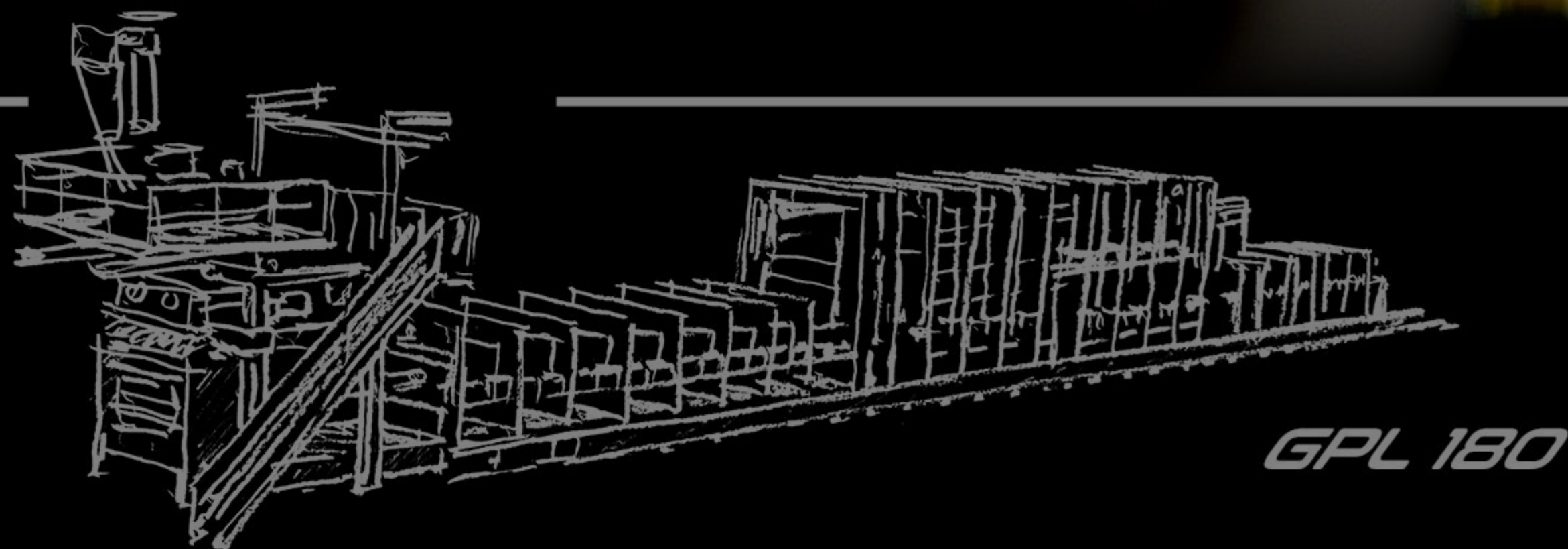


FAVA S.P.A. presents

**Whole life-cycle costs of
pasta equipment:
Our approach to
“TOTAL COST OF OWNERSHIP”**



at



**30TH ANNUAL IAOM
MIDEAST & AFRICA
CONFERENCE & EXPO**

**3-6 NOVEMBER 2019
DUBAI, UAE**

DUBAI WORLD TRADE CENTER



I N T R O D U C T I O N

OBJECTIVE OF THIS PRESENTATION

The objective of this report is to provide general guidelines to our clients, suppliers and internal staff on how to minimize the Total Cost of Ownership (T.C.O.) and reduce environmental impact without compromising on process flexibility, OEE (Overall Equipment Efficiency) and final product quality.

FAVA'S VISION & MISSION

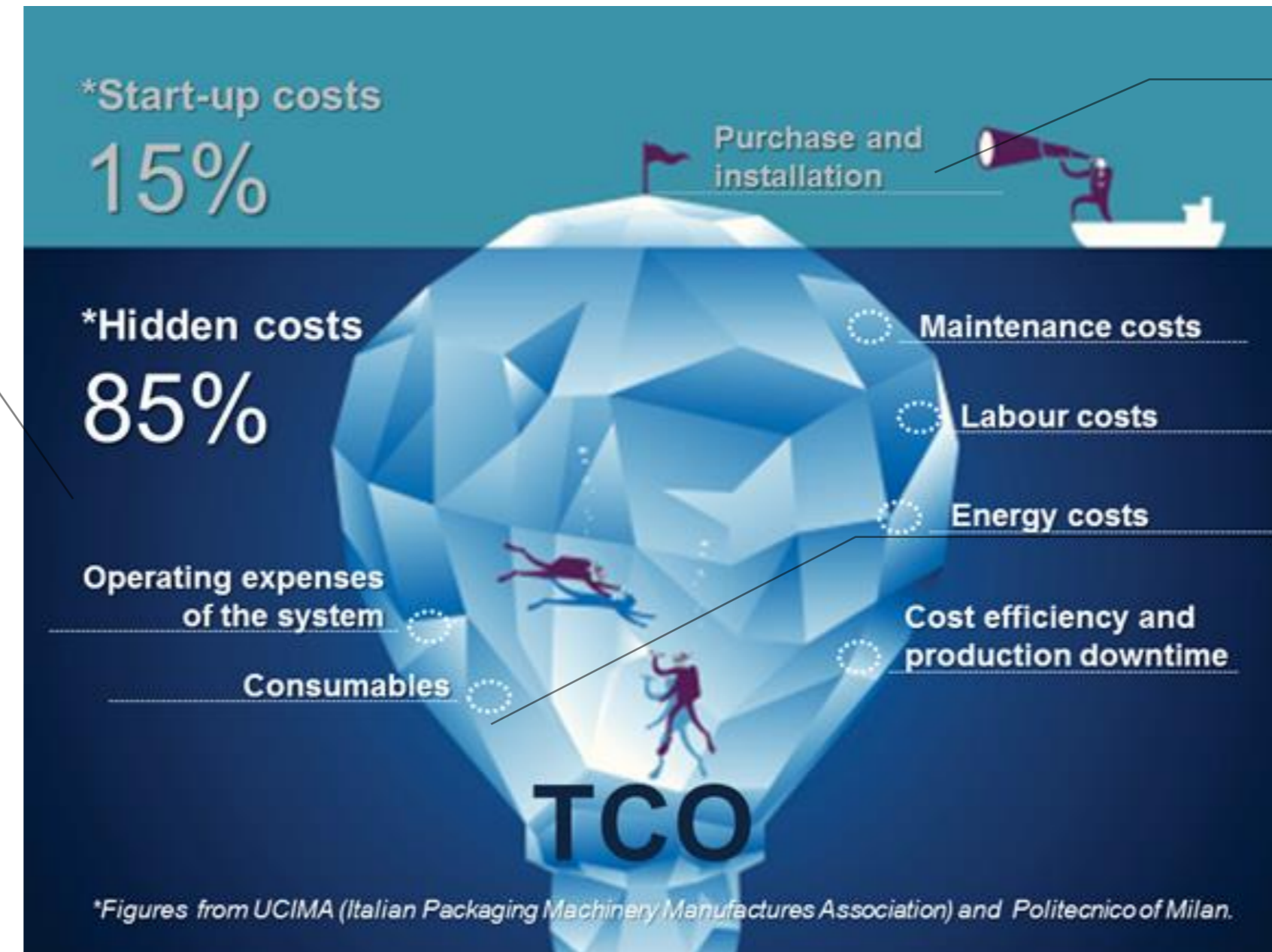
Design and construction of state-of-the-art pasta production lines as well as providing, in years to come, qualified technical and technological assistance in order to fully satisfy the client, operating efficiently, reducing Total Costs of Ownership and improving the overall image of the company.



