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#### PREFACE

The plastics industry is one of the most important actors of the Turkish economy. Today, the contribution of the plastics industry to the country's economy is gradually increasing with the total production exceeding 9 million tons, and 35 billion dollars' worth of turnover, the approaching direct exports of 5 billion dollars and the annual growth of 12% for the last 10 years.

Our industry, with its production capacity, has reached the second place in Europe and the sixth place in the world. As PAGEV, we continue to lead the industry successfully in the framework of the "Unifying Power" mission of the Turkish Plastics Industry.

We also know that having the right and reliable data and information is the most important part of the solution when we sign the indispensability of Plastics in our lives and sign our work to tackle our industrial problems with concrete steps based on scientific evidence. In this direction we constantly investigate, collect new data, compile and report them. We present our reports that we believe are important for the development of our industry and our booklets containing important information to the plastics industry representatives, stakeholders and public institutions.

As PAGEV, we prepared a report set that will contribute to the industry in a serious way in the face of our long and dedicated researches. With our reports, we made booklets with the comments of our expert reporters about the point where the Turkish Plastics Industry is in the right and reliable light, common problems and what should be the search for concrete solutions. We believe that our reports and information set will benefit all of our stakeholders, especially our members, and will guide the plastics world. At the same time, we are pleased that our public institutions have reached the most up-to-date and accurate information about the plastics industry.

On the other hand, with our sector reports in English, we think that our colleagues will be able to share the potential of our country's plastics industry with the most up-to-date business partners in the global marketplace.

Hereby, presenting our current reports and information files relating with our industry, we would like to thank all of our colleagues who have contributed to this day's achievement of our industry, who has taken a position as a locomotive mission in the development of our country.

#### Best regards,

Yavuz EROĞLU PAGEV President

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#### 1. TOYS CONSIDERED IN THE REPORT

In line with the international harmonization system, the toys shown in the table below are included in the scope of the review in the report.

Definition
Vehicles for dolls
Tricycles
Scooters, pedal cars and so on. wheel toy
Dolls
Only part of the dolls making dolls
Electric toy trains; miniaturized models to be combined
Other building sets and building toys; from plastic materials
Other building sets and building toys; other substances
Animal is a toy that depicts non-human creatures; stuffed
Animal is a toy that depicts non-human creatures; others
Toys musical instruments and devices
Riddles; wooden ones
Riddles; others
Other toys (team / set)
Other toys and models (motorized); plastic
Other toys and models (motorized); other substances
Toy weapons
Miniature metal models obtained by molding
Other toys; plastic
Other toys; other substances
Walkers
Mama Sandals
Puppies (Real Strollers)

Table 1: HS Codes of Toys

Source: Turk Stat and ITC Trade Statistics



# 2. PRODUCTION

In Turkey 67 companies are manufacturing plastic toys, 90% of which are operating in Istanbul.

	No of Companies	% Share
İstanbul	60	89,6
Ankara	2	3,0
Samsun	2	3,0
Bursa	1	1,5
Gaziantep	1	1,5
Yozgat	1	1,5
Total	67	100,0

 Table 2: Number of Companies Producing Toys in Turkey

 Source: PAGEV

Toys production in Turkey totaled around 21 thousand tons and 173 million dollars in 2017 and has increased by an average of 60% per year on amount and decreased by 3,1% in terms of value in the last 5 years.

In 2017, toys production increased by 7.6% on amount and 5% in terms of value compared to 2016.

	2013	2016	2017	CAGR (%) 2013-2017	% Increase 2017/2016
1000 Tons	16,6	19,4	20,9	6,0	7,6
Million \$	197,1	165,1	173,4	-3,1	5,0

Table 3: Total Toy Production in Turkey

Source: Turk Stat and ITC Trade Statistics

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Source: Turk Stat and ITC Trade Statistics

Plastic toys production, which was 11,6 thousand tons, and 138 million dollars in 2013, realized as 15,9 thousand tons, and 124,8 million dollars in 2017 with an annual increase of 8.2% on amount and decreasing annually by 2,5% for the last 5 years.

Plastic toys production incrased by 17% on amount and 8% in terms of value in 2017 compared to 2016.





# 3. FOREIGN TRADE

### 3.1. IMPORTS

Total toys imports in Turkey amounted to 29 thousand tons and 392 million dollars in 2017, with an increase of 0.6% on amount and 0.5% on value basis for the last 5 years.

