THE VALUE OF PACKAGES

Tullio Buonocore, Giacomo Franchini
Packages for the Oil&Gas and Power industry are an Italian stronghold ...

~170 COMPANIES
~1.6 BILLION EUR REVENUES
~80% EXPORT
>5000 EMPLOYERS
15/20% GLOBAL MARKET SHARE

MADE IN ITALY
... with Key Success Factors that are similar to the one of a small EPC Contractor

- **Packager’s competences**
- **Quality of sub-contractors and equipment / bulk**
- **Understand different specs and requirements**
- **Few assets but efficiently operated**
A Package is like a tailored suit
The on order delivery of a great tailored suit requires similar capability of Packagers

- Tailor’s competence
- Quality of materials
- Interpret and accommodate Clients’ preferences
- Few assets but efficiently operated
THE VALUE OF PACKAGES

- Packagers act as “small” EPC Contractors
- Distinctive Italian competences for Packages
- Packages require specific competences and know-how

WHICH SUSTAINABILITY?
Objectives of this analysis

• Map the competences of the Italian Packagers
• Allow vendors to know where to grow in a sustainable way
• Increase the international visibility of vendors, especially Small and Medium Enterprises (SME)
• Propose value chain actions to increase sustainability
Interviewed ~20 companies and 50+ people

EPC CONTRACTORS

- Technip
  - 12/06 and 3/11

- ISG
  - 23/09

- Delta engineering srl
  - 16/06

- SAIPEM
  - 22/05 and 6/10

- Rosetti Marino
  - 04/06

- GEA
  - 11/06

- Artes Ingegneria
  - 26/08

- Cannon

- Siirtac Nigi
  - 03/06

- Petrofac
  - 29/07

- DEOMONT srl
  - 23/09

- REPCo
  - 12/10

- SIMA & TECTUBI
  - 23/11

THANK YOU FOR YOUR AVAILABILITY AND CONTRIBUTION.

- Avv. Guido Maglionico
  - (Legal advisor to ANIMP)
  - 22/07
Agenda

What is a Package

Market

Players and economics

Sustainability

Proposed actions
Definition of Packages

Packages are multidisciplinary and process-oriented items that are defined by their functionality.

Packages have critical interfaces with the rest of the plant, thus are often highly co-engineered along the value chain and may have long lead times.
What is and what is NOT a Package for this analysis?

**EPC CONTRACTOR**

**MULTIDISCIPLINARY SKID-MOUNTED PACKAGES**
- Multidisciplinary competence is the base to put together various equipment
- Suppliers of small packages (with specific functionalities) and that are part of larger packages

**COMPLEX PACKAGES / SYSTEMS**
- Special parts of a plant with a specific functionality

**“SIMPLE” SKID-MOUNTED**
- Simpler skid mounted machineries (e.g. pumps)

**SUB-PACKAGES (PACKAGES-FOR-PACKAGERS)**

**MODULES FOR TOPSIDE**
- Suppliers of small packages (with specific functionalities) and that are part of larger packages

**EPC PACKAGES**
- Heating equipment
- Utilities packages
-...

**SUBSEA PACKAGES**
Multiple names $\rightarrow$ 1 package

**Contractor A**

*TEG Gas Dehydration Package System (Glycol type)*

**Contractor B**

*Gas / Liquid Dehydration Unit*

**Contractor C**

*Process Package*

*Very generic*

**End User M**

*Gas and liquid dewatering pack. Systems (glycol regeneration)*

**End-User N**

*Glycol Dehydration Package*

**Contractor Z**

*Gas Dehydration Package*
Leading sources have been considered to set a common language on Packages

ANALYSIS OF PUBLIC CATEGORIZATION

INTERVIEWS WITH CONTRACTORS, VENDORS, INDUSTRY EXPERTS

MAPPING OF KEY VENDORS

THE VALUE OF PACKAGES
Standard Categorization

Packages are critical business and procurement terms, which are defined in the International Standard of Classification of Investment Goods (ICIG).

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This Standard Categorization has been developed to help suppliers with the classification of their products.

1. Registration
   - Vendors need to register in the categorization system through a SupplHi validation tool.
2. Expert review
   - Vendors participate in virtual reviews with experts and receive feedback on product positioning.
3. Update
   - Vendors can update the information of their products in the SupplHi database.
16 FAMILIES of Packages within 2 GROUPS of categories

PACKAGES
- WATER TREATMENT
- PROCESS PACKAGES
- FLUE GAS TREATMENT
- REFRIGERATION
- COOLING TOWERS
- HEATING, VENTING AND AIR CONDITIONING (HVAC)
- FIRE-FIGHTING SYSTEMS
- FILTRATION, SEPARATION
- SKID-MOUNTED PACKAGES

HANDLING SYSTEMS
- WEIGHING AND PRODUCTION CONTROL
- SOLID HANDLING
- LIQUIDS HANDLING AND REFUELING SYSTEMS
- TRANSFORMATION AND FINISHING PACKAGES
- PACKING
- CRUSHING AND GRINDING
- EQUIPMENT AND SYSTEMS FOR SPINNING LINE

