442	99 083	99 547	100 528

Source: Statistics and Information Department, MHLW "Survey of Medical Institutions 2013"

Health Insurance

The system of universal health insurance was established in 1961 and it covers the entire population through employee schemes or through community health schemes for the unemployed, self-employed and retired population. The Employees' Health Insurance scheme is for employees working at companies while the National Health Insurance scheme, is for the self-employed or unemployed.

Public health insurance covers 70% of total medical expenses; some expenses though, are not eligible for insurance coverage (e.g. dental implants). Patients are co-paying part of the treatments, usually 30%, decreasing to 10% - retired people, over 75 years old.

With the rapid ageing of Japanese society, the need for long-term care is ascending; more elderly persons require long-term care. Traditionally, within a large family, the elders would have been supported by the younger women, but recently the younger families are not living with the older generations anymore; family units are becoming smaller and therefore fewer potential care givers, with the care givers themselves ageing.

Understanding the changing situation, in April 2000, the Japanese Government introduced a Long-Term Care Insurance (LTCI) System, aiming to support the long-term care of the elderly, on a societal level and to better manage the needs of the growing number of elder citizens. In the new LTCI system, the local municipalities chose products following national guidelines, but more flexible and designed to meet the needs of the actual situation:

- ⇒ the system allows users to choose between different types of services and vendors;
- ⇒ Services are provided by diverse vendors, including private-sector firms, agricultural and other cooperatives, non-profits, etc.
- ⇒ Users pay 10% regardless of income



4.2.2. Trends

Product

Demand for highest quality products

On the Japanese market the option of using the premium quality products is highly encouraged. Most people can afford the mandatory procedures and many have enough money for the highest quality products, considering that all the patients have to pay only a percentage of the total medical cost for their treatments.

The government is supportive for this type of treatment, by having periodic initiatives to reduce product prices while maintaining the highest quality and also sustaining a high reimbursement rate (70% to 90%).

Customized products

A gender-specific total knee replacement implant⁷⁴, specially designed either for a male or a female, the size is slightly different, to accommodate different bone sizes; the joint replacement implants may allow better function, as well as improved durability.

Increasing demand for large joint replacement

The increasing demand for large joint Arthroplasty is attributed to the aging Japanese population and the elevated number of highly active individuals.

Patient

Aging population (see Chapter IV 2.2: Dental Implants - Trends)

As Japan's number of elder people is increasing, with an also rising life expectancy, the number of patients in need for bone replacement treatments is also growing.

Public awareness of treatment options

Two decades ago, fewer doctors were trained as orthopedic specialists. Likewise, fewer patients were aware of available surgeries and treatments. Now, the orthopedic device providers are educating healthcare workers and patients, by opening orthopedic learning centers, mobile clinics and conducting mass advertising directly to consumers.

Increased number of patients in need

Increased number of people participating in sports, younger people suffers accidents, more people entering older age – aging population, higher demand for treatments in case of joints pain, the increased frequency of chronic medical conditions (osteoarthritis, rheumatoid arthritis and osteoporosis) and the availability of technologically advanced implant designs are all factors⁷⁵ fueling growth of the Japanese joint reconstruction devices market.

⁷⁴ <http://www.berkshireorthopaedics.com/newtrends.php>

⁷⁵ <http://www.beckersspine.com/orthopedic-a-spine-device-a-implant-news/item/27200-10-trends-in-the-orthopedic-trauma-fixation-market.html>

Doctor

Challenging choice of product

Decision to determine the proper implant to be used in the operation is becoming more complicated⁷⁶ as the surgeons are provided with choices to opt for different products and materials, with a variation of tracked record, different properties and the rising number of patients asking for a specific product.

Minimal invasive surgeries

Surgeons are aiming for “minimal invasive surgeries” and thanks to the advancements in the technology and use of products, these methods are becoming more accessible. With a shorter time for post-operative recuperation, this method is convincing more and more patients to take the surgery step.

Growing number of young doctors specialized in these procedures

In the past, the number of doctors trained to perform small joints procedures was modest, but many young doctors have been trained recently, so this should imply a significant growth of the small joint replacement market since it is easier to begin with. Despite less demand for small joint procedures, this segment is growing.

Total Joint Replacement Length of Stay⁷⁷

The length of stay for large bone joint replacements has decreased to 3 days in 2015. Currently, 35% of total joint replacement patients are being discharged on day 3, while 55% are being discharged on day 2.

National health expenditures are expected to increase

Japan's aging population and the increasing number of patients with chronic diseases and diseases caused by their life-style, medical devices that ease pain, complement lost functions, and improve the quality of life are real motifs for the expected national health expenditures increase.

⁷⁶ <http://orthopedics.about.com/od/kneereplacement/f/bestkneeimplant.htm>

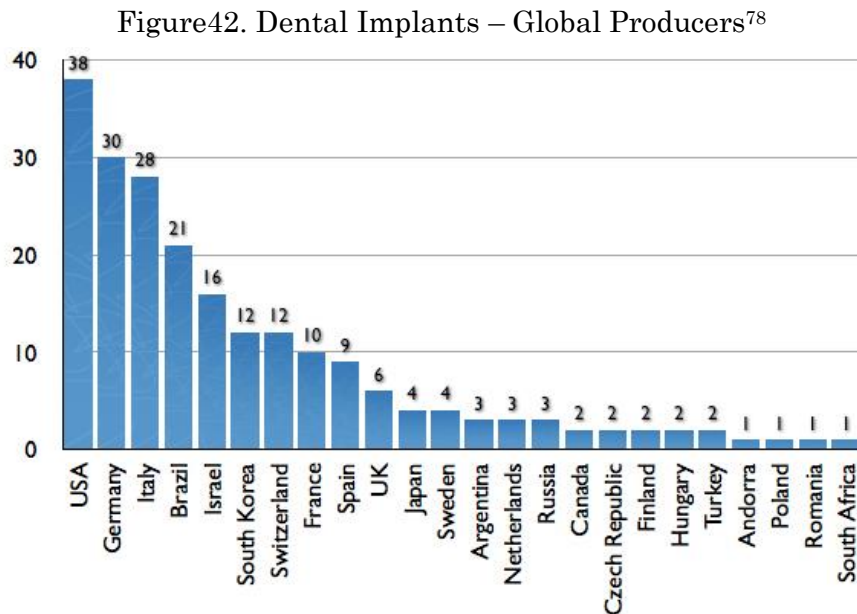
⁷⁷ <http://accelerohealth.com/trends-length-stay-joint-replacement-patients/>

4.3. Key Players



A. Dental Implants

As shown in Figure42 below, a list of worldwide dental implants manufactures has been put together; the list contains a total number of 213 companies, from 24 countries, out of which 46% are located in E.U.



Source: 3W Dental Institute, Beverly Hills, USA (June 2013)

On the Japanese market, the key dental implants vendors are:

- ① Straumann
- ② Nobel Biocare (acquired by Danaher Corp)
- ③ Dentsply Implants (acquired Astra Tech, merged with Sirona Dental Systems)
- ④ Zimmer Holdings (acquired Biomet)
- ⑤ Osstem Implant
- ⑥ Kyocera Medical Corporation (Japan)

Besides these major players, other manufacturers are supplying the dental market⁷⁹:

Dentium
GC
Henry Schein
Kavo Dental
Koken
Iwase Dental Supply

⁷⁸ <http://news.3wdentalinstitute.com/implant-co-distribution-by-country/>

⁷⁹ http://www.researchandmarkets.com/research/m5pwjz/dental_implant

① STRAUMANN⁸⁰ (Premium Dental Implants)

Headquartered in Switzerland, Straumann is a global leader in implant, restorative and regenerative dentistry, with a strong presence in the Japanese market.

In 1984, Straumann started to distribute their products and services in Japan, through Daishin Implant System (DIS), as an exclusive partner.

In 2007 they acquired Daishin and became a leader in distributing products and services for implant dentistry in Japan. The acquisition provides Straumann with its own local subsidiary to serve the market directly⁸¹.



Straumann`s top products:

- PURE ceramic implant, which was introduced in Japan in 2013; the product has exceptional esthetic properties, translucent ivory color like natural tooth roots and a specially-developed ZLA® surface to enhance and shorten the healing process and to provide osseo-integration.
- SLActive surface is an advanced implant surface designed to bond faster with bone, reduce healing time and increase the predictability of implant treatment.

[After several years of regulatory delay, in March 2014, Straumann received marketing approval from the Japanese health authority PMDA and launched SLActive; the first 10.000 units were sold in just 36 working days. In Straumann Annual Report they declared that “more than 40% of all implants sold in Japan in 2014 had the new surface”.]⁸²

- Roxolid material is the first Titanium Zirconium alloy designed for dental implants that offers a new option for patients with limited bone or narrow spaces between teeth.
- BLT (Bone Level Tapered Implant) is a product that uses Roxolid material and SLActive surface to deliver primary stability in all bone classes, making it ideal for immediate placement even in challenging protocols.

In Japan, Roxolid and BLT received the regulatory clearance in July 2015 and have been released on a controlled market for the moment, to collect feedback from experienced users; the new product will be available to all customers from 2016. As investments are targeting markets with high growth potential, Straumann Group recently developed a CAD/CAM milling center in Japan, Narita (Tokyo) that went operational in October 2015.

Driven by strong growth in Japan and China, 2015 revenues in Asia/Pacific climbed 19%, generating a 30% growth. Straumann gained further market-share in Japan, thanks to the continuing roll-out of SLActive and the market release of BLT.

They expect the Asia-Pacific implant market to continue the positive development for the following years and their revenue to grow.

⁸⁰ <http://www.sccij.jp/news/overview/detail/article/2014/03/24/straumann-gains-market-share-in-japan/>

⁸¹ http://www.straumann.com/en/home/media/media-releases/2007/tag_xml_newsbox_ch2007-11-02t101600z149727013digest.html

⁸² https://www.straumann.com/content/dam/internet/straumann_com/Resources/investor-relations/annual-report/2014/STR_Annual_Report_2014_FINAL.pdf

② NOBEL BIOCARE (Premium Dental Implants)

Nowadays, Nobel Biocare is the world's second-biggest maker of dental implants, abutments, crowns and bridges and CAD/CAM-based individualized prosthetics.

In 1985 the company was established in Japan, under the name Nobel Pharma Japan Co., Ltd.

In 1996, along with the parent company renamed, the Japanese company changed its name into Nobel Biocare Japan Co., Ltd.