Total toys imports decreased by 12.5% on amount and 7.2% in terms of value in 2017 compared to 2016.

	2013	2016	2017	CAGR (%) 2013-2017	% Increase 2017/2016			
1000 Tons	27,9	32,7	28,6	0,6	-12,5			
Million \$	384,3	422,7	392,1	0,5	-7,2			
Source: Turk Stat and ITC Trade Statistics 1000 Tons ——Million \$								
384,3	400,6	3	350,1		392,			
27,9	28,3	:	26,9	32,7	28,			
2013	2014	2	2015	2016	201			
	nnorts in Turkov							

Graphic 3: Total Toys Imports in Turkey

At least 70% of total toys imports are plastic toys in Turkey.

The imports of plastic toys, which were 19,5 thousand tons and 269 million dollars in 2013, realized as 21,5 thousand tons and 294,1 million dollars in 2017 increasing annually by 2.4% on amount and 2.3% in terms of value for the last 5 years.

Plastic toys imports decreased by 6.3% on amount and 0.6% in terms of value in 2017 compared to 2016.

	2013	2016	2017	CAGR (%) 2013-2017	% Increase 2017/2016				
1000 Tons	19,5	22,9	21,5	2,4	-6,3				
Million \$	269,0	295,9	294,1	2,3	-0,6				
Table 6: Plastic Toys Imports in Turkey									

Source: Turk Stat and ITC Trade Statistics

Source: Turk Stat and ITC Trade Statistics





Source: Turk Stat and ITC Trade Statistics

#### 3.2. EXPORTS

Total toys exports in Turkey amounted to 6 thousand tons and 34 million dollars in 2017, with an annual increase of 4.4% on amount and 0.9% on value basis for the last 5 years.

Exports increased by 1.5% on amount and 5.1% in terms of value in 2017 compared to 2016.



#### Graphic 5: Total Toys Exports in Turkey

Source: Turk Stat and ITC Trade Statistics

In Turkey, plastic toys exports constitute at least 90% of total toy exports.

Plastic toys exports realized as 5 thousand tons and 30 million dollars in 2017, increasing annually by 5.9% on amount and 0.9 % in terms of value for the last 5 years.



Plastics toys exports increased by 7.1% on amount and 5.1% in terms of value in 2017 compared to 2016.



Graphic 6: Plastic Toys Exports in Turkey Source: Turk Stat and ITC Trade Statistics

# **3.3. FOREIGN TRADE DEFICIT**

The toy industry in Turkey constantly gives deficit in foreign trade. Foreign trade deficit, which was 22.1 thousand tons and 351 million dollars in 2013, reached to 21,7 thousand tons and 357 million dollars in 2017. Foreign trade deficit decreased by 16.2% on amount and 8.3% in terms of value in 2017 compared to 2016.

	2013	2016	2017	CAGR (%) 2013-2017	% Increase 2017/2016
1000 Tons	-22,1	-25,9	-21,7	-0,5	-16,2
Million \$	-351	-390	-357	0,5	-8,3

Table 9: Foreign Trade Deficit for Total Toys in TurkeySource: Turk Stat and ITC Trade Statistics





**Graphic 7: Foreign Trade Deficit for Total Toys in Turkey (Million \$)** Source: Turk Stat and ITC Trade Statistics

The plastic toys industry in Turkey constantly gives deficit in foreign trade.

Turkey's plastic toy foreign trade deficit which was 14 thousand tons and 239 million dollars in 2013, increased to 15 thousand tons and 263 million dollars in 2017.

Foreign trade deficit in plastic toys decreased by 11.2% on amount and 1.3% in terms of value in 2017 compared to 2016.

	2013	2016	2017	CAGR (%) 2013-2017	% Increase 2017/2016
1000 Tons	-14,3	-16,8	-14,9	1,0	-11,2
Million \$	-238,7	-266,0	-262,7	2,4	-1,3

Table 10: Plastic Toys Exports in Turkey

Source: Turk Stat and ITC Trade Statistics



Graphic 8: Foreign Trade Deficit for Plastic Toys in Turkey (USD Million) Source: Turk Stat and ITC Trade Statistics

# 3.4. IMPORTS AND EXPORTS BY COUNTRIES

Turkey carries 94% of total toys imports from 10 countries and 53% of total toy exports to 10 countries.



