




# Acquisition of Pavan Group

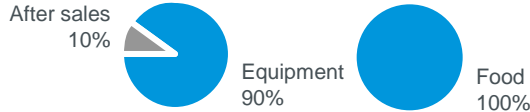
26 September 2017



## Products, solutions & services

	Revenue share	
 <b>Processing lines</b>	55%	Lines for dry pasta, fresh pasta, extruded products/convenience foods plus tooling
 <b>Milling &amp; Handling<sup>1</sup></b>	30%	Storage, handling and milling equipment for cereals, rice and animal feed, shipload-handling
 <b>Packaging</b>	15%	Flow packers, weighers and VFFS/HFFS machines for pasta and cereals

Revenue 2016  
ca. €155m



**Dry and fresh pasta**

~62%



**Snacks**

~16%



**Cereals**

~22%



## Geographical footprint

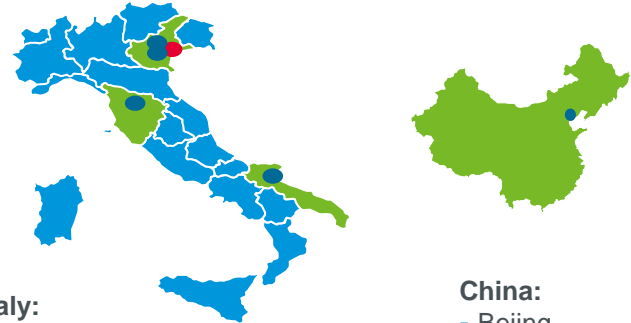
**HQ location**

Galliera Veneta , Italy

**Website**

[www.pavan.it](http://www.pavan.it)

## Production sites



**Italy:**

- Galliera Veneta (2)
- Quinto di Treviso
- Uzzano (2)
- Manfredonia

**China:**

- Beijing

## Cereal treatment

- Solutions for wheat, rice and maize processing, feed mills and grain handling solutions
- Plants of durum and wheat mills, maize mills, animal feed, rice mills, ship loadings/ unloadings & storage systems



Wheat processing  
(Milling)



Rice processing  
(paddy separator)



Feed mills  
(extruder)

## Dry pasta

- Solutions for short cut, long cut (multi tier and single tier) and nest shaped dry pasta
- Dosage and press units, cutting units, shaker pre-dryer, Thermo-Active System dryers and cooling units



Press



Thermo-Active System  
dryers



Gluten free pasta line

## Fresh pasta

- Filling & dosing pumps, thermal treatment (pasteurizing, cooling, cooking), dough mixers, sheet preparation (press, extrusion, kneading/ sheeting), forming



Thermal treatment  
(pasteurizing line)



Thermal treatment  
(spiral cooler)



Double sheet forming  
machine

## Snacks

- Solutions for potato based die cut, laminated & stackable potato chips, square shapes, 2D/3D & punched pellets
- Raw material blending, dosing & mixing, forming, flavouring



Single screw forming  
extruder



Twin screw cooking  
extruder



Flavouring systems

## Dies & moulds

- Dies, extrusion moulds and accessory equipment such as die washers and cutters
- Moulds for long-cut, short cut, lasagna, nest and soup-size pasta



Die washing machine



Long cut pasta moulds



Short cut pasta moulds

## Packaging

- Packaging machines for short-cut & long-cut pasta and snacks



Continuous horizontal



Continuous vertical

## Storage & handling

- Solutions for both raw materials and finished products
- Silos, extractor, conveyor etc.