In 1998 they merged with a leading US dental implant company SteriOss Inc.

In 2001 they released NobelProcera dental CAD/CAM system in Japan, a system that combines precision scanning and intuitive design, extensive services and high-end industrial production.

In 2007⁸³, in Japan, they established the Makuhari Production Center, in Chiba Prefecture, where they manufacture ceramic and titanium products sold besides Japan, in other Asian markets, and where they apply the latest CAD/CAM technologies. The company was a pioneer in modern implant systems and the first to introduce titanium dental implants integrated with living bone.

In 2014 U.S. healthcare group Danaher Corp (DHR.N) started their acquisition of Nobel Biocare; by January 2015, they were controlling approximately 98% of the issued registered shares of Nobel Biocare. Danaher Corp aims to become the world's biggest player in the dental implants market, benefiting from growing demand for cosmetic dentistry; they see the Nobel Biocare deal returning 10 % on invested capital by 2019⁸⁴. Although the premium market is growing at a slower pace than the value segment, Danaher said they expect dentists to continue to choose premium implants for complex cases.

They expect the premium segment to keep growing in the 3-5 percent range⁸⁵.



③ DENTSPLY Implants

Astra Tech, a Swedish manufacturer of dental implants, was founded in 1948 as part of what it became later AstraZeneca Group.

In 2006, acknowledging that Japan is the 3rd largest dental implant market in the world and has a strategic importance to the company's expansion in Asia, Astra Tech decided to acquire their Japanese distributor: Denics International. The fully owned subsidiary, located in Shibuya, Tokyo was named Astra Tech K.K.

In 2011, Astra Tech was sold to US Dentsply, and changed its name into DENTSPLY IH K.K.

⁸³ <http://www.businesssupport-chiba.jp/eng/business/interview/nobelbiocare/>

⁸⁴ <http://www.bloomberg.com/news/articles/2014-09-15/danaher-agrees-to-buy-nobel-biocare-for-2-2-billion>

⁸⁵ <http://www.reuters.com/article/2014/09/15/us-nobel-biocare-m-a-danaher-idUSKBN0HA0B420140915#1kf4z2u wPtOL8jeq.97>

DENTSPLY International Inc. is a leading manufacturer and distributor of dental and other consumable medical device products. For over a century, they have committed to innovation and professional collaboration; headquartered in the U.S., the Company has global operations with sales in more than 120 countries.



Their main dental product categories are dental consumable products, dental laboratory products and dental specialty products. The dental laboratory products category includes dental prosthetics, artificial teeth, precious metal dental alloys, bridge materials, dental ceramics and crown. Equipments, in this category, include: computer aided design and machining (CAD/CAM), ceramic systems and porcelain furnaces.

In 2014 DENTSPLY's total sales in Japan were \$83 mil - 3% of the total, out of which around \$12 mil were sum up from dental laboratory products including ceramic implants sales.⁸⁶

DENTSPLY distributes approximately half of its dental products through third-party distributors. Part of their marketing tools in promoting ceramic dental implants was the sponsorship of "Asia Student Dental Ceramics Contest 2014⁸⁷", where they invited top Asian dental college and university students to compete for the best aesthetic dentistry award, by building a 3-unit bridge, using DENTSPLY ceramic products.

Sirona Dental Systems, a dental technology leader, has served dealers and dentists worldwide for more than 130 years. Sirona develops, manufactures and markets a complete line of dental products, including CAD/CAM restoration systems (CEREC), digital intra-oral, panoramic and 3D imaging systems.

In September 2015⁸⁸, DENTSPLY and Sirona announced their combination to create the world's largest manufacturer of professional dental products and technologies with scale and breadth across all major geographies and competitive offerings in each of the major dental categories. Specific benefits include: strong commitment to innovation, increased scale and product breadth and total solutions provider.

⁸⁶ http://www.annualreports.com/HostedData/AnnualReports/PDF/Dentsply_2014_10KAnnualReport.pdf

⁸⁷ <http://www.dentsply.com/content/dam/dentsply/web/corporate/News/Update-QR-Code-Content-for-Asia-Student-Ceramics-Contest-2014-zqqpg05-en-1404.pdf>

⁸⁸ <http://www.sirona.com/de/invest/phoenix.zhtml?c=88793&p=irol-SECText&TEXT=aHR0cDovL2FwaS50ZW5rd2l6YXJkLmNvbS9maWxpbnmcueG1sP2lwYWdlPTEwNDg1Nzk1JkRTRVE9MiZTRVE9NyZTUURFU0M9U0VDVEIPTI9QQUdFJmV4cD0mc3Vic2lkPTU3>

④ ZIMMER BIOMET



In 1927 Mr. Zimmer, with fellow salesman J.J. Ettinger, formed the Zimmer Manufacturing Company, in a rented building in Warsaw - Indiana, a company that was to become a leader in orthopedics.

In 1977 the company purchased Nemoto Shokai, a marketing chain in Japan that was the base of forming the current Zimmer Japan.

In 2003 Zimmer acquires Centerpulse AG, a Swiss-based orthopedic manufacturer and the leading reconstructive company in Europe, expanding its product offering to the rapidly growing spinal implant market and the reconstructive dental market.

Zimmer offers a wide range of orthopedic knee implant products and instruments, personalized knee replacement systems that focus on the unique needs of patient, surgeon and institution and also hip and shoulder replacement products, foot and ankle system, elbow and trauma products.

In 2014, Zimmer total sales in **Japan**⁸⁹ were: Dental Implants ~ \$17 mil.
Orthopedic Implants ~\$456 mil. (76%Knee + 20,8% Hip + 3,2% Extremities)

Biomet was established in 1977 in US, Florida by four young men experienced in the orthopedic industry.

In 1999 Biomet enters dental reconstructive market with acquisition of Implant Innovations Inc. (3i) and it is renamed Biomet 3i.

In 1992 Biomet 3i founded Dental Implant Inobeishonzu Japan, located in Osaka; the entity changed its name in 2011 into Biomet 3i Japan Co. Ltd.

In 2013 the Tokyo head office was opened and in 2014 a dental laboratory is inaugurated.

In June 2015 Zimmer completed the acquisition of Biomet, and changed their name into Zimmer Biomet Holdings; Zimmer Dental and BIOMET 3i also have joined forces to become a leader in oral healthcare solutions as Zimmer Biomet Dental Division.

In September 2015 Zimmer Biomet sold their technology rights for Zimmer Uni-compartmental High Flex Knee and Discovery Elbow System on the Japanese Market, to Lima Corporation; by December 2015, Lima received the final approval from the Japanese Fair Trade Commission.

Based in Italy, Lima Corporate is present in the Japanese market since 2004; the company was already an important market player in shoulder Arthroplasty; this acquisition gives them the opportunity to expand their position in the knee and extremities market. Their product range includes large joint revision and primary implants and complete extremities solutions including fixation, products, made of various materials, including ceramics.

⁸⁹<http://files.shareholder.com/downloads/ZMH/0x0x819050/C1935C65-9C4E-4E29-95E6-9B95E5BE3755/zimmer-2014-annual-report.pdf>

⑤ OSSTEM IMPLANT

The growing acceptance of discount implants has been driven especially by the Korean regional market leader, OSSTEM IMPLANT; they were holding 21,9% market share of the total dental implant market, for the Asia Pacific region, in 2014. The company has invested significantly in marketing efforts, leading to a significant grow in the popularity of its products.



The company was established in 1995; in 2006 they initiated their abroad expansion by setting up of a few foreign subsidiaries among which, one was in Tokyo, Japan.

Throughout the following years, Osstem Implant and other discount implant companies, such as MegaGen, Dentium and Neobiotech are expected to capitalize on the growing popularity of discount implants.

⑥ KYOCERA Medical Corporation



Kyocera is one of the top 10 ceramic producers worldwide; with a large variety of ceramic produces, they started the development of bio-ceramic implant materials in 1973 and they launched their first ceramic dental implant in 1978.

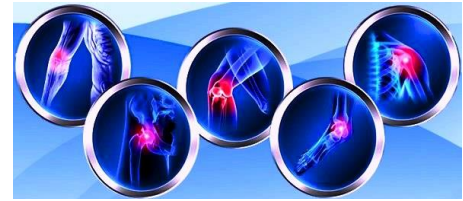
KYOCERA Medical Corporation engages in designing, developing, manufacturing and selling of medical equipment in Japan and internationally. The company offers artificial joints and bones to the field of orthopedic medicine and dental implant systems. They have a branch office in Tokyo, Japan; and a design center in Somerset, New Jersey.

KYOCERA Medical Corporation operates as a subsidiary of Kyocera Corp.

B. Orthopedic Implants

In the Japanese Joint Replacement Implants Market the major players operating are⁹⁰:

- ① Stryker (U.S.)
- ② Depuy Synthes (member of Johnson & Johnson Group) (U.S.)
- ③ Japan MDM Inc.
Zimmer Biomet (U.S.) – (*see Dental Implants Key Players*)
Smith & Nephew Plc. (U.K.),
Exactech, Inc. (U.S.)



Companies, such as the above mentioned, have fortified their position worldwide by producing high-quality **large joint implant** products and investing their resources in research and development. Currently, these companies get most of their business through the top tier hospitals, as patients are willing and able to spend their money on sophisticated orthopedic devices. In the Japanese **small joint market**, “DePuy Synthes” leads with a little less than 1/3 of the market share, while “Acumed” held the second position, with almost 20% share; Stryker is also a strong player. Other domestic important players are Nakashima Medical and Kyocera.

① Stryker⁹¹

Dr. Stryker started the company in 1941 with the goal to help patients lead healthier, more active lives by using medical products and services that make surgery and recovery simpler, faster and effective. Since mid 1955’s, Stryker’s products have been distributed in Japan through around 20 partners.



In 1994 Stryker **acquires** 51% of Matsumoto Medical Distribution’s **shares** (a domestic medical instrument wholesaler) and this partial ownership significantly strengthens their business in Japan.

In 1998, Stryker Corporation purchases “Howmedica”, the orthopedic division of Pfizer Inc. This acquisition brings together market-leading orthopedic products from both companies. Stryker becomes one of the largest players in the orthopedic implant business and with its medical equipment and services; the Company becomes a leader in the worldwide medical technology marketplace.

In 2000 they built the NSK Training Center in Shinagawa, Tokyo.

In 2003, Stryker launches the “CentPillar” hip stem, a product specifically designed for the Japanese market. Soon after, in 2004, they launched the “NRG” knee system, also specifically designed for the Japanese market.