82,5% of total imports are realized from China. Italy, USA, Vietnam and Taiwan are the other important import partners of Turkey in toys after China.

9.4% of total exports are destined to France. Iraq, Poland and Greece constitute the other important export partners of Turkey's toys industry after France.

Import Partners	% Share	Export Partners	% Share
China	82,5	France	9,4
Italy	2,8	China	8,0
USA	1,6	Iraq	7,6
Viet nam	1,4	Poland	5,4
Taiwan	1,3	Greece	4,1
Germany	1,3	Russian Fed.	4,0
Indonesia	1,0	UK	3,8
Chez Rep.	0,8	Bulgaria	3,6
Hungary	0,7	S.Arabia	3,6
Malaysia	0,6	Italy	3,5
10 Total	94,1	10 Total	53,0
Others	5,9	Others	47,0
Total	100,0	Total	100,0

 Table 11:Turkey's Main Import and Export Partners for Toys (2017)

 Source: Turk Stat and ITC Trade Statistics

# 3.5. FOREIGN TRADE PRICES

The average import price of Turkey's toy is 2.5 times higher than the average export price. In other words, Turkey exports cheap toys while imports with higher price and exports does not provide enough value added.

Import prices declined by an average of 0.1% annually while export prices by 3.4% between 2013 and 2017. Import prices realized as USD 13,7\$/kg and export price as 5,1 \$/kg in 2017.

Import price increased by 6.1% and export price by 3.6% in 2017 compared to 2016.

	2013	2016	2017	CAGR (%) 2013-2017	% Increase 2017/2016
Import Price	13,8	12,9	13,7	-0,1	6,1
Export Price	5,8	4,9	5,1	-3,4	3,6

 Table 12: Average Foreign Trade Prices for Toys in Turkey (\$/Kg)

 Source: Turk Stat and ITC Trade Statistics





Import Price Export Price

Graphic 9: Average Foreign Trade Prices for Toys in Turkey (\$/kg) Source: Turk Stat and ITC Trade Statistics

#### 4. DOMESTIC CONSUMPTION

In Turkey, the domestic market volume of toys in 2017 has been around 43 thousand tons and 531 million dollars. Domestic consumption of toys has increased by 2.5% on average on amount and decreased by 0,8% on volume basis in the last 5 years.

Domestic sales of toys in Turkey, decreased by 6% on amount and 4.3% in terms of value in 2017 compared to 2016.

	2013	2016	2017	CAGR (%) 2013-2017	% Increase 2017/2016
1000 Tons	38,7	45,3	42,6	2,5	-6,0
Million \$	547,7	554,6	530,6	-0,8	-4,3

 Table 13: Domestic Sales of Total Toys in Turkey

 Source: Turk Stat and ITC Trade Statistics





#### Graphic 10: Domestic Sales of Total Toys in Turkey

Source: Turk Stat and ITC Trade Statistics

Domestic consumption of plastic toys in Turkey, accounts for about 70% of the total domestic toys market volume.

Plastic toys domestic market sales realized as 22 thousand tons and 294 million dollars in 2017 increasing annually by 2.4% on amount and 2.3% in terms of value in the last 5 years.

Domestic consumption of plastic toys in Turkey decreased by 6.3% on amount and 0.6 in terms of value in 2017 compared to 2016.





Source: Turk Stat and ITC Trade Statistics



# 5. SUPPLY AND DEMAND

In Turkish toys industry, 173, 4 million dollars of production, 392, 1 million dollars of imports, 34,9 million dollars of exports and 530,6 million dollars of domestic market consumption are realized in 2017.

In 2017, imported toys shared 73% of domestic consumption while the domestic production received only 27%.

In this period, 27% of domestic production was exported.

It is estimated that in 2018, 182 million dollars of production, 396 million dollars of imports, 37 million dollars of exports, 557 million dollars of domestic sales are estimated. In 2018 the industry is expected to give 359 million dollars of foreign trade deficit.