Silos



Conveyor

# Pavan provides access to new technologies and fosters regional diversification



## A

### pplications



## R

### egions<sup>1</sup>

America 27%

Asia 17%

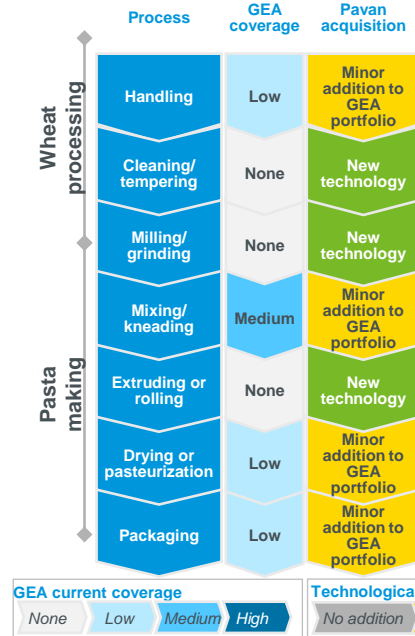
Europe 40%

Middle East/Africa 14%

Oceania 2%

## T

### echnologies



## E

### Functional excellence

Pavan's operating EBITDA-margin is accretive to GEA's operating EBITDA margin

<sup>1</sup> Annual report 2016 Pavan

## GEA has historically a long exposure to the Dairy industry which recently has gone through a major downturn

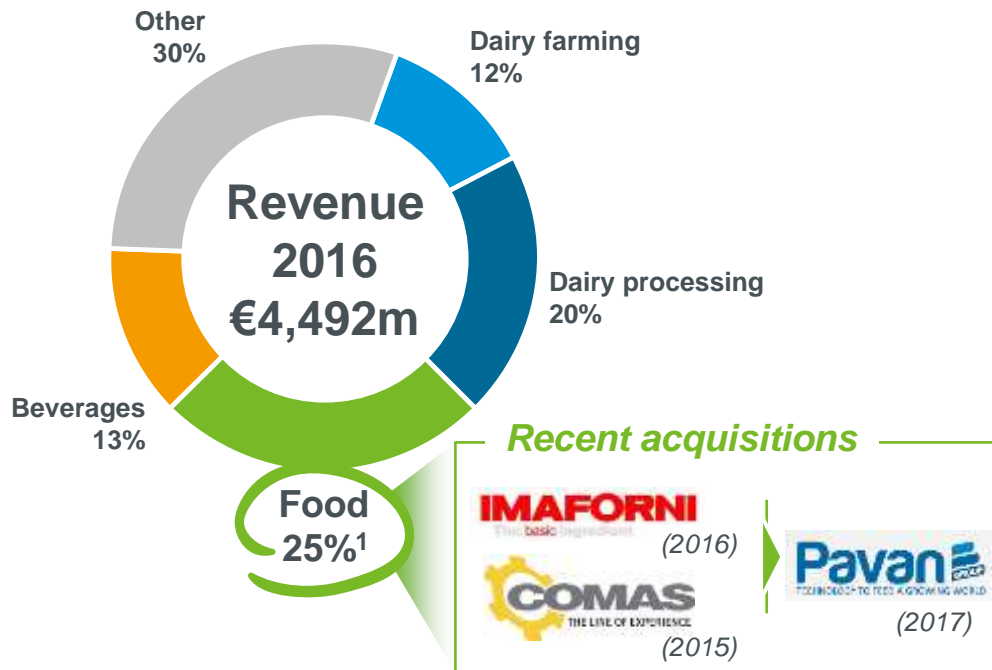
- **Dairy Processing Solutions** order intake declined from peak in 2013 by 250-300 €m (FY2016)
- **MDF Equipment** order intake declined from peak in 2014 by 70-80 €m (FY2016)



- Therefore, the mid and long term **portfolio strategy** of GEA has and will be to concentrate and invest where GEA is strong but at the same time look for opportunities to expand into new **Applications** and **Technologies**.
- This makes GEA less vulnerable and more robust when it comes to unavoidable cycles in specific industries. With the past acquisition of Comas and Imaforni we expanded into the bakery industry and now with **Pavan's Pasta and Extrusion** as **Application** and **Technology** we are doing a next step.
- When GEA decides to go into a new applications, we always look to buy one of the **leading companies** in that industry / technology.

# Applications: Successful diversification into Food application which is marked by strong fundamentals

## Increasing focus on Non-dairy Food & Beverage

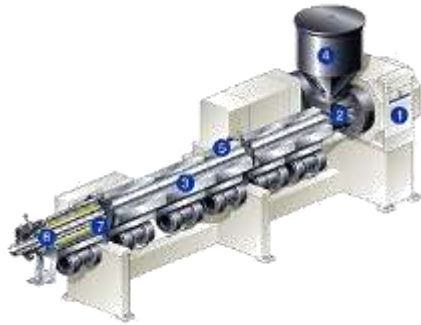


- Further diversification of application exposure in Food & Beverage
- Various attractive sub-applications to be covered by GEA
- Adding new processing technologies suited for various end products
- Diversification of customer base
- Market fragmentation offers several targets and perspectives for further consolidation

1. Excl. Pavan revenues

# Technologies: With its extrusion knowhow, Pavan provides a new technology platform for GEA

## Extrusion technology (*basic concept*)



- 1 Drive unit
- 2 Feed section
- 3 Temperature control
- 4 Hopper/dosing
- 5 Vacuum-Gas drainage
- 6 Nozzle
- 7 Screw

### Functions

Mixing

Cooking

Degassing

Forming

Change of physical characteristics

## Pavan offers a broad portfolio of extrusion technology

### Forming extruders

- Application example: **Pasta**
- Designed to convey, mix, knead the raw materials
- Forming, at controlled temperatures of pre-gelatinized raw material and/or cooked doughs coming from a cooking extruder, using interchangeable dies and a suitable cutting system



Pavan single screw forming extruder

### “Cooking” extruders

- Application examples: **Cereal and fried snacks**
- Designed to impart mechanical and thermal energy to the raw materials to bring about the desired physico-chemical changes
- Allows for automatic and continuous processing of flours and cereal/potato starches (mixed and in pure state)



Pavan single screw cooking extruder



Pavan twin screw cooking extruder

# Technologies: Multiple applications use the extruder technology | Pavan with knowhow in key applications

## *Food applications using extrusion technology*



Pasta



Snacks



Breakfast cereals



Pet food & aquatic feed



Others (e.g. bread, biscuits, confectionery)

Applications already served by Pavan ■

Applications not yet covered by Pavan ■



# Excellence: Jump-start for a successful integration

## GEA's technology footprint in Italy

*Many years of experience with operational sites in Italy*

- Homogenization
- Filling & Packaging
- Refrigeration
- Cheese processing
- Bakery solutions
- Pavan

ca. 1,100 FTEs

> €350m of sales (2016)

ca. 600 FTEs

ca. €155m of sales (2016)  
*(Pavan Group total sales)*

## GEA's and Pavan's main production sites in Italy



*GEA's existing presence and strong acquisition track record in Italy will provide a solid basis for the successful integration of Pavan*



engineering for  
a better world