DEFINITION

TOTAL COST OF OWNERSHIP [TCO]

TCO analysis is a cost benefit analysis that determines the economic value of an investment.
A TCO analysis includes total cost of acquisition, operating and dismantling costs.



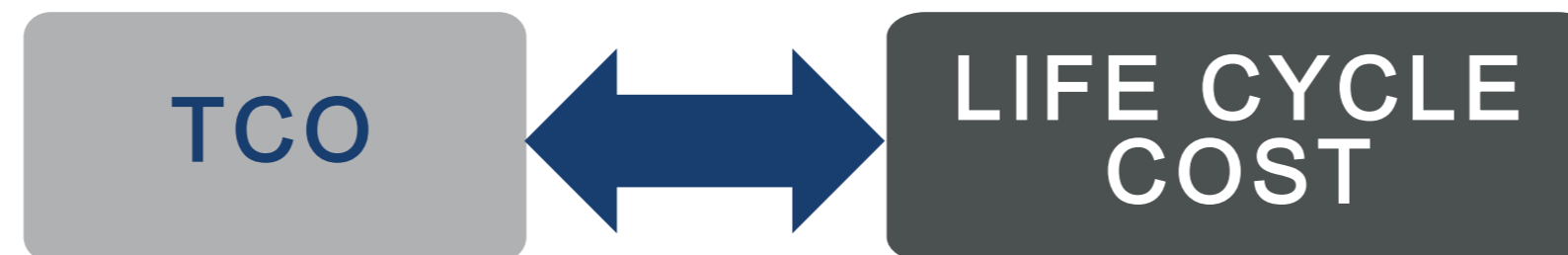
PURCHASE, DEPRECIATION & INSTALLATION COST

OPERATING COSTS

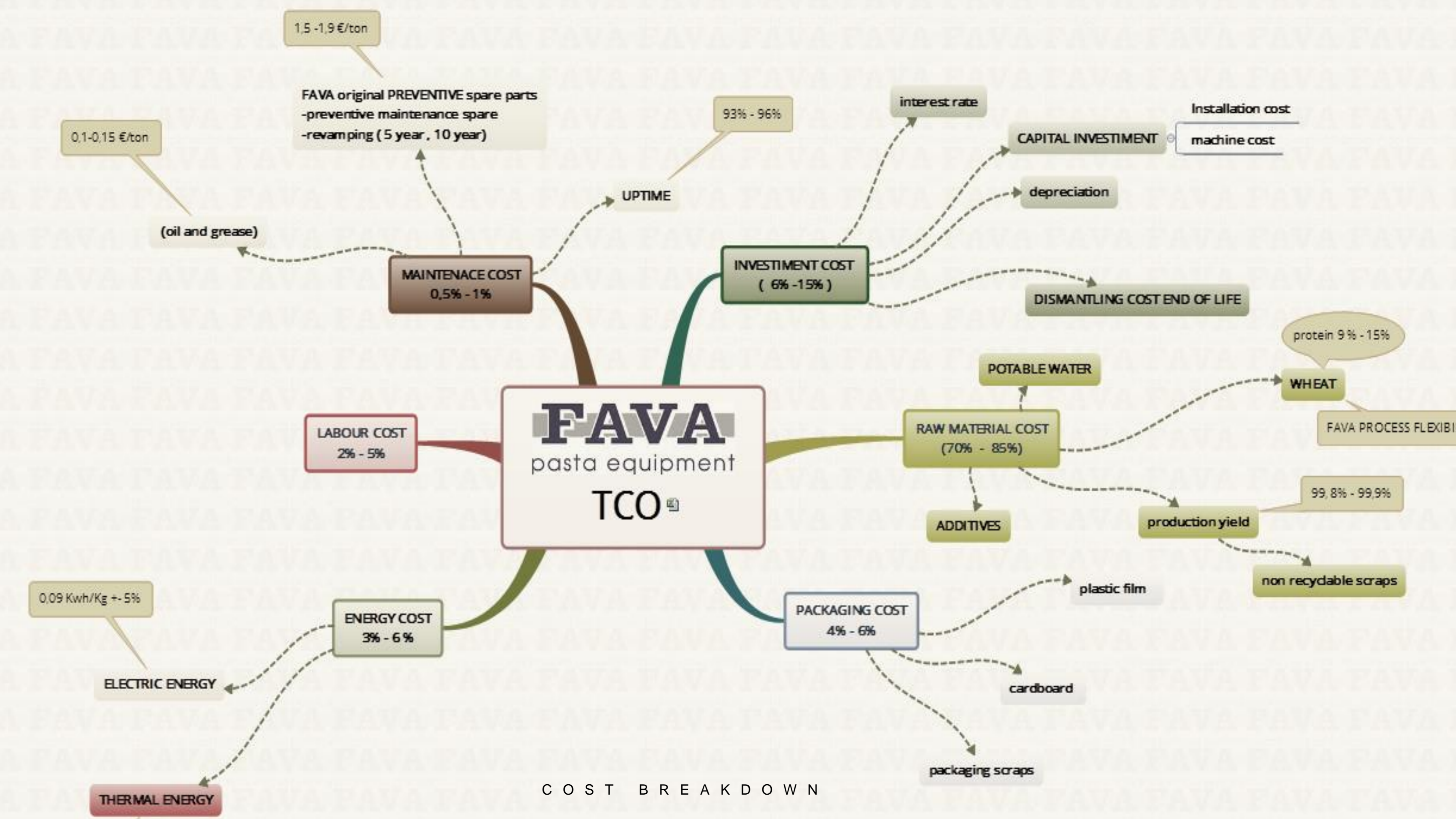
- 1/ Energy
- 2/ Labor
- 3/ Maintenance
- 4/ O.E.E. (Overall Equipment Efficiency)