	2013	2016	2017	CAGR (%) 2013-2017	% Increase 2017/2016	2018
Production	197,1	165,1	173,4	-3,1	5,0	182,1
Imports	384,3	422,7	392,1	0,5	-7,2	396,0
Exports	33,7	33,2	34,9	0,9	5,1	36,6
Domestic Sales	547,7	554,6	530,6	-0,8	-4,3	557,1
Foreign Trade Deficit	-350,6	-389,5	-357,2			-359,4

 Table 15: Supply and Demand for Total Toys in Turkey (Million \$)

 Source: Turk Stat and ITC Trade Statistics

In Turkish plastic toys industry, 124, 8 million dollars of production, 294,1 million dollars of imports, 31,4 million dollars of exports, and 387,5 million dollars of domestic sales are realized. The industry gave 262,7 million dollars of foreign trade deficit in 2017.

In 2017, imported plastic toys shared 75% in domestic sales and 25 of total production was exported.

In plastic toys industry, 131 million dollars of production, 297 million dollars of imports, 33 million dollars of exports and 407 million dollars of domestic sales are expected. The industry is expected to realize 264 million dollars of foreign trade deficit in 2017.

	2013	2016	2017	CAGR (%) 2013-2017	% Increase 2017/2016	2018
Production	138,0	115,6	124,8	-2,5	8,0	131,1
Imports	269,0	295,9	294,1	2,3	-0,6	297,0
Exports	30,3	29,9	31,4	0,9	5,1	33,0



Domestic Sales	376,6	381,6	387,5	0,7	1,5	406,9
Foreign Trade Deficit	-238,7	-266,0	-262,7			-264,0

 Table 16: Supply and Demand for Plastic Toys in Turkey (Million \$)

 Source: Turk Stat and ITC Trade Statistics

### 6. GENERAL EVALUATION

Although the toy industry has already a very small share in the plastic industry, has a significant potential both in terms of the domestic market and exports. This potential needs to be well assessed. Because the toy demand in Turkey is met with a great deal of imports, and a significant part of these imports are Chinese toys.

The most important advantages of the domestic toy industry in exporting to Europe with respect to Chinese toys;

- > Ability to respond quickly to market demand due to location
- The short duration of production and freight,
- Product quality in European standards
- Insecurity for Chinese companies
- > Exchange rate advantages according to the Chinese RMB.

China, which is the most important threat in front of the development of the Turkish toys industry, is a country exporting toys to the world today with over 40 billion dollars a year. However, the question of how healthy the toys imported from China are also being questioned. The fact that children pay more attention to toys is emerging since the health of the children is concerned. It is possible to reach every level in the toys coming from China. That why, it is impossible to categorize all the toys coming from China as harmful, it is necessary to be in compliance with the criteria and quality control very well.

Inspection work carried out by the Ministry of Customs and Trade in this direction is quite effective. Consumers, however, have to pay attention to this issue. The first thing to pay attention to is the reliability of toys; "CE" marking can be counted as the fact that the child is selected for the age of the child, the instructions for the use are clearly explained to the children and the fact that the package has the manufacturer / importer information.

The Turkish plastics industry is producing within the framework of EU legislation and this also applies to plastic toy production. All production is done in consideration of the public health, so domestic toys do not carry any risk especially for health. However, the Turkish plastics industry has had to struggle in a vicious competitive environment with the Far East countries especially with China. The cheap costly craftsmanship of the Far East is the most important reason for the

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shift of world production to this region. Today, many of the world's famous brands are producing their products in the Far East.

At the foremost priorities for the promotion and development of domestic toy production are the public awareness of local products. Consumers who know that domestic production is particularly reliable in terms of health will direct to these products. Meanwhile, the environment in which licensed value-added products can be produced in Turkey is available. While these kinds of products are being inspected in terms of legislation of Turkey on the one hand, will become more reliable with the supervision of licensed manufacturers on the other hand.

The toys industry is a sector that creates very serious employment and can provide important contributions to domestic production and economy. It is also a reflection of cultural values of Turkey and an important starting point for the future of children. Therefore, the domestic toys industry will also contribute to the culture. It is possible that we can shape our basic ethical and cultural values with the toys we produce. Today's consumption frenzy and war, fighting figures, which are an example of American pop culture products in particular, contain very harmful messages for children who will create future generations. The toys and the characters that make up these toys reach very large quantities, especially with cartoon support and crazy introductions, and reach very high sales figures. If a similar application is reflected in Turkish domestic production, the native characters will also form a symbiotic unity with the domestic toy sector.