⁹⁰ <http://www.businesswire.com/news/home/20130208005729/en/Research-Markets-Japanese-Orthopedic-Large-Joint-Reconstruction>

⁹¹ <http://www.stryker.com/en-us/corporate/AboutUs/History/index.htm>

② Depuy Synthes⁹²

The DePuy Synthes Companies are part of the Johnson & Johnson companies and have a wide-range portfolio of orthopedic products and services in the areas of joint reconstruction, trauma, spine, sports medicine, neuro, cranio-maxillofacial, power tools and biomaterials.



In 1895 Revra DePuy founds DePuy Manufacturing in Warsaw, Indiana; the company was about to become the first commercial orthopedic manufacturer in the world.

In 1994 DePuy's parent company, purchases ACE Medical Company, a manufacturer of orthopedic trauma products in the U.S. and the number two supplier of trauma products in Japan. The purchase of ACE diversifies DePuy's position in the orthopedic marketplace, bringing the company in Japan.

③ Japan MDM Inc. (*Japan Medical Dynamic Marketing Inc*)



The company was established in 1973; its business activities are concentrated within the orthopedic field: import and sale of medical devices; development, manufacture and sale of domestic medical products and promotion of medical products to medical professionals and major hospitals throughout Japan.

The company net sales are on an upward trend, growing from ¥8.134 million in 2013 to ¥9.459 million in 2014 and reaching ¥11.855 million in 2015.

⁹² <https://www.depuvsynthes.com/about/corporate-information/our-history>

4.4. Regulations, License, Labeling, Packaging, Distribution

Regulations

In Japan, medical devices are regulated according to the “Pharmaceutical Affairs Law” (Law No. 145 of August 10, 1960; “PAL”), and their safety and effectiveness has to be confirmed. All medical devices used on patients have ultimately been approved by the Ministry of Health, Labor and Welfare (MHLW). Dental Implants and Orthopedic Implants are considered “medical devices”.



Prime Minister Shinzo Abe’s economic revitalization and growth strategy, introduced in June 2013, includes the promotion of domestic pharmaceutical, medical device and biotechnology industries. The strategy includes measures such as accelerating regulatory approvals and eliminating so-called “medical device lags” and “drug lags” in market introduction, as well as rewarding innovative medical devices and pharmaceuticals among other measures.

As a part of the strategy, in November 2014, the Government obtained Diet approval for several amendments to the Pharmaceutical Affairs Law (PAL). The Diet revised the law to reflect the characteristics of medical devices separately from pharmaceuticals, and the medical review process is expected to be further improved through the revised PAL and related regulations. Also the name of the law regulating drugs and medical devices was changed from the “Pharmaceutical Affairs Law” to “The Law on Ensuring Quality, Efficacy and Safety of Pharmaceuticals and Medical Devices, etc.” (referred to as “Pharmaceuticals and Medical Devices Law” or “PMDL”).⁹³

PMDL regulates the quality, efficacy and safety of pharmaceuticals, quasi-pharmaceuticals, cosmetics and medical equipment in Japan. Under the Pharmaceutical Affairs Law, medical equipment must be approved by the Government before it can be sold or marketed in Japan.

All foreign companies that sell medical devices in Japan must go through a local dealer or establish an office in Japan.

After receiving approval, an application for coverage under health insurance can be made and the medical equipment item can then be offered inside the framework of the National Health Insurance System.

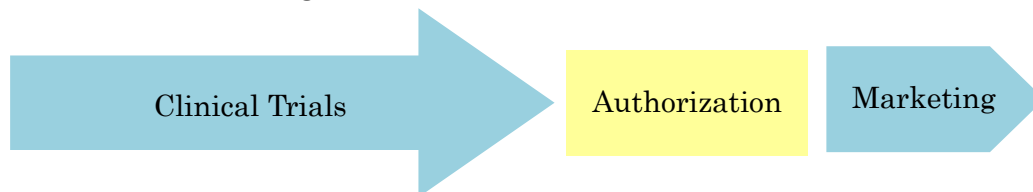
⁹³ <http://export.gov/industry/health/healthcareresourceguide/japan084194.asp>

Authorization Process

The MAH system was set up to increase the quality and safety controls applicable to medical devices, by separating the responsibilities of manufacturing and product release. In general terms, under the new system, the manufacturer is responsible for production while MAH is responsible for the release of products into the marketplace. *[It may require MHLW or prefecture-level inspections of the company applying to become MAH.]*

Under the PMDL, there are two routes to obtain authorization; the first route is the same as the **standard authorization** system for drugs under the PAL (PMDL Art. 23-25) (Figure43):

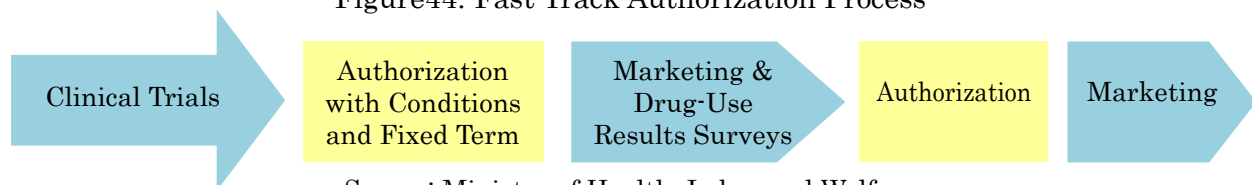
Figure43. Standard Authorization Process



Source: Ministry of Health, Labor and Welfare

The second route is intended to address the **regenerative medicine product**. Thus, if the safety of the regenerative medicine product is demonstrated through clinical trials, MHLW may authorize the applicant to manufacture and market the regenerative medicine products, with certain conditions, for a fixed term, after receiving an expert opinion from the Pharmaceutical Affairs and Food Sanitation Council (Figure44):

Figure44. Fast Track Authorization Process



Source: Ministry of Health, Labor and Welfare

With this amendment, it is expected that companies attracted by this fast-track authorization process may initiate research and development of regenerative medicine products and may commence to market such products earlier than previously anticipated, allowing patients to have earlier access to regenerative medicine products.

Medical Devices Characteristics

As indicated by its name, the Pharmaceutical Affairs Act ("PAL") focused on the regulation of drugs rather than medical devices. Recently, however, medical devices have been recognized to have the following characteristics that distinguish them from drugs:

- medical devices are clinically implemented;
- there are continually under improvement and the life-cycle is short;
- the efficacy and safety of medical devices depend largely on the doctor's technique;
- there are many types, but few of each type are clinically used.

The medical devices classify as follows:

Class I General Medical Devices - Extremely low risk to the human body in case of failure of the medical devices (e.g. X-Ray film);

Class II Controlled Medical Devices - Relatively low risk to the human body in case of failure of the medical devices (e.g. MRI, bronchial catheters)

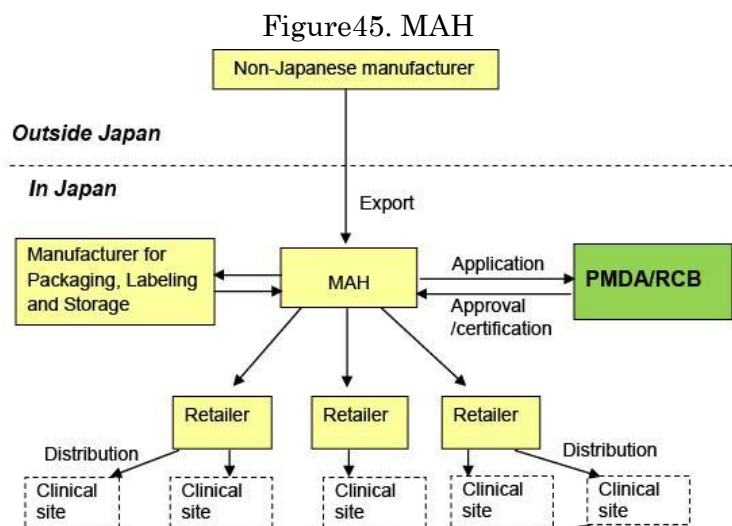
Class III Specially Controlled Medical Devices - Relatively high risk to the human body in case of failure of the medical devices (**artificial bones, dental implants, dialyzer...**)

Class IV Specially Controlled Medical Devices - Highly invasive to the patients and life-threatening in case of failure of the medical devices (e.g. peacemaker, artificial heart valves)

Licensing Options

Overseas medical device manufacturers have three options to market their medical devices in Japan as described below⁹⁴:

(1) A Japanese company with a MAH license becomes the approval holder (the Approval Applicant). The overseas manufacturer enters a distribution agreement with a MAH-licensed company in Japan. The MAH Company submits applications for regulatory approval (Certification). After obtaining such approval (Certification), only the MAH Company can import and distribute the medical devices, acting as an exclusive import agent.

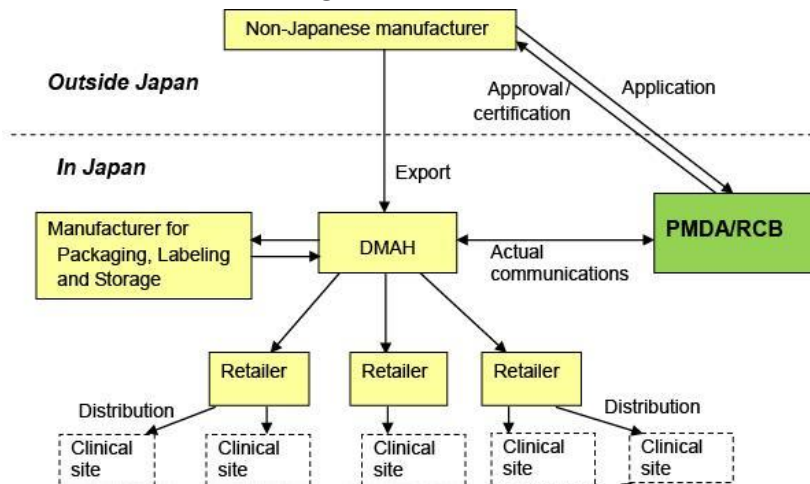


Source: Ministry of Health, Labor and Welfare

(2) The foreign manufacturer becomes the approval holder. Foreign manufacturers can become approval holders, although MAH licenses apply only to Japanese companies. A foreign manufacturer planning to submit its own application for approval must assign a Japanese company with appropriate MAH licensing as a DMAH to act as its representative.