RAW MATERIALS COSTS

- 1/ Flour / Semolina / Blends
- 2/ Additives
- 3/ Packaging Material Costs



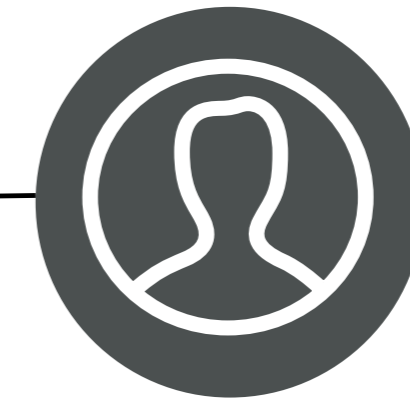
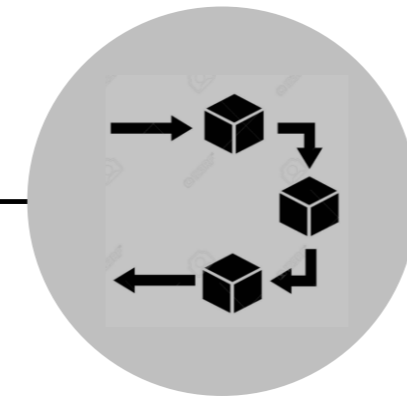
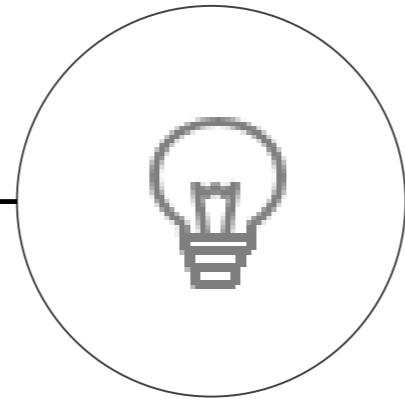
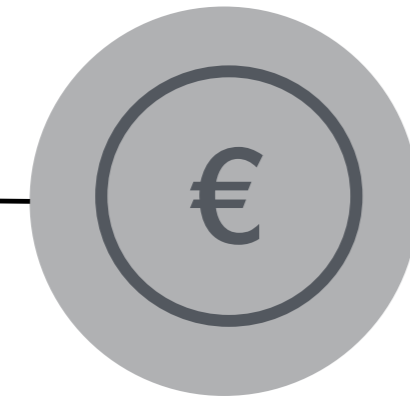
15% OF THE INVESTMENT IS FOR PURCHASE & START-UP COSTS



C O S T B R E A K D O W N

FAVA MIND MAP

FAVA'S WORLDWIDE T.C.O. ANALYSIS



RAW MATERIALS
70-85%

The incidence of raw material costs in pasta factories are approx. 70-80% of the total lifecycle costs.
Raw material costs have a very high incidence on the total cost and quality of final product.

INVESTMENT, INTEREST, INSTALLATION & DISMANTLING COST
6-15%

INCL. REVAMPING 5-10 YRS.
The incidence of investment, interest, depreciation (20 year) and dismantling cost are approx. 6-15% of the total lifecycle cost.

ENERGY CONSUMPTION
5-8%

The incidence of energy cost in pasta factories is about 5 % to 8% of the total lifecycle cost depending on which technology and efficiency used.
As the energy cost does not have a high incidence on the total cost, pasta has low profit margins, so incidence of energy costs becomes important in economic and environmental analysis.