Of course, support and encouragement from the government is also expected in terms of the development of the plastic toys industry. The relevant incentives will support entrepreneurs who will invest in this issue. In addition, the control mechanisms need to be well managed to prevent unreliable, harmful production.

Regarding imported toys, even though the Ministry of Customs and Trade operates its supervision mechanisms at the highest level, some limitations in importing toys for the protection of domestic production will be of considerable benefit in terms of the toys industry.

# 7. MAIN PROBLES OF THE INDUSTRY

- ✓ The most important problem of the toy industry is the large foreign trade deficit and the unit import prices are 2.5 times the unit export prices. The industry imports expensive toys and exports toys having small add value, leading to a rise in foreign trade.
- ✓ Large amount of foreign trade is seen in walkers, baby boats and children's cars that are not included in the report. If these materials are included, the foreign trade deficit reaches to a great extent.
- ✓ Since there is a very small amount of electronics in toy production, it cannot be an alternative for functional products. One of the reasons for this is low labor costs in the Far East. Because functional toy production is laborious. The other is that the production processes that support



plastic technology such as printing on plastic, ultrasonic welding processes are not yet implemented in Turkish toy industry. It is also an important question that some electronic components can be supplied cheaper in the Far East. Even if functional products are produced in Turkey, it is necessary to import these kinds of equipment's and this is a matter of scale. For example; micro motor, electronic circuit, LED lamp and so on.

- One of the problems that the industry has experienced according to its overseas competitors is the problem of not developing original models. Currently available sales are either due to the price advantage or proximity to the market, depending on the models available abroad. Supporting industrial creative design in order for Turkish toys to be accepted in world markets will be an important driving force in the industry.
- ✓ In the past, surveillance for toy imports has been put into practice in order to enable registered economic transition. In this context, for example, 1 ton toy can be imported by collecting VAT at 10,000 Dollars. However, since VAT is not a cost, there is no protection against competition with domestic products. For this reason, customs duties are applied to the products that are produced or made in Turkey. A similar application has been successfully implemented in developing countries such as Brazil and Russia. In this way, it will be possible for our domestic firms to reach the required scale and develop by devoting resources to technological innovations.
- ✓ Increasing the quality perception of Turkish toys is an important objective in order to increase exports. For this, activity should be provided to increase the quality and increase the image of domestic firms. Firms should be directed in this regard; product inspection and sanctions should be increased in the internal market which serves as a dynamo engine for domestic companies producing low quality products. In this respect, the increase in product quality will be seen in the medium-term and the image of Turkish products and brands abroad will be pulled up.
- ✓ Due to the fact that the battery-powered car toy industry is an important and strategic market in terms of production skill and value added, the difficulty in importing especially the batterypowered cars is a high priority for domestic production. Therefore, additional tax per ton can be applied to imports of battery-powered cars. In addition, importing companies must follow the rules of recycling and waste management of importing companies for the processing of criteria's in these vehicles according to the criteria determined by TÜMAKÜDER and Ministry of Environment and Urban Planning and the legislation applicable to battery imports in these vehicles.
- ✓ Products are not taxed at FOB prices in China (sometimes because of low billing etc.), they have to be taxed at the reference price that they will pay considering the costs of the manufacturer.
- ✓ A small number of producers in Turkey cannot profit from their profits because they cannot protect their intellectual property rights.
- ✓ Copying is not only among domestic producers. Sometimes the products of the domestic producers are copied and presented in the Far East.



✓ In the framework of the Toy Safety Regulation in the EU (2009/48 / EC). Many tests are also required from domestic producers in our country. Especially these tests and certifications are a serious cost factor for SMEs. (Source: PAGEV)