⁹⁴ <https://www.j-mdc.com/report.html>

Figure 46. D-MAH



Source: Ministry of Health, Labor and Welfare

Foreign Restrictive Approval Holder

A foreign manufacturer lacking a Japanese subsidiary can continue to receive and maintain the approval under its own name. However, the foreign firm will need to designate a MAH when applying for a product approval. This “Designated MAH” (D-MAH) must assume all responsibilities for issues such as quality assurance, adverse event reporting and post marketing surveillance. In most cases, D-MAHs will be the Japanese importer/distributor of the medical device.

It is important to note that only a D-MAH can import and market approved foreign products. The major advantage of working with these companies is their business neutrality. However, even if a foreign company obtains a product approval status under its own name, by designating an importer/distributor as a D-MAH, it becomes very difficult to change the chosen D-MAH, as their consent will be needed.

(3) A subsidiary is established in Japan and obtains a MAH license (the subsidiary in Japan becomes the approval holder); this is the simplest way. Foreign manufacturers establish their own subsidiaries in Japan; the subsidiary obtains a MAH license and acts as a MAH, as in Case (1); the subsidiary (MAH) becomes the approval holder. In order to establish a subsidiary with a MAH license in Japan, appropriate offices and qualified personnel are required. The actual requirements for MAH licensing depend on the classification (Class 1, 2 or 3 MAH licenses).

Types of MAH licenses

There are three types of licenses that can be obtained by an MAH, as follows:

- Type 1 – Medical Device Manufacturing and Sales License for Specially Controlled Medical Devices; they can import all categories of medical devices (Classes I, II, III, IV).
- Type 2 – Medical Device Manufacturing and Sales License – Controlled Medical Devices; they can import only Class I and II.
- Type 3 – Medical Device Manufacturing and Sales License – General Medical Devices; they can import only Class I.

A MAH must be physically located in Japan and is required to have (assign) three controllers, also based in Japan. These three controllers are:

1. General Controller (one person per license),
2. Safety Management Controller (one person per license) and
3. Quality Assurance Controller (one person per license).

MAH Role

- *To obtain marketing approval for each product*

The MAH must obtain a marketing approval for each product, in order to obtain this approval MAH has to guarantee the quality, safety and efficacy of the product.

- *To verify that the product meets market needs*

The MAH is responsible for the products and all processes related to quality and safety and the most important is to deliver products that are suitable for the Japanese market.

- *Production Quality Control*

The MAH is required to ensure quality control system at the manufacturing facilities, including subcontractors and contract sterilizers; there are all up to the standards of the "release criteria" for each product; MAH has to make sure that manufacturers comply with the released criteria.

- *Product Quality Control and Safety*

The MAH must comply with GQPs (Good Quality Practices), governing product quality and with GVP (Good Vigilance Practice), requiring to monitor the safe use of the product in Japan and also any safety related events in the markets where the products are being and have been sold. These necessitate monitoring post-market sales in the markets where the products are being or have been sold and taking immediate action to minimize any public health exposure.

MAH Company has the right to transfer approval to other companies with MAH licenses.

Since MAH is responsible for the product and all the processes related to quality and safety, it is critical for MAH and Manufacturer to establish good communication channels with each other and agree on key issues, such as Japanese GMP compliance, the effectiveness of systems assessment by the MAH and the sending of notifications to the MAH in a timely manner.

Labeling & Packaging



After the MAH has conducted the customs clearance of medical devices and released the products, Japanese labeling and packaging manufacturers receive them. According to the PAL, labeling, packaging, and warehousing are defined as “manufacturing” activities and therefore require a Packaging Manufacturer License⁹⁵. Most foreign companies conduct labeling and packaging in their foreign facilities (outside Japan), but warehousing in Japan can’t be avoided, so it is required to appoint a Japanese labeling and packaging manufacturer.

Distribution of Dental Products

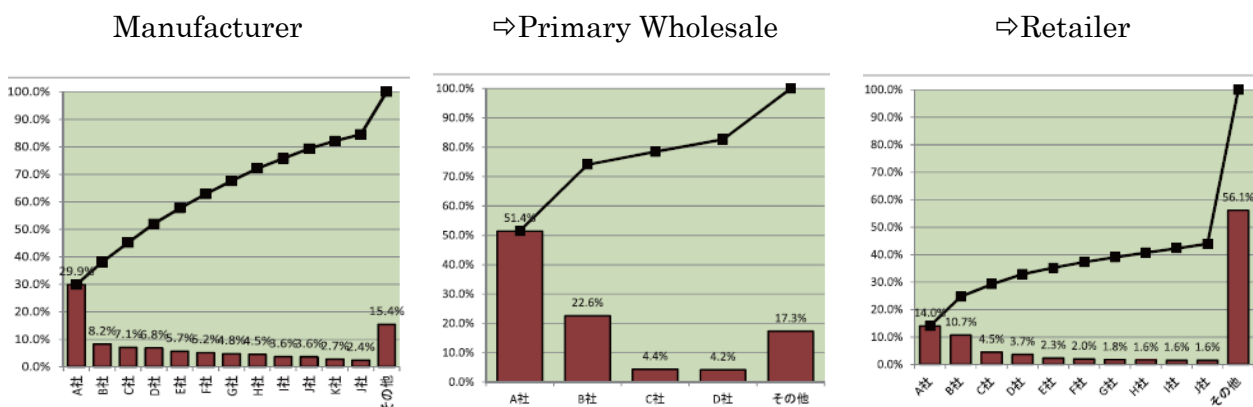
According to Japan Dental Chamber of Commerce and Industry Association, in December 2011, there were 937 companies related to dentistry in Japan (members).

Products flow: **Manufacturer ⇒ Primary Wholesaler ⇒ Secondary Wholesaler ⇒ End-User**

Characteristics of the Dentistry market structure⁹⁶:

- *Manufacturers* (including importers) are 274 companies, out of which the first 12 companies = 82.5% of the market share ~169,4 billion Yen;
- *Primary Wholesalers* are 15 companies, with a high level of corporate integration, a group of 4 companies representing 82.7% of the market share ~ 113,4 billion Yen;
- *Secondary Wholesalers* are 648 companies, out of which 10 companies have 43.9% of the market share, a long tail structure ~ 149,3 billion Yen;

Figure47. Dentistry Market Structure



Source: Ministry of Health, Labor and Welfare - 2012 doctors, dentists and pharmacists survey Overview

⁹⁵<http://cdn.eubusinessinJapan.eu/cdn/farfuture/ILnZjBmlVFqn30CKGMGvZvpLg2epRgg2gMk2MnpT75U/mtim e:1407312648/sites/default/files/dental-devices.pdf>

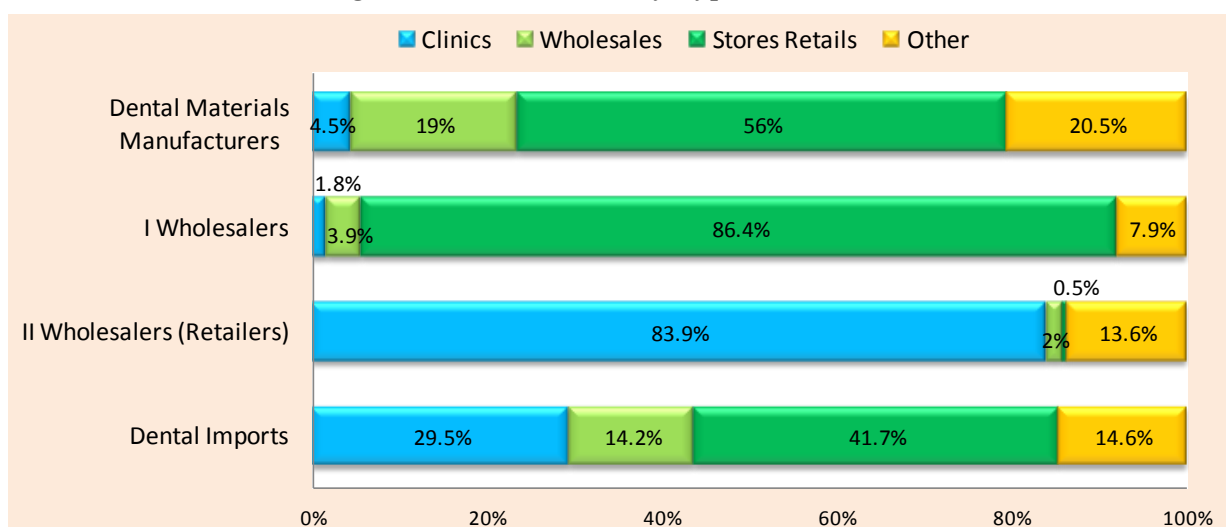
⁹⁶ http://www.jdta.org/pdf/h24_vision.pdf

Since the materials used in dentistry are diversified, produced in small amounts, the wholesalers and retailers are important in the distribution process, especially for the delivery performance and the provision of information.

The local producers of dental materials are selling their products, in a proportion of 75% through wholesalers and retailers and only 4,5% of their sales goes directly to Dental Clinics, while the remaining 20,5% is sold through other meanings, including export (Figure48).

On the other hand the **importers** of Dental Products have a larger opening, 29,5% of sales goes directly to Clinics while only 55,9% goes through wholesalers and retailers while the remaining 14,6% is sold through other meanings.

Figure48. Distribution by Type of Business⁹⁷



Source: MHLW - 2012 Doctors, Dentists and Pharmacists Survey Overview

Environment surrounding the distribution of dental equipments continued to change. In the future, it is expected for the business environment to become more severe, efficiency and rationalization of distribution is further required, in order to enhance the seller's valuable presence.

⁹⁷ http://www.idta.org/pdf/h24_vision.pdf

4.5. Challenges & Opportunities

Challenges

Regarding the Product

➤ **High costs**

The cost of registering a new medical device can be considerable, extending from registration fees to expert assistance with document preparation and the possible expense of a production centre audit and inspection.

➤ **Time consuming regulations**

One of the longest-standing, the complaints of foreign manufacturers doing business in Japan is the time and money it takes to get a product approved for sale. Depending on the class of device, the registration process for equipment that is already industry standard can take 12 to 18 months.

➤ **No recognition between the EU and Japan regarding GMPs**

There is no mutual recognition agreement between the EU and Japan regarding GMPs for medical equipment, no adequate acceptance of data from clinical trials undertaken outside Japan in accordance with the requirements of ISO 14155 “Good Clinical Practices Standards”.