PACKAGING COST
4-6%

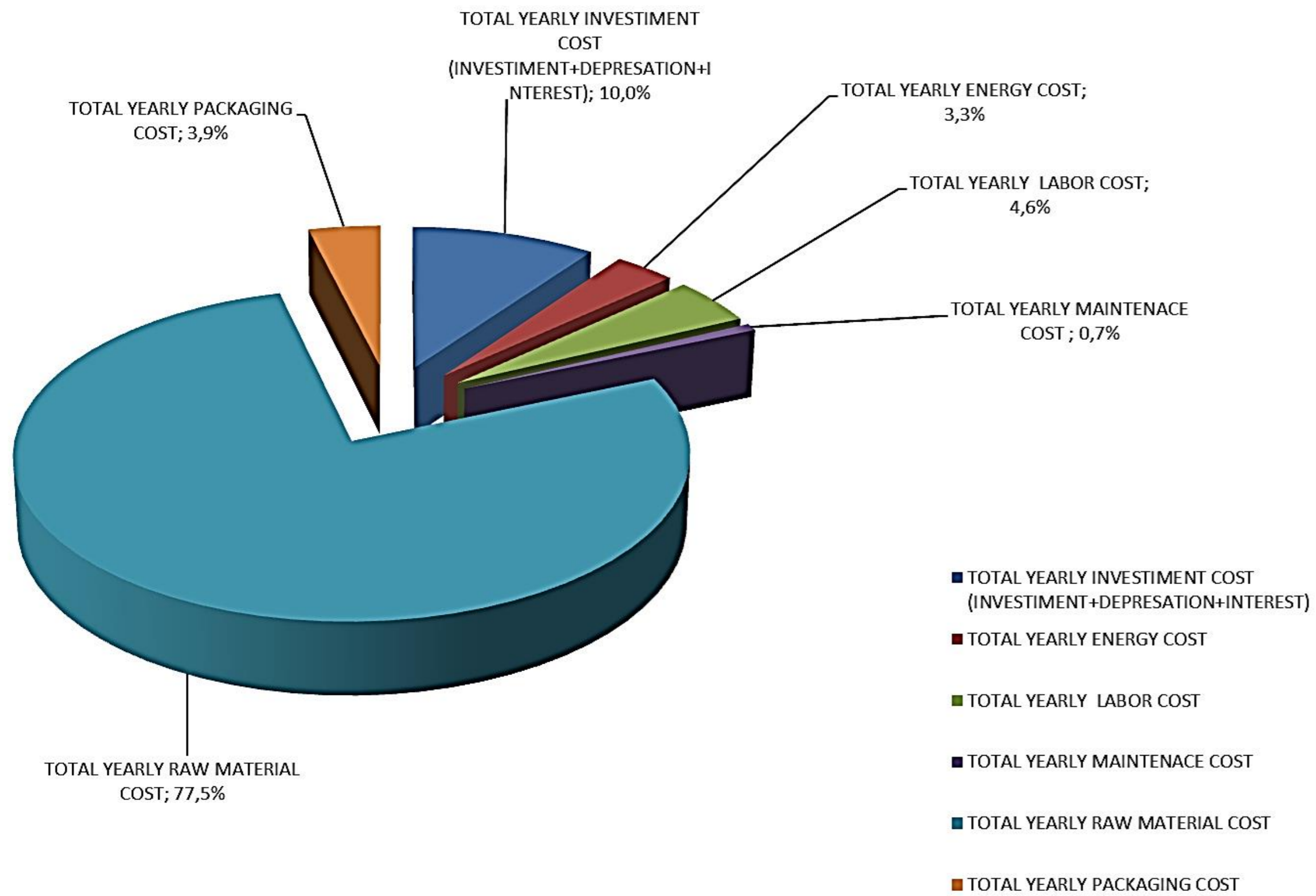
The incidence of packing costs is approx. 4-6% of the total lifecycle costs, depending on which material and packaging dimensions are used.

LABOR COST
2-5%

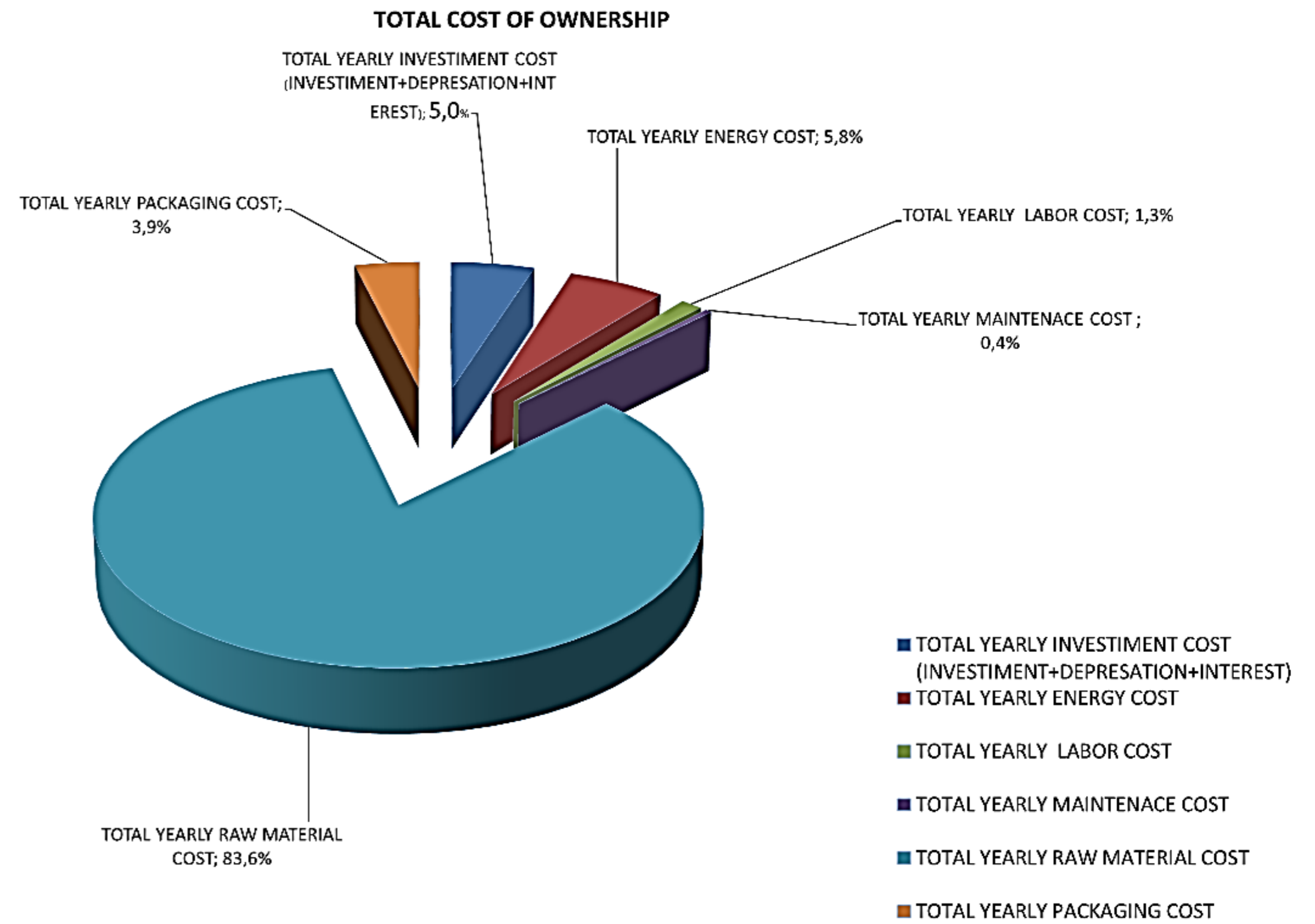
The incidence of labor costs in pasta factories is approx. 2-5% of the total costs depending on the country.
Equipment must be fully automated.