# 8. RECOMMENDATIONS FOR SECTOR

- Due to the health of our children, we need to pay more attention to the toys imported from China, to comply with the criteria and to inspect the quality very well.
- ✓ Toys are a reflection of our cultural values and an important starting point for the future of our children. Therefore, the domestic toy industry will provide added value and employment to our economy as well as contribute to the culture and the military.
- ✓ It is possible to shape our basic ethical and cultural values we want to convey with our toys.
- Contemporary consumption insanity and war, fighting figures, which are an example of American pop culture products in particular, contain very harmful messages for children who will create future generations. The toys and the characters that make up these toys reach a very large mass especially with cartoon support and crazy introductions, and sales figures are exploding.
- ✓ The reflection of a similar application to the domestic toy production will ensure that the domestic characters and the domestic toy industry form a symbiotic unity.
- ✓ Inspection activities carried out by our Ministry of Customs and Trade in this direction should be very effective and consumers should be aware of the following issues for reliability of toys.
  - "CE" marking of toys,
  - > The game is chosen according to the age of the child,
  - > Clarification of the instructions for use to children,
  - > The packaging has a certificate indicating the manufacturer / importer information.
- ✓ The Turkish plastics industry (and therefore plastic toy production) is producing within the framework of EU legislation. For this reason, domestic toys do not carry any health risks from the viewpoint of public health.
- ✓ It would be wrong to categorize all of the toys from China as harmful because it is possible to reach the product at every level in the production made in China which is the biggest toy exporter in the world.
- ✓ Public awareness of domestic products should be directed.
- Developing applications in the direction of market oriented flexible labor force suitable for seasonal production. If the cost of labor of China's toys production villages is considered, it can be considered that special regional different Minimum Wage Practices.
- ✓ Protection of intellectual property rights in Turkey.
- ✓ Facilitate access to finance for toy firms, which are mostly SMEs
- Creation of active characters for the TRT child and the provision of local production by making agreements with the Civil Society organization representing the producers.
- ✓ Awareness raising and directing of the public about domestic products.

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- ✓ Developing applications in the direction of market oriented flexible labor force suitable for seasonal production. If the cost of labor of China's toys production villages is considered, it can be considered that special regional different Minimum Wage Practices.
- ✓ Protection of intellectual property rights in Turkey.
- ✓ Facilitate access to finance for toy firms, which are mostly SMEs
- The support of the Ministry of Science and Industry and Technology to take the toy industry to the next three years' Turkey Industrial Strategy Action Plan and to establish 'Toy Specialist OSB' within the scope of the plan; so the development and branding of the domestic toy industry is a very important step for the sector.
- ✓ Establishing a model that will encourage producers in Turkey to manufacture the main brands holding the world market.
- ✓ Organizing a procurement committee to meet with local producers of global brands and to identify production opportunities.
- ✓ It is possible for some producers working with import competition and cost disadvantage in the sector to shift to this region and new investors to enter the sector.
- ✓ Cordless toy cars are an important and strategic item in terms of production skill and high added value. For this reason, it is necessary to tighten control of imports of cordless toy cars and to increase the additional taxes per ton of imports.
- ✓ Increasing scale of control mechanisms to prevent unreliable, harmful production.
- ✓ Handling the puzzles on the toy according to criteria set by the Ministry of Environment.
- ✓ The requirement to receive tape from TRT for parts such as radio, CD and USB reader on the toy.

Supporting mold designs and molds supplied from abroad by the government

- ✓ Local play is preferred in State tenders for the needs of institutions such as Child Protection Agency, kindergartens, schools, recreational facilities.
- ✓ Local goods are preferred in toys distributed by state authorities and institutions.
- ✓ Do not discriminate the country in the import of toys produced in Turkey, it is necessary to increase the tax rate, to determine the value of the goods again and according to the market conditions.
- ✓ It needs to be supported by the Ministries of Culture, Tourism and National Education as well as by the Ministry of Science, Industry and Technology and figures and characters belonging to my country and culture and mums, and these values should be popularized with positive discrimination.

It is important for our companies operating in the toy sector to support investments in construction, machinery, etc., by our government.

- ✓ As the toy sector requires intensive workmanship due to its handmade assembly, significant incentives will be gained in terms of employment and creating incentive areas for the toy sector.
- ✓ It is important for the manufacturer companies to establish quality control laboratories in their own organizations and support for accreditation.



- ✓ Requests can be increased by offering the advantage of paying 50% freight to our customers during the export phase due to the high freight rates. However, it should be possible to obtain incentives from IMMIB or KOSGEB.
- ✓ The requirement to buy 25% domestic products in toy chains for market chains is important for domestic production. Because the retail sector is much more attractive for domestic producers because they cannot get paid before 1 year minimum on the wholesale market. Retail chains also prefer products imported from the American brands Hasbro, Mattel or China. Our domestic producers prefer products with high brand value, even though they offer much more favorable prices for the same style products.
- ✓ The presentation of the 6th region organized industrial investment incentives to our domestic producers in the positions they are in will be very important support.
- ✓ Domestic producers should be supported in raw materials and electricity.