➤ **Introducing the newest products**

Even if there is a higher demand and affordability for Premium Quality Products, Japanese high regulations rigidity relating to new and innovative products pose serious difficulties for European companies trying to build a stronger presence in Japan, as they cannot market their newest and more expensive products.

➤ **No medical insurance for dental implants**

The medical Insurance does not cover the dental implant costs, the price must be paid by the consumer, considering that most of the dental implants are imported; the prices are higher compared to Europe for example.

➤ **Pricing and reimbursement for Joint Replacement providers**

Although the Joint Replacement Implants are covered by the national medical insurance, the providers are facing challenges regarding pricing and reimbursement; due to the GOJ’s efforts to control overall healthcare costs as a consequence of Japan’s aging population.

“The GOJ implemented pricing policies, such as Foreign Average Price (FAP), to cut medical device reimbursement rates. In 2014 reimbursement revisions, the GOJ again changed the FAP rule by excluding the highest price under certain conditions in the foreign average price calculation method. GOJ also changed the recalculation rule by reducing the foreign average price multiplier of 1.5 times to 1.3 times under certain conditions. Despite the fact that the FAP rule has substantially narrowed foreign price differentials between Japan and overseas

markets through the past seven reimbursement revisions, the price differential still remains as an issue to be solved within the GOJ⁹⁸. Revision of the FAP occurs every April, on even-numbered years and if necessary adjustments are instated.

Applications from domestic companies are prioritized by PMDA.

Regarding the Patient & the Doctor

➤ **Japanese are very conservative** in choosing new providers, new materials;

The Japanese people tend to become brand loyal once they tried a certain type of products, they become familiar with how to use it and also if the products show good quality and reliability, changing the buying behavior might prove difficult. For a new entering company it might take a longer time than expected, to study and understand consumers` mindset and buying behavior and the best suited method to promote a new product, but also how to build up consumers new brand awareness and convince them of the new products special features. This aspect can be overcome by choosing the right partner for distributing the materials, local partner that already have a strong position, acceptance in the targeted field.

Regarding doing business

➤ **Finding the right business partner** – MAH⁹⁹

Because of the particular characteristics of the Japanese market, extra time and effort will be needed to find an appropriate distributor, particularly if the distributor is to be utilized as a D-MAH. Because the Japanese always stress the importance of establishing mutual trust, prospective distributors will also keenly research and carefully evaluate the exporting company before signing an agreement. Finding the right distributor might take even over a year, depending on the needed time to do reciprocal company check-ups and so on.

⁹⁸<http://www.mtc.com/wp-content/uploads/2015/04/2015-Medical-Devices-Resource-Guide-Japan-and-China.pdf?29e721>

⁹⁹ <http://eu-gateway.archive.eu-gateway.eu/userfiles/file/Market%20Studies/2013/2013%20-%20Healthcare%20&%20Medical%20Technologies%20Japan%20-%20Market%20Study.pdf>

Opportunities

Regarding Regulations

➤ **Improved Authorization Process**

“Prime Minister Shinzo Abe’s economic revitalization and growth strategy, introduced in June 2013, includes the promotion of domestic pharmaceutical, medical device and biotechnology industries”.¹⁰⁰ Therefore, the Japanese medical device market and pharmaceutical industries are considered to be key areas for business expansion. Although the GOJ’s policy programs are targeting to boost the international competitiveness of Japanese industries, these measures could also be beneficial for European medical companies that can offer innovative products to Japanese patients.

PMDA will reduce the medical devices review lag by offering premium reimbursement for companies that submit their approval applications in less than 180 days after submitting in the USA and EU.

Regarding the Product

➤ **Growing demand in both dental implants and joint replacement market**

Dental Implants

Based on current trends, the implants will experience significant growth in the next few years. As baby boomers are entering the retirement age, many will need treatments to replace missing teeth and implants are becoming more popular, being the best choice for many. Both Premium and Discount Dental market are expected to grow in the following years, offering a good opportunity for entering Japanese market.

Joint Replacement

The increasing demand for hips, knees and large bones repairs as more younger people are practicing sports and inevitably getting injured and more patients are willing to undergo a procedure related to large joint replacement since there are seriously affecting their daily life, by partial or complete loss of mobility or various degree of pain, affecting also their capacity to provide for their families.

As ceramic implants proved their longevity and reliability among many other benefits, these products might have the best chance to win the market since there are best suited for middle aged and younger people or with a longer life expectancy, as the traditional implants would have a life expectancy of around 20 years.

Foreign device manufacturers may discover many opportunities for expansion into the Japanese and Asian market; for example, by “expanding their portfolios to include midrange versions of their A-line orthopedic products”¹⁰¹, the foreign producers will find they have better chances of succeeding against local competitors or already established exporters of medical devices.

¹⁰⁰<http://www.mitc.com/wp-content/uploads/2015/04/2015-Medical-Devices-Resource-Guide-Japan-and-China.pdf?29e721>

¹⁰¹ <http://www.pacificbridgemedical.com/publication/asian-orthopedics-markets/>

The Japanese consumers expect innovative products with well documented clinical results, already launched on several foreign markets that would bring more beneficial features than similar devices now present on the local market.

➤ **Most implants & related technologies are imported**

Dental implants, with US and European technology (ostheo-integration) widely used and also the bone replacement implants are almost all imported, as Japanese companies chose to stay away from such a sensitive product.¹⁰²

In general, suppliers need to achieve higher prices for medical equipment in Japan than in other markets, in order to cover higher costs, driven up by Japan-specific requirements for product design, development and testing; by the traditionally complex distribution system; by customer expectations of extensive technical and after-sales services; and by the frequent need to maintain old product lines to cover the delays in Japan's product approval process. However, it is quite common to find that the market in Japan also supports higher profit margins than elsewhere.

The development and commercialization of new types of implants, whether for dentistry or orthopedically usage, made by new material components, including ceramics, in adapted forms and designs, is progressing in Japan. Treatments, exploiting these new implant materials with better outfit for each patient's medical conditions and high durability, encourage higher expectations of superior postoperative functional recovery.

Regarding the Patient

➤ **Aging population, in need for medical treatments**

Dental Implants

The aging population in need for medical treatments for various affections, including dental implants for lost teeth and bone implants for pain alleviate, is expected to keep growing for the following years. In Japan people are encouraged to have a better dental care and to keep their teeth for as long as they can, this means that they would rather accept the more expensive option of dental implants rather than extract all the remaining teeth and use prosthesis.

Joint Replacement

The newly developed types of Ce/Ce bone implants that last for a longer period of time encourage the population to opt rather sooner than later to ease their pain and opt for joint replacements in order to continue having an active life, it is known that many Japanese people are used to continue to work many years after they officially retired.

¹⁰² <http://eu-gateway.archive.eu-gateway.eu/userfiles/file/Market%20Studies/2013/2013%20-%20Healthcare%20&%20Medical%20Technologies%20Japan%20-%20Market%20Study.pdf>

➤ **Growing awareness**

Increasing awareness among patients, encouraged by dental care public national campaign and producers' aggressive marketing, addressed directly to the patients through the company's official website, are changing their "old age" expectations: regarding dental implants, people want to continue to feel comfortable while eating, to feel good while smiling and to have a more natural look.

Regarding bone implants, especially knees and hips, people would expect to continue their active lives.

➤ **Afford the costs and willing to spend**

The Japanese society is considered wealthier and as people become aware of the latest tested medical treatments, available on the market they are willing to spend in order to improve their daily lives.

Japan is one of the highly developed markets that demands the most advanced health care products and have a high level of spending on dental and medical care¹⁰³. In this market, dental care is increasingly focused on preventive care and specialized dentistry, in addition to basic procedures. "This market requires various and complex dental products, utilizes sophisticated diagnostic and imaging equipment and demands high levels of attention to protect against infection and patient cross-contamination".¹⁰⁴

➤ **Absolute size of the potential market**

The absolute size of the potential market might prove worthy for the painful time delays and complex procedures. In Japan, a large segment of the population can afford higher end treatments in both dental and medical care, including expensive dental implants procedures that are not reimbursed, nor covered by the National Health Insurance System.

Regarding Doctor & their practice

➤ **Training centers**

Many device manufacturers, exporting to Asian countries have increased their business by opening training centers and starting "training programs" for regulators and doctors as a way to enhance awareness of potential treatments, spread know-how between doctors and raise demand for the medical devices. This can be an opportunity for new comers, as the market is already boosted by the existing players for the benefit of everybody: producers, distributors, doctors, patients.

➤ **Increasing number of clinics**

The increasing number of clinics specialized in dentistry and in general medical care and the number of dentists prove once again that the implants market in Japan is growing.

➤ **Increasing use of modern technologies**

¹⁰³http://www.annualreports.com/HostedData/AnnualReports/PDF/Dentsply_2014_10KAnnualReport.pdf

¹⁰⁴ http://csimarket.com/stocks/markets_glance.php?code=XRAY

The new generations of dental technicians are becoming more computer skilled with stronger knowledge of CAD/CAM techniques, as many labs become integrated in the dental practices. The interest in products that will improve the quality of life for seniors is increasing. However, it is up to each individual practice and clinic, to position itself for success, by using the latest technologies and the latest types of materials to improve their clinical competence, in order to be able to provide the most suited treatment.

Communication is another tool that needs to be used wisely; the expansion in the early commercialization of domestic dental implants and the development of dental CAD/CAM technology need to be promoted. Moreover, it is necessary to develop further advanced high functional products such as dental crowns, restored prosthesis, pursuing implant upper structure and vital affinity in order to support and construct the international sales network.

Asia region represents one quarter of the global orthopedics devices market out of which around 40% is the Japanese market, with an aging wealthy population and growing awareness of the medical devices choice of materials and possible treatment options.

This means that even small and medium sized European orthopedic companies may find interesting sales opportunities in Japan in the near future, if they are patient and have the financial support to withstand the long lasting approval procedures for marketing medical devices in Japan.

5. Recommendations and Conclusions

Japan is far from being an opportunistic market, so it is very important to have a strategy and a long-term plan when approaching this market. It can be expensive and time consuming to develop a business in Japan so be clear from the beginning about the resources of time, money and people that you want to allocate.

Research the market well before setting your business objectives, in order to understand how to adapt your business, your products and your expectations to the market needs and demand.

Before expanding to Japan, you need to have previous international experience and a strong presence on home market, as mature markets are more difficult to explore and have higher competition.