MAINTENANCE COST
0.5-1%

INCL. REVAMPING 5-10 YRS.
The incidence of preventive and scheduled maintenance costs in pasta factories is approx. 0.5-1 % of the total costs with the application of FAVA original spare parts.



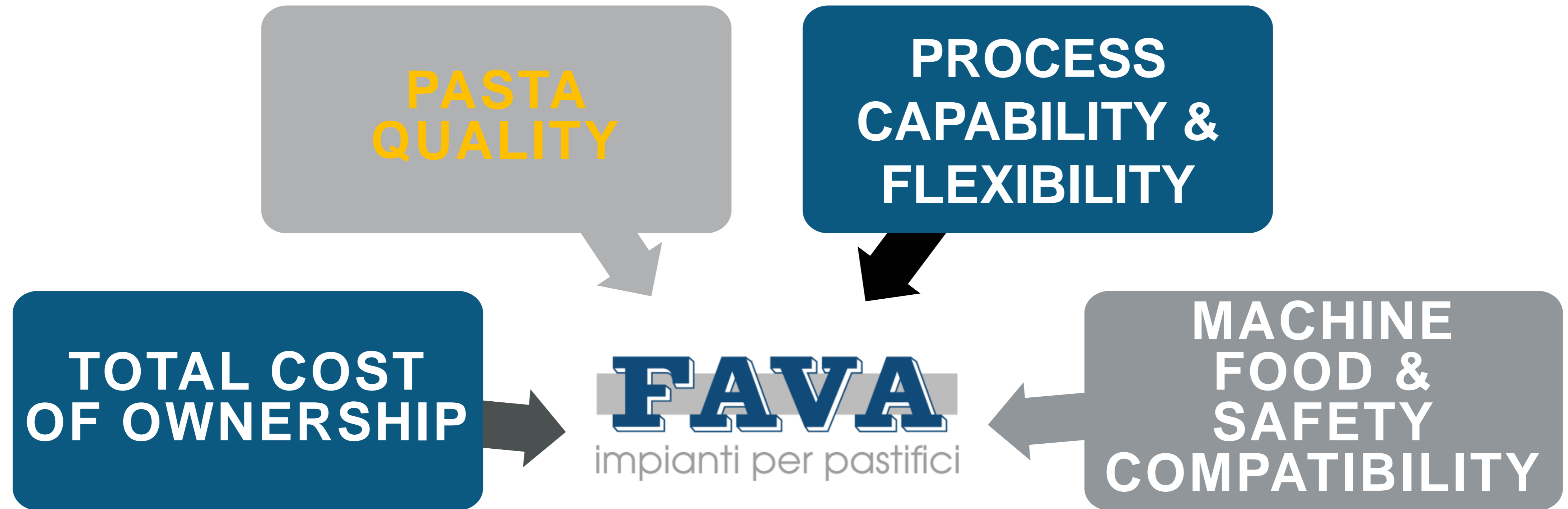
ITALY



NIGERIA

TOTAL COST OF OWNERSHIP

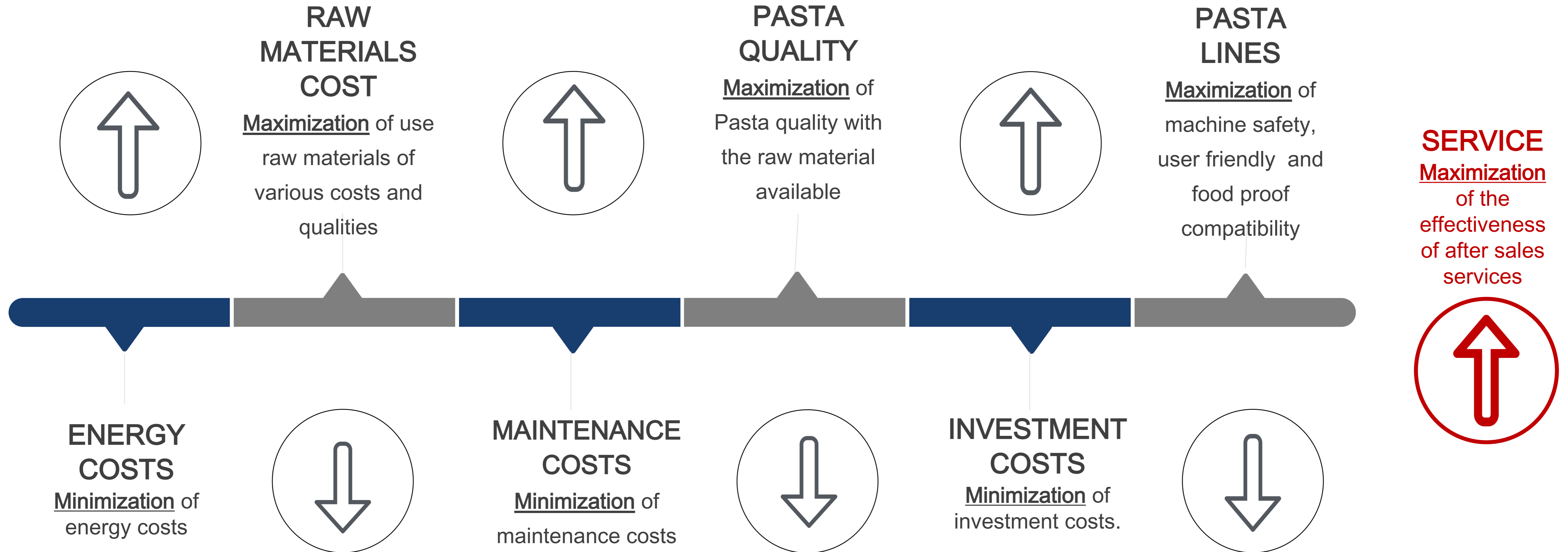
CASE STUDY EXAMPLES – EUROPE/AFRICA



TOTAL COST OF OWNERSHIP

FAVA DEVELOPMENT STRATEGIES

WHAT TO DO...



HOW TO DO IT...

- By respecting **competitors of excellence**.
- By **establishing long-term partnerships** with our clients and users.
- By **investing** in ongoing and scientific **Research & Development**, applying advanced and innovative technologies.
- By **focusing on continuous improvement and training**.
- Through **long-term partnerships with advanced technical and scientific entities** (universities, laboratories etc...).
- By using the **best available design instruments**.
- By applying **IoT technologies**: predictive maintenance and quality control tools.
- By using the **Voice of Customer** approach.

FAVA'S LATEST AND TOP IMPROVEMENTS

- Improved quality of final product by applying Fava's NEW DRYING TECHNOLOGIES.