# 9. PAGEV PROJECTS

PAGEV which is the "Unifying Power "of the Turkish plastics industry develops different projects aiming to solve the problems outlined above. These are in summary: "PAGEV Plastic Center of Excellence" and "International Regional Plastics Production Center".

# 9.1. PAGEV PLASTICS CENTER OF EXCELLENCE

Plastic materials, used in all areas of life, are rapidly taking place of other alternative products, because of their superior properties, in Turkey as well as in all over the world. Plastics, which usage in all sectors Increasing is becoming an indispensable material for the 21<sup>st</sup> century.

Turkish Plastics Industry which is one of the fastest growing sectors in our country despite being young, is the 6<sup>th</sup> in the world and the 2<sup>nd</sup> in Europe. Growing with the goal of leadership in Europe, the Turkish Plastics Sector aims to increase the certification and added value of its products.

PAGEV, "Unifying Power" of the Turkish Plastics industry, is leading the industry with the "PAGEV Plastic Excellence Center" for realizing this purpose. The mission of the PAGEV Center for Plastic Excellence, will include the following activities.

- ✓ Research and Development
- ✓ Test and Laboratory Services
- $\checkmark$  Certification
- ✓ Training
- ✓ Competent Consulting



With the Center of Excellence, the test and laboratory support that the plastic industry needs; will be provided to the industry. So, many problems that lead to loss of time and energy such as high test costs, overseas shipping, customs clearance, and long test times will be removed.

The platforms that will provide information to and knowledge sharing in the industry will be developed by the Center and detailed training programs will be prepared and presented for the benefit of the industry. While working on the newest technologies, the Center of Excellence will work together with industry organizations, universities, research institutes, professional associations and non-governmental organizations to work for the Turkish plastics industry to be the world leader with R&D and innovation based work.

Established with the support of the Ministry of Science, Industry and Technology, PAGEV Plastic Center of Excellence will provide to the plastics industry and Turkish economy, especially the development of industrial skills and capabilities that will form the basis of Turkey's national projects.

By PAGEV Plastic Center of Excellence, which will be established by strategic cooperation, it is aimed to grow the plastic industry faster with its traceable targets, scientific quality and high potential for commercialization.

Upon completion, the Center of Excellence, which will have an area of over 30 thousand m<sup>2</sup>, rises right beside PAGEV Vocational and Technical Anatolian High School in Küçükçekmece, Istanbul. PAGEV Plastic Center of Excellence, which will make Turkey the center of plastic production in the world, will carry out innovative projects.

In addition to this, the Center will create a control mechanism for the products exported abroad. The Center will also contribute to the preservation of the reliability and reputation of the plastic products produced in Turkey. On the other hand, the introduction of poor quality and nonstandard goods into the country will be prevented by determining the technical suitability of the plastic products imported from abroad without any definite importation in the laboratories.

With its superior information infrastructure, the Center of Excellence will present the important documents required by the players of the sector more economically and quickly.

By accelerating the development, we will focus on the development of products and production technologies that will increase the competitive power of our firms.

The Center of Excellence, which will develop innovative ideas by following the developments in the world plastic sector, will increase the competitive power of our firms by providing many field consultancy services from the determination of appropriate input materials to the optimization of production process.



# 9.2. INTERNATIONAL REGIONAL PLASTIC MANUFACTURING CENTER

Although the Turkish plastics sector, with its process capacity reaching 9 million tons, has the 6<sup>th</sup> largest plastics production capacity in the world and 2<sup>nd</sup> in Europe, imports more than 85% of the plastic raw material it needs.

One of the most important advantages of the plastics industry in Turkey is that it is located between the Middle East countries which are the main petroleum and plastic raw material producer and the European market which is the main plastic consumer.

PAGEV aims to unify the plastic raw materials potential of Middle East countries with the Turkish plastics industry's competent production capability and experience at the international regional plastic production center, which Turkey aims to establish in South East Anatolia Region.

In the center, to be established with the win - win principle, the plastics raw materials producer countries will be supplying cheap and reliable raw materials having a large volume and reliable market while Turkish plastics industry will have greater competition possibilities in the global markets with its growing production capacity and falling costs.

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