● **Choosing Shop/Office Location**

When looking for a location to set up your office or to open your first shop, for tableware for example, it is important to research well the real estate market, considering:

⇒ **the proximity to shops with similar or complementary products**

[Tableware: “Kappabashi Street”¹⁰⁵ is an 800 meters street, located in Tokyo's Taito City, along the west side of Asakusa's main entertainment district, and just midway between Ueno and Asakusa. Merchants first began gathering in the Kappabashi area around 1912 to sell old tools. Today, there are over 170 shops with kitchen equipment like Japanese, Western and Chinese tableware, china, lacquer-ware, restaurant equipment, packaging, containers, decorative goods, bamboo-wares, baking ingredients, food and beverage ingredients, confectionary wholesalers, Japanese and Western furniture and other home goods.]

⇒ **the area is visited by your targeted consumers**

After deciding your targeted customers you may chose from a variety of areas with a higher consumers` traffic like Ginza, Shinjuku, Ikebukuro, Funabashi, Odaiba ..., depending on your set priorities.

⇒ **office space in the right building**

The building where your office will be settled is going to say a lot about your company potential, market positioning, commitment, the company`s understanding of the Japanese market and so on, therefore it is important to research where similar companies are located, who else is located in the building you chose to move in, the distance from your partners, potential customers and so on.

[A company determined to set up an office in Tokyo, can inquire for EU-Japan Center`s or JETRO`s support for initial “step-in” office support for one or two months.](#)

¹⁰⁵ <http://www.kappabashi.or.jp/en/>

- **Adapt your Product to the market needs**

- **Demand for single item**

The ordinary demand of ceramic tableware shifted to “single items”, sold by piece, for personal home use, and consumer needs are being more diversified and individualized.

- **Short lifecycle**

The product lifecycle is progressively shortening, with a wider variety of products manufactured in smaller volumes.

- **Large variety**

Make the product available in a wide range of sizes and colors, as the Japanese consumers are used to constant renewal; keep expanding your range of products to keep the retailers and consumers interested.

- **Adapt the size of products**

Size of objects is a critical issue in the Japanese market where living space is usually smaller, especially in big cities, and European goods tend to be relatively bigger so the producers need to study how to make them suitable for the Japanese market.

Tiles manufacturers need to take into consideration that in Japan a 200-mm square tile is expected to be slightly smaller so together with the joints to reach exactly 200 mm in size.

Bone implants are smaller in sizes, as most of the Japanese people are shorter than Europeans.

- **Severe Quality control**

The quality control of the products sent to Japan has to be more detailed than for any other foreign markets.

- **Prepare a story for your company, products**

Give some thoughts to what is special about your product. Japanese buyers are always looking for something different or unique.

- **Explain important features**

Pick one or two products features to emphasize and use them constantly in any discussion and/or in any sales literature you produce. Use brand names that are easy to remember for the Japanese, adapt brand names and make sure it makes sense to them.

- **Brand it**

E.U. products are often associated with good design and quality, but an already known brand in Europe would present more interest for Japanese partners than an OEM producer. The brand is bringing prestige, history, a story to tell, previous consumers experience that would make the products more desirable.

- **Emphasis EU image**

The number of countries and languages involved make it difficult for Japanese customers to clearly identify product origins and for traders to get information on specific products. European SMEs value their independence, but they still represent E.U. image, so they should use E.U. as “origin marking” (besides their country) on their company`s and product`s description.

- **Do not rely entirely on your partners to chose from your products**

Some producers after meeting partners during exhibitions and start a business relation, they rely entirely on their partner`s decision regarding what products to choose, but this strategy is not entirely a successful one in Japan, as the producer will always know best which products and designs may be adapted and which products are their “best seller”.

In order to be able to make suggestions to partners regarding the most adequate selling points, the producers need to study the market in depth:

- ⇒ to visit local shop chains, see how the product are displayed, (for example in Loft the Japanese style products are in one place, while the foreign style is in a different place, although on the same floor);
- ⇒ to check patterns, designs, colors existing on the market to understand how you can differentiate from what it is already there;
- ⇒ to check the wrapping a very important aspect in Japan and also the Gifting Market opportunities.

- **Pay attention to Consumer`s behavior:**

Knowing the consumers` expectations and habits is the key to understand where to retail your products and to decide which distribution routes would best suits your needs.

- **Attracted by exotic, novelty and brands**

Oposing the strict and gray working environment where people are complying with rules and regulations, their personal time and environment, their home is striving to differentiate from others, to become unique and comforting by bringing in an “exotic touch”; consumers are attracted by imported goods and they are willing to pay for having them.

- **Easily influenced**

The consumers are easily influenced to buy or not to buy, by family members, friends, co-workers, TV commercials or shows, general publicity. Their “buying decision” also relies on the social status for which they are willing to pay accordingly.

- **High expectation for complimentary services**

In general, the consumers have expectations for complimentary services, weather it is packaging or transport or complementary gifts for large value acquisitions. They are also risk averse and they consider high prices imply higher quality and added services.

- **Minimum concern about price**

Despite how “valuable for the money” goods are, the buying-decision is made based rather on feelings than on conscious choices, although they have started to travel for a better price.

- **Visit & Exhibit at Fairs**

- **Attend trade fairs in Europe**

Japanese buyers from larger stores visit trade fairs in Europe such as Ambiente Frankfurt and Maison & Objet Paris every year, so exhibiting in Europe, for some companies can be a way to meet Japanese interested parties. In many cases Japanese retailers pay a retainer fee to local Japanese contacts to provide ideas and information on a regular basis.

➤ **Attend trade fairs in Japan**

When attending trade fairs in Japan, do not assume that English language is universally used in business all over the world and expect to deliver at least your company presentation in English, because in Japan, this believes are doomed to failure. Even if they understand English, most of the people are reluctant to speak it even just for small talk.

➤ **Attend Presentations during fairs**

During most exhibitions, interesting presentations are held on subjects closely connected, presentations that might give precious information on the field of activity, local trends and products, brands, usually in Japanese and rather rarely in English. Either you are an exhibitor or just a visitor you should attend presentations and seminars held during the exhibition or delegate someone who can understand Japanese.

[The author of this report went to a fair related to Construction materials and attended two presentations on similar topics, one in English – with 6 participants, all foreigners and the other in Japanese – with around 200 participants, 99% Japanese attendees.]

➤ **Company presentation opportunities**

During almost all exhibitions, for a fee, exhibitors have the option of holding a presentation about their company, either on their booth or on conference designated space that can accommodate 50 to 200 guests.

➤ **“Match making” opportunities**

Some exhibitions (e.g. the ones organized by Reed Expo) offer a platform for “Match making” for the exhibitors to meet visitors interested in their products.

● **Distribution**

➤ **Bypassing local distribution chains**

There is a market pressure to reduce the distribution chain costs, by evading wholesalers and partnering directly with major retailers. While Trading Houses may be bigger, better known, easier to contact and more used to working with foreign suppliers, their profit margin is quite high and your product will become just one among many others.

➤ **New distribution channels**

Be open for new upcoming distribution channels such as TV shopping and e-commerce. In Japan, mobile “smart” phones are now being used by e-commerce companies to raise awareness with aggressive commercials.

● **Chose carefully the Retailers of your products**

In Japan, many consumers wish to coordinate the design of a room in a coherent atmosphere. Consequently, retailers handle interior goods and line up products under concepts like “cute and natural”; therefore it is important for producers, who wish to enter the Japanese market, to explore which retailers are better fitted to handle their product concept in Japan.

● **Your business partners` needs**

➤ **Find a way to communicate in Japanese**

There are trading companies, local distributors interested in accessing information about

European products and producers, but they find it difficult to process the information in English, so preparing the necessary data and the promotional materials in Japanese would increase their understanding and their desirability to get in touch with European producers.

➤ **Personal relationship before business relationship**

Japanese people highly value personal relationships before entering professional or business relationships. "Cold calling" in any kind of business relationship in Japan will do more harm than good, as the response will be very polite and vague, closing any future approach. A "no" answer will come disguised in "very difficult" and further communication will soon turn into silence on the subject.

➤ **Being recommended**

You need to be introduced by a Japanese person who "recommends" you; the person recommending you become fully "responsible" for your behavior. Once you gained the trust of one person, the others will follow.

Lacking trust is not a result of rejecting foreigners but rather an issue between Japanese business people; trust is usually granted within their group, their company to which they dedicate their entire lives, but trusting a person from a different group of interests is a different story; they are so deeply covering "hone" (truth) by several layers of "tatemaie" (façade) and under the seven stages of politeness that they find it hard to trust each other.

➤ **Show commitment**

Show that you are making an effort by being prepared with information about your potential partners, the most adequate distribution channels to your line of business and prepared to wait until all the wheels are in motion.

➤ **Accept small orders for start**

Be prepared to accept small orders, particularly in the early stages of doing business. The importer is both testing the market and testing the quality of your delivery and products.

➤ **Keep a close contact**

Keep regular contact with customers/partners and visit Japan at least once a year if possible, to get feedback from them about market trends and to discuss ways to improve the business; always respond promptly to any requests for information; keep constant communication with your partner.

➤ **Special need for information**

Be prepared to answer questions received from nowhere else in the world, help your importer to improve his business chances by providing plenty of information about your company and its business and the products you are selling. This information will be used to prepare sales literature that the importer will use in securing sales of your product (your agreement with the importer is likely to include a margin to cover the cost of marketing information as well).

➤ **Agreement**

In many cases, Japanese agents are asking for exclusivity, but there is no absolute need to give it, although in some cases it may be necessary to ensure the agent strong commitment towards expanding the sales of your product. It may be useful to introduce safeguards into an exclusive agency contract, by stipulating regional exclusivity, minimum sales or quantities

indicators of sales effort, but keep in mind that minimum sale figures are seen as indicators not fixed requirements. Also it is advisable to discuss any issue with the Japanese agent before taking the decision to terminate the contract and agree upon nullifying it.

Special understandings

➤ **differences in business practices and unspoken assumptions**

When a company decides to engage into Japanese market they need to do extensive research not only about products, potential market, consumers` expectations ... but also the business practice in Japan. It is better to ask several times the same question then make assumptions. It should not be surprising that Japanese people sometimes repeat what they were told and expect confirmation that they understood it correctly.

➤ **communication representative**

It is advisable to have a communication partner in Japan, open an office or find a representative to deal with all detailed communication with the local Japanese partners that are used to ask many questions, including the most obvious ones.