- 15% Reduction in heat consumption with NEW DRYING PARADIGMS for Fava's NEW process technologies.
- 5% Reduction in electric consumption by developing and applying efficient and special electric devices.
- 10% process heat recovery from air expulsion from shaker predryer in short cut pasta process technology.
- Elimination of external humidification requirements (water / steam) in the stabilization and cooling phases.
- Elimination of compressed dry air in the pasta lines by using electrical control devices.
- Improved O.E.E. by applying IoT technologies: Predictive maintenance and quality control tools.

FAVA'S KPIs V BENCHMARK

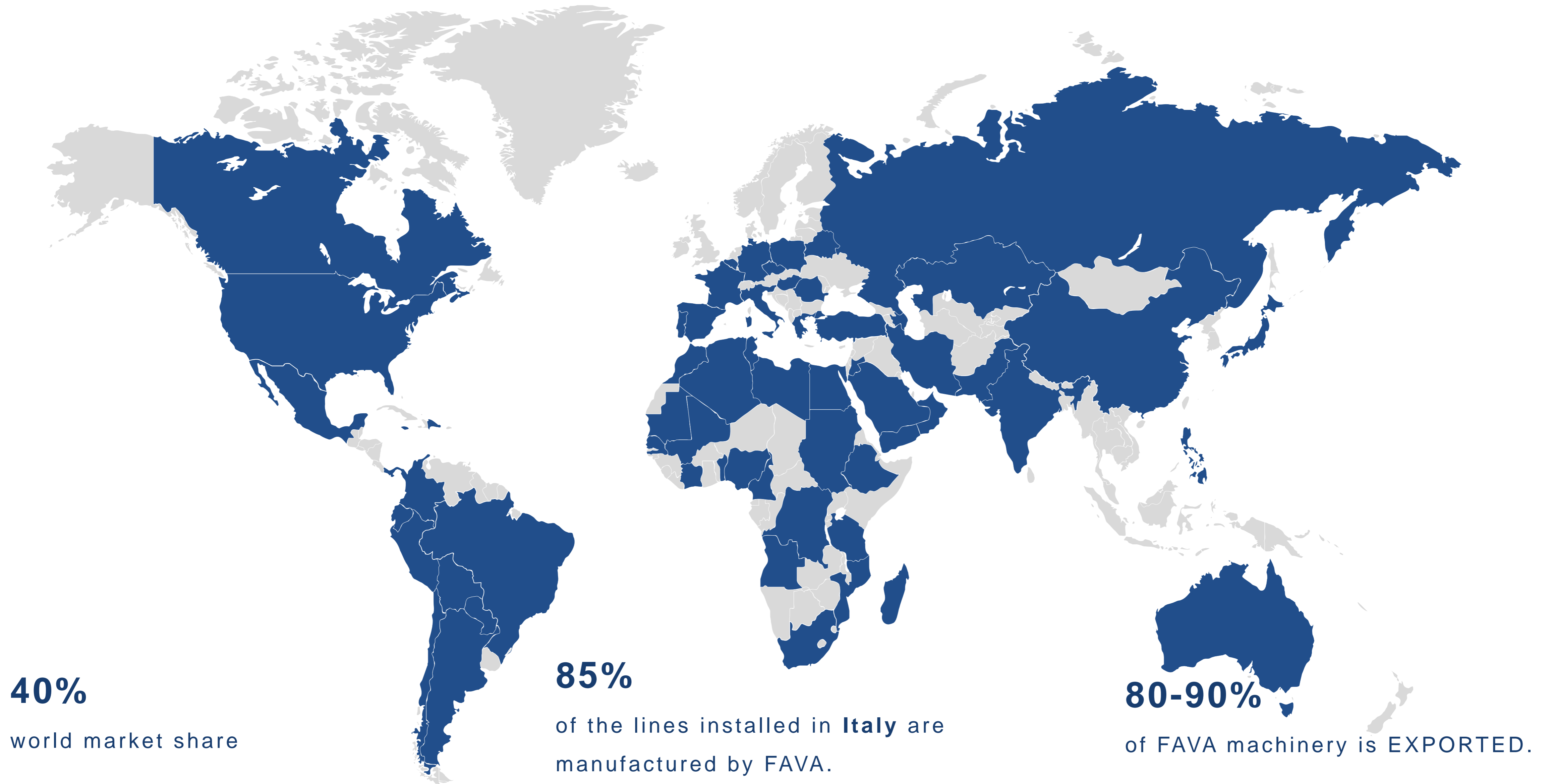
	UM	FAVA SHORT-CUT LINE	FAVA LONG-CUT LINE	REFERENCE BENCHMARK (*)
Electric energy consumption (***)	kWh/ton	63	85	85
Thermal energy consumption	Kcal/Kg	250	190	240
Cooling energy consumption	Kcal/kg	45	40	47
Process steam/water Consumption	l/ton	0	4	8-15
Maintenance cost (labour + spares + revamping 5-10 years)	€/ton	1,5 – 2,5	1,5 – 2,5	3 - 5
O.E.E.	%	UP TO 95%	UP TO 93%	Not available
Protein content	% db	>= 9	>= 9	>= 10
Granulometry %<100 micron	%	100	100	60