➤ **difficulties in identifying the decision maker**

Within a group, a number of institutions involved in a project or smaller companies within a group representing the same interest it is very difficult to identify the decision maker, that is why sometimes you need to promote your idea, products to a large number of people and convince them of the benefits and if so, they will lobby to the decision maker.

➤ **lobby**

Japanese partners are not only selling, opening the market and finding customers, but also providing and creating a sense of stability and security in the business relationships with Japan and lobbying for your products on the Japanese market, which takes a very long time; that`s why they will get in business only with people interested in a long term relationship.

➤ **Managers` abilities**

In export business, success depends, among others, on the ability of managers to understand and manage cultural differences.

Step-In

European suppliers who are determined to enter the Japanese market should consider establishing a physical presence in Japan as it would show commitment and reliability for all the after-sales issues and many other aspects. For technical ceramics products, a good first step could be to assign a technical engineer to the Japanese distributor. Such a step should, of course, first be discussed with the distributor in order to avoid any misunderstandings.

“The consumer is the key to understand a market potential”

The present report gravitates around the “consumers” as they are the key to unlock the market understanding; all the chains constructed around a product from the manufacture until the end-user have the same unique purpose, to satisfy the society needs, the individual desires while complying with the cultural background and the particularities of the place of consumption.

Once you understand the consumers, you are one big step further in fulfilling a market need with your products! If “the seeker” is looking for convenience, beauty or uniqueness, it is up to you to determine in which proportion these features should be combined in your products.

“Ceramic is a vast and dynamic field”

The ceramic market in Japan should not be seen as a unitary market, as each group of ceramic products is integrated in a different market sector. As the industries involved are so diverse, in the dedicated period of time, the report could explore only a small part of the Japanese market potential. The advance ceramics, in particular, are situated at a leading edge of development in many different industry segments and every day new usage is being discovered. There are more opportunities also in the electro-ceramics (semi-conductors, smart homes ...), ceramic coatings and renewable technologies, but these fields remain to be approached by a different Report.

Appendix 1a – Tariff Duties on Ceramics in Japan

The tariff duties on major product groups of ceramic products are shown in the table below:

	H.S. code	Description	Tariff rate			Unit
			General	WTO	GSP	
Ceramic Tableware	69.11	Tableware, kitchenware, other household articles and toilet articles, of porcelain or china.				
	6911.10 0	Tableware and kitchenware	3.4%	2.3%	Free	KG
	6911.90 0	Other	3.4%	2.3%	Free	KG
	69.12					
	6912.00 0	Ceramic tableware, kitchenware, other household articles and toilet articles, other than of porcelain or china.	3.4%	2.3%	Free	KG
	69.13	Statuettes and other ornamental ceramic articles.				
	6913.10	Of porcelain or china	3.4%	2.3%	Free	KG
	6913.90	Other	3.4%	2.3%	Free	KG
	69.14	Other ceramic articles.				
	6914.10 0	Of porcelain or china	Free	(Free)		KG
6914.90 0	Other	Free	(Free)		KG	
Wall&Floor Tiles	69.07	Unglazed ceramic flags and paving, hearth or wall tiles; unglazed ceramic mosaic cubes and the like, whether or not on a backing.				
	6907.1 0	Tiles, cubes and similar articles, whether or not rectangular, the largest surface area of which is capable of being enclosed in a square the side of which is less than 7 cm	2.60%	1.70%	Free	MT
	6907.9 0	Other	2.60%	1.70%	Free	MT
	69.08	Glazed ceramic flags and paving, hearth or wall tiles; glazed ceramic mosaic cubes and the like, whether or not on a backing.				
	6908.1 0	Tiles, cubes and similar articles, whether or not rectangular, the largest surface area of which is capable of being enclosed in a square the side of which is less than 7 cm	3.20%	2.10%	Free	MT
	6908.9 0	Other	3.20%	2.10%	Free	MT
Sanitary	69.10	Ceramic sinks, wash basins, wash basin pedestals, baths, bidets, water closet pans, flushing cisterns, urinals and similar sanitary fixtures.				
	6910.1 0	Of porcelain or china	Free	(Free)		KG
	6910.9 0	Other	Free	(Free)		KG
Brick & Roof Tiles	69.04	Ceramic building bricks, flooring blocks, support or filler tiles and the like.				
	6904.1 0	Building bricks	Free	(Free)		MT
	6904.9 0	Other	Free	(Free)		MT
	69.05	Roofing tiles, chimney-pots, cowls, chimney liners, architectural ornaments and other ceramic constructional goods.				
	6905.1 0	Roofing tiles	3%	2%	Free	MT
	6905.9 0	Other	3%	2%	Free	MT
Pipe	69.06	Pipes				
	6906 0	Ceramic pipes, conduits, guttering and pipe fittings.	Free	(Free)		MT

Appendix 1b – Tariff Duties on Ceramics in Japan

	H.S. code	Description	Tariff rate			Unit
			General	WTO	GSP	
Technical ceramics	69.09	Ceramic wares for laboratory, chemical or other technical uses; ceramic troughs, tubs and similar receptacles of a kind used in agriculture; ceramic pots, jars and similar articles of a kind used for the conveyance or packing of goods.				
		Ceramic wares for laboratory, chemical or other technical uses :				
	6909.11	Of porcelain or china	Free			
		10 - Catalyst carriers, intended for use in manufacturing catalyst		(Free)		KG
		20 - Other		(Free)		KG
	6909.12	Articles having a hardness equivalent to 9 or more on the Mohs scale	Free			
		10 - Catalyst carriers, intended for use in manufacturing catalyst		(Free)		KG
		20 - Other		(Free)		KG
	6909.19	Other	Free			
		10 - Catalyst carriers, intended for use in manufacturing catalyst		(Free)		KG
	20 - Other		(Free)		KG	
	6909.9 0 Other	Free	(Free)		KG	
Refractories	69.01					
	6901 0	Bricks, blocks, tiles and other ceramic goods of siliceous fossil meals (for example, kieselguhr, tripolite or diatomite) or of similar siliceous earths.	Free	(Free)		MT
	69.02	Refractory bricks, blocks, tiles and similar refractory ceramic constructional goods, other than those of siliceous fossil meals or similar siliceous earths.				
	6902.1 0	Containing by weight, singly or together, more than 50 % of the elements Mg, Ca or Cr, expressed as MgO, CaO or Cr ₂ O ₃	2.20%	1.50%	Free	MT
	6902.2 0	Containing by weight more than 50 % of alumina (Al ₂ O ₃), of silica (SiO ₂) or of a mixture or compound of these products	2.20%	1.50%	Free	MT
	6902.9 0	Other	2.20%	1.50%	Free	MT
	69.03	Other refractory ceramic goods (for example, retorts, crucibles, muffles, nozzles, plugs, supports, cupels, tubes, pipes, sheaths and rods), other than those of siliceous fossil meals or of similar siliceous earths.				
	6903.1 0	Containing by weight more than 50 % of graphite or other carbon or of a mixture of these products	5.20%	3.50%	Free	KG
	6903.2 0	Containing by weight more than 50 % of alumina (Al ₂ O ₃) or of a mixture or compound of alumina and of silica (SiO ₂)	5.20%	3.50%	Free	KG
	6903.9 0	Other	5.20%	3.50%	Free	KG

Source: http://www.customs.go.jp/english/tariff/2016_1/data/print_e_69.htm

Appendix 2 – List of Trade Fairs & Exhibitions

Architecture + Construction Materials

Date: March

Place: Tokyo Big Sight

Frequency: Annual

Last Fair Information (2015): *(The past records may include concurrent/joint exhibits)*

- ◇ Total number of exhibitors: 288
- ◇ Total number of visitors: 102.908

<https://messe.nikkei.co.jp/ac/>

Eco House & Eco Building

Date: March

Place: Tokyo Big Sight

Frequency: Annual

Last Fair Information (2015): *(The past records may include concurrent/joint exhibits)*

- ◇ Total number of exhibitors: 1.513
- ◇ Total number of visitors: 71.665

<http://www.ecohouseexpo.jp/>

Living Style Tokyo – New Housing Style +Reform & Renovation

Date: May

Place: Tokyo Big Sight

Frequency: Annual

Last Fair Information (2015): *(The past records may include concurrent/joint exhibits)*

- ◇ Total number of exhibitors: 273
- ◇ Total number of visitors: 31.332

<http://www.housingworld.jp/>

Architecture Exhibition Nagoya

Date: October

Place: Nagoya

Frequency: Annual

Last Fair Information (2015): *(The past records may include concurrent/joint exhibits)*

- ◇ Total number of exhibitors: 73
- ◇ Total number of visitors: 18.520

<http://www.chukei-news.co.jp/kenchiku/>

Medi-Care Service Expo

Place: Tokyo Big Sight

Frequency: Annual: January

Last Fair Information (2015): *(The past records may include concurrent/joint exhibits)*

- ◇ Total number of exhibitors: 277
- ◇ Total number of visitors: 13.554

<http://www.medicarefoods.com/mcs/>

Nano tech

Place: Tokyo Big Sight

Frequency: Annual: January

Last Fair Information (2015): *(The past records may include concurrent/joint exhibits)*

- ◇ Total number of exhibitors: 567 (142 foreign)
- ◇ Total number of visitors: 47.649 (640 foreign)

<http://www.nanotechexpo.jp/>

Medical Device Development Expo (MEDIX)

Organized by: Reed Exhibitions Ltd

Place & Frequency & Date: Twice a year: February in **Osaka** and June in **Tokyo**

Last Fair Information Osaka (2015) *(The past records may include concurrent/joint exhibits)*

- ◇ Total number of exhibitors: 723
- ◇ Total number of visitors: 27.692

New: 2016 edition will include "Materials zone"

<http://www.medix-kansai.jp/en/>

Last Fair Information Tokyo (2015): *(The past records may include concurrent/joint exhibits)*

- ◇ Total number of exhibitors: 2.253 (321 foreign)
- ◇ Total number of visitors: 81.469 (1.575 foreign)

<http://www.medix-tokyo.jp/en/>

Highly-functional Material World

Organized by: Reed Exhibitions Ltd

Place & Frequency & Date: Twice a year: April in **Tokyo** & October in **Osaka**

Date: 6 – 8 Apr 2016 in **Tokyo Big Sight - 1st Ceramics Japan - NEW**

Last Fair Information (2015): *(The past records may include concurrent/joint exhibits)*

- ◇ Total number of exhibitors: 1.029 (196 foreign)
- ◇ Total number of visitors: 57.527 (3.665 foreign)

Date: 5 – 7 Oct 2016 in **Osaka - 1st Ceramics Japan- NEW**

Last Fair Information:

- ◇ Total number of visitors: 42.216

Appendix 3

1st Highly Functional CERAMICS Expo Japan, launched in April 6-8, 2016

The technical ceramic market in Asia-Pacific is the biggest market for advanced ceramics in the world with a steady increase in the demand particularly for monolithic ceramics, ceramic matrix composites and ceramic coatings. The medical industry is projected to be the fastest-growing application sector, followed by military & defense. Japan is the second largest technical ceramics consumer in the area, after China.

In this regard, this year in April new B2B trades show will be launched in Japan: “1st CERAMICS JAPAN – Highly-functional Ceramics Expo” at Tokyo Big Sight Expo. The show will be held under the “Highly-functional Material World 2016” which consists of four specialized shows: 7th Film Tech JAPAN, 5th PLASTIC JAPAN, 3rd METAL JAPAN and 1st CERAMICS JAPAN, providing also a business platform for advanced ceramics professionals who seek new business opportunities in Japan and Asia. Two other concurrent shows are being held at the venue at the same time: 26th FINETECH JAPAN - Flat Panel Display Technology Expo and 16th Int'l Laser & Photonics Expo (Photonix 2016). Japan Fine Ceramics Association was invited as co-organizer for the show.

This event will be the first exhibition to gather various kinds of highly-functional materials for a wide variety of advanced industry sectors, such as automobile, Smartphone/tablet, renewable energy, aircraft, medical equipment, etc. A second edition will follow in October in Osaka.

The list of exhibitors participating in the 1st CERAMICS JAPAN section includes 140 companies, and together with its concurrent shows there will be 1.350* companies from around the world (**including co-exhibitors*). Exhibits are expected to range from highly-functional ceramics, material, ceramics coating, forming/bonding technology, inspection/analysis/testing equipment to contract service. During the show, 70,000** professionals (***including concurrent shows*) from various fields (IT, semiconductor, home appliances, automobile, medical device, manufacturing equipment, renewable energy, aerospace, ceramics processing, etc.) are expected to attend.

For Exhibitors

Details regarding the registration can be found by contacting the organizer from here:

<http://www.ceramics-japan.jp/en/To-Exhibit/Merit/>

For Visitors

For pre-registered visitors the entrance is free of charge, the registration can be made here:

<https://contact.reedexpo.co.jp/expo/FPDK/?lg=en&tp=inv&ec=CERA>

Appendix 4 – List of Authorities and Related Organizations, Associations

<p>Ministry of Health, Labor and Welfare (MHLW) 1-2-2, Kasumigaseki, Chiyoda Ward, Tokyo 100-8916 Tel +81-3- 5253-1111 http://www.mhlw.go.jp/english/</p>
<p>Ministry of Economy, Trade and Industry (METI) 1-3-1, Kasumigaseki, Chiyoda-ku, Tokyo 100-8901 Tel: +81-(0)3-3501-1790 http://www.meti.go.jp/english/index.html</p>
<p>Japan External Trade Organization (JETRO) Ark Mori Building 6F,1-12-32 Akasaka, Minato-ku, Tokyo 107-6006 Tel: +81-(0)3-3582-5511 http://www.jetro.go.jp/</p>
<p>Japanese Standards Association (JAS) 4-1-24 Akasaka, Minato-ku, Tokyo 107-8440 Tel: +81-(0)3-3583-8000 | Fax: +81-(0)3-3583-2014 http://www.jsa.or.jp/</p>
<p>Japan Association of the Housing Industry Kojimachi Nakata Bldg. 8F, Kojimachi 5-3, Chiyoda-ku, Tokyo 102-0083 Tel: +81-(0)3-3511-0611 / Fax: +81-(0)3-3511-0616 http://www.zenjukyoo.jp/</p>
<p>The Japanese Building Materials Association Kanto Branch, 2-9-5 Shirakawa Koto-ku, Tokyo 135-0021 TEL (03) 3630-2811 www.kenzai.or.jp</p>
<p>Japanese Prefabricated Construction Suppliers and Manufacturers Association (JPA) M&C BLDG., 3-13-2 Kandaogawamachi, Chiyoda-ku, Tokyo 101-0052 TEL +81-3-5280-3121 | FAX +81-3-5280-3127 http://www.purekyo.or.jp/English/index.html</p>
<p>Japan Ceramic Tile Manufacturers' Association http://japanese-tile.com/</p>
<p>The Ceramic Society of Japan (CSJ) Hyakunincho 2-22-17, Shinjuku-ku, Tokyo 169-0073, Japan Tel: +81-(0)3-3362-5231 / Fax: +81-(0)3-3362-5714 http://www.ceramic.or.jp/</p>
<p>Japan Interior Architects / Designers' Association (JID) Shinjuku Park Tower 8F, Nishi-Shinjuku 3-7-1, Shinjuku-ku, Tokyo 160-1008 Tel: +81-(0)3-5322-6560 / Fax: +81-(0)3-5322-6559 http://www.jid.or.jp/</p>
<p>Japan Testing Center for Construction Materials (JTCCM) Akos North Bldg 3F, 2-9-2 Takasago Souka Shi, Saitama 340-0015 Tel: +81-(0)48-920-3811 / Fax: +81-(0)48-920-3820 http://www.jtccm.or.jp/english.html</p>
<p>Japan Construction Material & Housing Equipment Industries Federation (J-CHIF)</p>

<p>KDX Hamacho Bldg. 5F, Nihonbashi Hamacho 2-17-8, Chuo-ku, Tokyo 103-0007 Tel: +81-(0)3-5640-0901 / Fax: +81-(0)3-5640-0905 http://www.kensankyo.org/index.html</p>
<p>Overseas Construction Association of Japan (OCAJI) Hatchobori Daiichi Seimei Bldg.7F, Hatchobori 2-24-2, Chuoku, Tokyo 104-0032 Tel: +81-(0)3-3553-1631 / Fax: +81-(0)3-3551-0148 E-mail: info@ocaji.or.jp http://www.ocaji.or.jp/</p>
<p>Japan Tile Contractors Association Tokyo Kara Kaikan, Fujimi 1-7-9, Chiyoda-ku, Tokyo 102-0071, Japan Tel: +81-(0)3-3265-2887 / Fax: +81-(0)3-3265-2903 E-mail: office@yane.or.jp http://www.yane.or.jp</p>
<p>Japan Tile Works Association Kokuho-21 5F, Ichigayatamachi 2-29, Shinjuku-ku, Tokyo 162-0843, Japan Tel: +81-(0)3-3260-9023 / Fax: +81-(0)3-3260-9024 E-mail: nittaren@mvi.biglobe.ne.jp http://www.nittaren.or.jp/</p>
<p>Japan Building Materials Association Shumokubashi Bldg. 4F, Edobori 1-4-23, Nishi-ku, Osaka 550-0002, Japan Tel: +81-(0)6-443-0345 / Fax: +81-(0)6-443-0348 E-mail: office@kenzai.or.jp http://www.kenzai.or.jp/</p>
<p>Japan Tile Testing & Engineering Association TEL: +81-52-935-7509 http://www.tileken.or.jp</p>
<p>Japan Medical Association (JMA) 2-28-16 Honkomagome, Bunkyo-ku, Tokyo 113-8621 Tel: +81-(0)3-3946-2121 | Fax: +81-(0)3-3946-6295 http://www.med.or.jp/english/</p>
<p>Japan Dental Association (JDA) 4-1-20, Kudan Kita, Chiyoda-ku, Tokyo 102-0073 Tel: +81-(0)3-3262-9213 | Fax: +81-(0)3-3262-9885 http://www.jda.or.jp/en/index.html</p>
<p>Japan Dental Technicians' Association 21-5 Shonaicho, Ichigaya, Shinjuku-ku, Tokyo 162-0846 Tel: +81-(0)3-3267-8681 | Fax: +81-(0)3-3267-8650 http://www.nichigi.or.jp</p>
<p>Japan Hospital Association (JHA) 13-3, Ichiban-cho, Chiyoda-ku, Tokyo 102-8414 Tel: +81-(0)3-3265-0077 | Fax: +81-(0)3-3230-2898 http://www.hospital.or.jp</p>
<p>Pharmaceuticals and Medical Devices Agency (PMDA) New Kasumigaseki bldg 6F West, 3-3-2, Kasumigaseki, Chiyoda Ward, Tokyo, 100-0013 Tel +81-3-3506-9506 http://www.pmda.go.jp/english/index.html</p>

<p>Japan Medical Devices Manufacturers Association (JMED) Kamiura-Kojimachi Bldg. 3F, 10-3 Kojimachi 3-chome, Chiyoda-ku, Tokyo, Japan TEL.03-5212-3721 | FAX.03-5212-3724 www.jmed.jp</p>
<p>Japan Dental Trade Association (JDTA) JDM Bldg. 1F, 2-16-14, Kojima, Taito-ku, Tokyo 111-0056 Tel: +81-(0)3-3851-0324 | Fax: +81-(0)3-3851-0325 http://www.jdta.org/eng/index.html</p>
<p>Japan Dental Dealers' Federation 1-25-25 Hongo, Bunkyo-ku, Tokyo 113-0033 Tel: +81-(0)3-3814-1651 | Fax: +81-(0)3-3818-7859 http://www.asahi-net.or.jp/~wr9h-situ/</p>
<p>Japan Association of Medical Devices Industries (JAMDI) Iryo Kiki Kaikan 5F, 3-39-15 Hongo, Bunkyo-ku, Tokyo 113-0033 Tel: +81-(0)3-3816-5575 | Fax: +81-(0)3-3816-5576 URL: http://www.jamdi.org/</p>
<p>Japan Federation of Medical Devices Associations (JFMDA) Iidabashi Square Bldg. 8F, 3-2 Shimomiyabicho, Shinjuku-ku, Tokyo 162-0822 Tel: +81-(0)3-5225-6234 | Fax: +81-(0)3-3260-9092 http://www.jfmda.gr.jp/e/</p>
<p>Japan Fine Ceramics Association (JFCA) Land Mark Shiba Park Bldg. 2F; 1-2-6 Shibakoen, Minato-ku, Tokyo, 105-0011, Japan Tel:81-3-3431-8271 Fax:81-3-3431-8284 http://www.jfca-net.or.jp</p>

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