*Data provided by main worldwide producers. All above mentioned data are subjected to a technical tolerance of +/- 5% for electric and +/-10% for thermal

WHERE TO FIND US



FAVA's GLOBAL MARKET





AFRICA & MIDDLE EAST

AFRICAN MARKET

IMPORTANT FACTS

14.3 MILLION TONNES OF PASTA

approx.14.3 million tonnes of pasta
were produced worldwide

Source: Survey carried out by IPO 2015

5.8%

PRODUCED IN AFRICA

North Africa in particular
produces the majority of the
pasta produced in Africa.

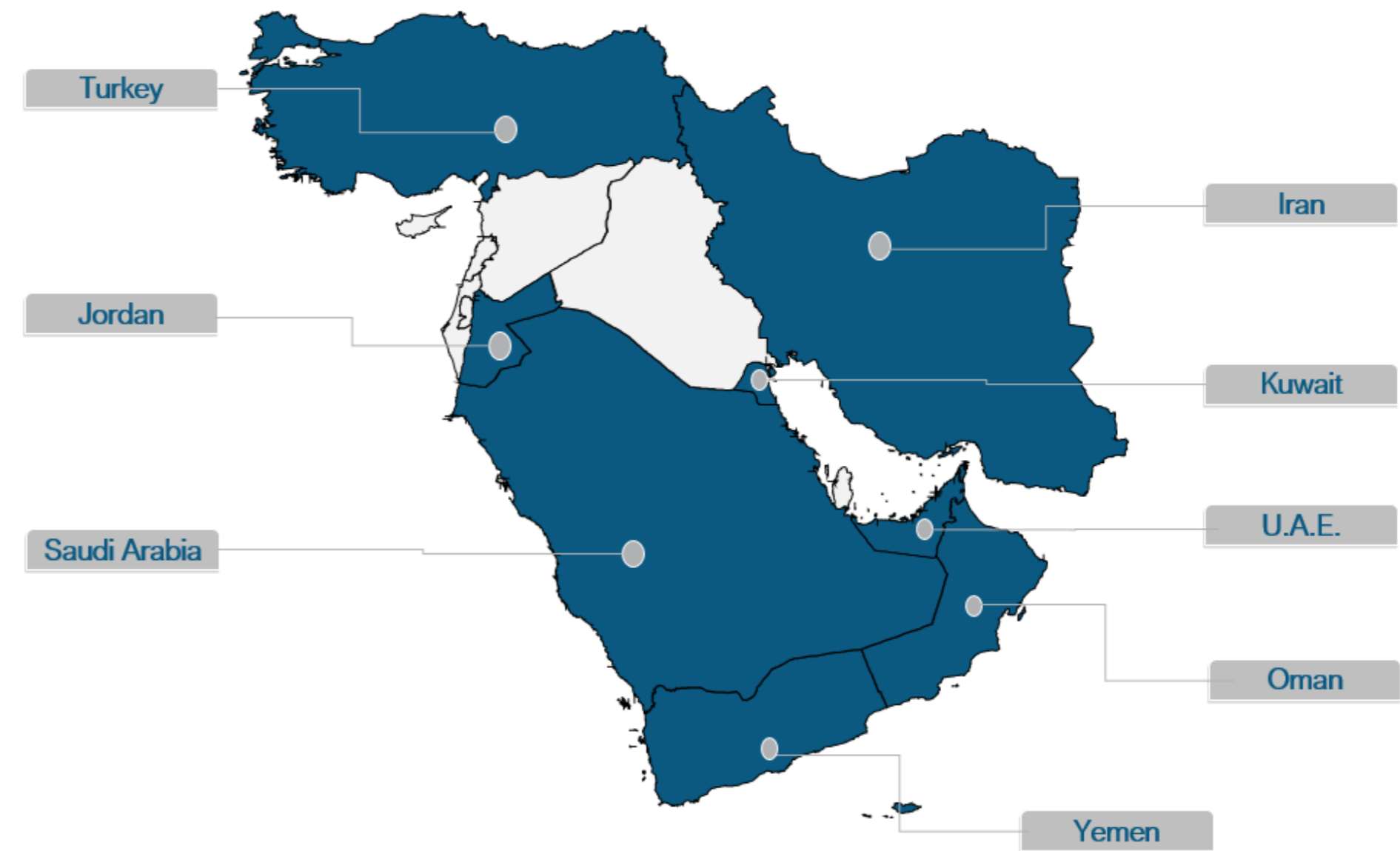
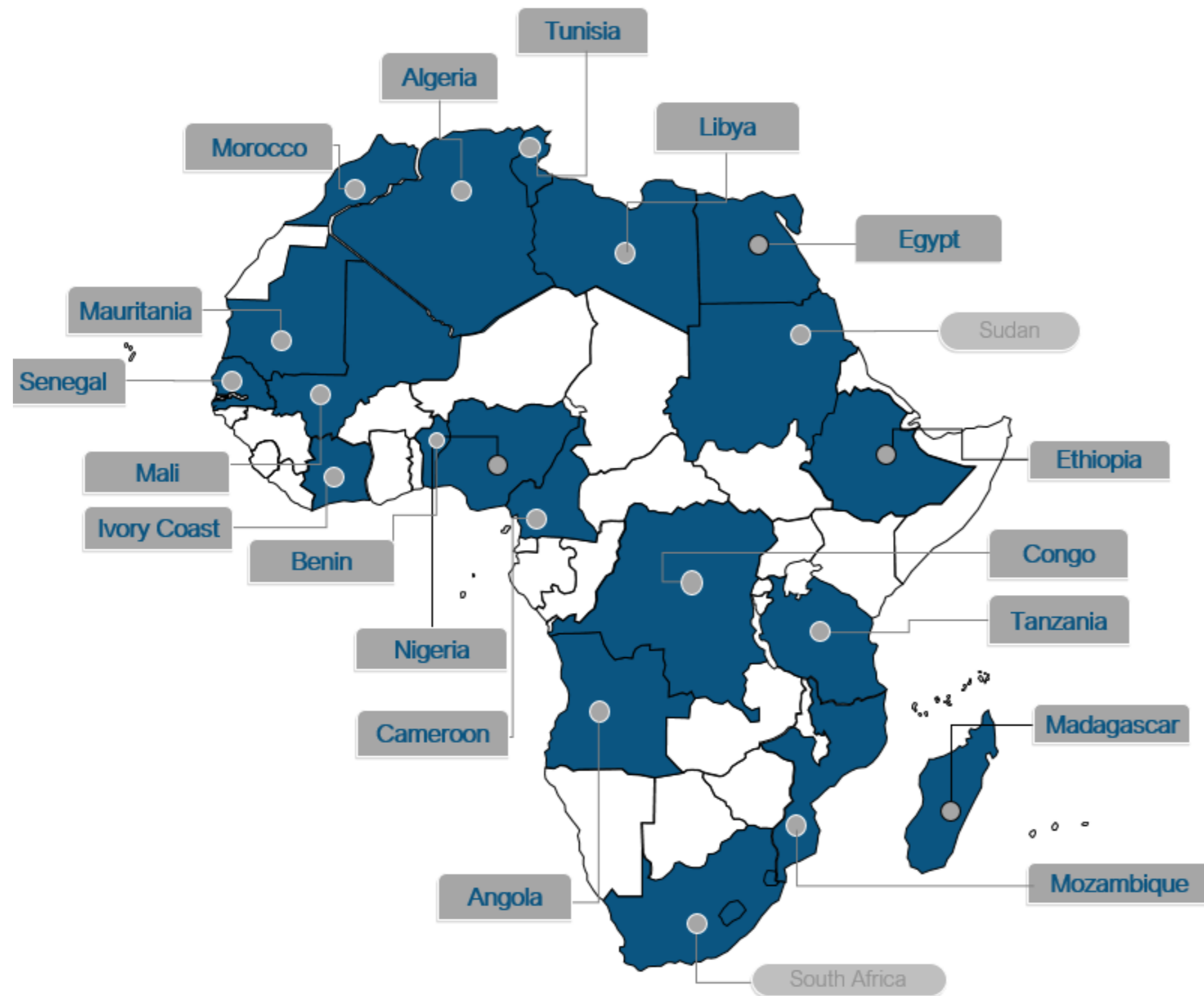
EXPORTS

RISING STEADILY TO AFRICA

Export figures to Africa are
increasing at a steady rate.

WHERE TO FIND US

FAVA'S AFRICAN & MIDDLE EASTERN MARKETS



A F R I C A N M A R K E T

FAVA FIGURES – AFRICA/MIDDLE EAST

FIRST FAVA LINE INSTALLED IN AFRICA WAS IN 1997 IN ALGERIA

103

CLIENTS
IN
AFRICA &
MIDDLE EAST

256

LINES
INSTALLED
IN AFRICA &
MIDDLE EAST

28

AFRICAN &
MIDDLE EASTERN
COUNTRIES
WITH
FAVA LINES

75

TURN-KEY
PROJECTS
IN AFRICA
& MIDDLE EAST

GET IN TOUCH

For any further information required, please do not hesitate to contact us at
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