ALWAYS IN SCOPE AND FOCUS OF THIS ANALYSIS

SOMETIMES CONSIDERED TO BE PACKAGES
- Boilers
- Fired Heaters
- Waste Heat Recovery Units
- Heat Recovery Steam Generators (HRSG)
- Waste Heat Recovery with ORC plants
- Furnaces
- Incinerators
- Flares
- Components and Accessories of Furnaces and Incinerators
- Storage Tanks
- Silos, Cylinders and Spheres
### Handling Systems

#### Weighing and Production Control
- **Scales**
- **Weighing Bridges**
- **Belt Weighing Systems**
- **Batching and Feeding Systems**
  - **Electromechanical Extractors**
  - **Electromagnetic Extractors**
  - **Forklifts**
  - **Hoppers and Feeders**
  - **Vacuum Mixer**
- **Pneumatic and Gravity Handling**
  - **Pneumatic Conveying Systems**
- **Handling / Dosing Equipment**
  - **Mixture Vessels**
  - **Transportation Systems**
- **Package Unit of Sampling**

#### Solids Handling
- **Conveyors**
  - **Belt and Pipe Conveyors**
  - **Screw Conveyors**
  - **Apron Conveyors**
  - **Chain and Redder Conveyors**
  - **Pen Conveyors**
  - **Bucket and Screw Elevators**
  - **Catalyst Handling Systems**
  - **Bill Activators (Extractor Under Silos)**
- **Elevators for Passenger Goods**
  - **Rack and pinion**
  - **Traction**
- **Crystallization and Dehydration Systems**
  - **Electrophoresis**
- **Heavy Lifting**
  - **Strand Jacks**
  - **Flat Jacks**
  - **Hydraulic Jacks**
  - **Hydraulic Gantry Cranes**
  - **Other Cranes**
- **Hotels and Cranes**
  - **Hoists**
  - **Bridge Cranes**
  - **Portal / Gantry Cranes**
  - **Other Cranes**
- **Loading Arms - Land (Mechanical)**
  - **Onshore Loading Booms**
  - **Loading Arms - Land (Mechanical)**
  - **Onshore Refueling Systems**

#### Liquids Handling and Refueling Systems
- **Conveyors**
  - **Vibrating, Oscillating Steel-band, Pusher Conveyors**
  - **Pan Conveyors**
  - **Screw Conveyors**
  - **Roller Conveyors**
  - **Gravity Handling**
  - **Screw Elevators**
  - **Pneumatic and Air Cushion Conveyors**
  - **Conveyors and Chutes**
  - **Chains and Rollers**
  - **Chain and Apron Conveyors**
- **Stockpile equipment and dispatching**
  - **Truck and Wagon Loaders**
  - **Ship Loaders and Unloaders**
  - **Reclaimers**
  - **Extractors**
  - **Extractor Under Bin Activators**
  - **Diverter Valves**
  - **Baggage Handling Systems**
  - **Airport Handling Equipment**

#### Transformation and Finishing Packages
- **Bagging Machine**
  - **Bagging and Cartoning Systems**
  - **Pneumatic Conveying Systems**
  - **Powder Overflow Systems**
  - **Bagging and Cartoning Machines**
  - **Packing**
  - **GmbH & Co. KG**
  - **Hammer Crushers**
  - **Horizontal Roller Mills**
  - **Vertical Roller Mills**

#### Consolidation
- **Wet Solvent Spinning**
  - **Wet Solvent Spinning**
  - **Wet Solvent Spinning**
  - **Wet Solvent Spinning**
  - **Wet Solvent Spinning**
  - **Wet Solvent Spinning**
  - **Wet Solvent Spinning**
  - **Wet Solvent Spinning**

#### Oil & Gas
- **Process Liquid Handling**
  - **Onshore**
  - **Offshore**
  - **Gas Cylinder Conditioning, Filling Lines**
  - **Incineration and Combustion Systems**
  - **Incineration and Combustion Systems**
  - **Incineration and Combustion Systems**
  - **Incineration and Combustion Systems**

#### For Drums
- **Package Unit for Drum Heating By Steam**
  - **Package Unit for Plastic Film Extruding and Forming**
  - **Package Unit for Plastic Film Extruding and Forming**
  - **Package Unit for Plastic Film Extruding and Forming**
  - **Package Unit for Plastic Film Extruding and Forming**
  - **Package Unit for Plastic Film Extruding and Forming**
  - **Package Unit for Plastic Film Extruding and Forming**
  - **Package Unit for Plastic Film Extruding and Forming**

#### Oil & Gas
- **Oil Canning and Packing Units**
  - **Oil Canning and Packing Units**
  - **Oil Canning and Packing Units**
  - **Oil Canning and Packing Units**
  - **Oil Canning and Packing Units**
  - **Oil Canning and Packing Units**
  - **Oil Canning and Packing Units**

#### Various Equipment
- **Bagging**, **Palletizing and Strapping**
  - **Bagging**, **Palletizing and Strapping**
  - **Bagging**, **Palletizing and Strapping**
  - **Bagging**, **Palletizing and Strapping**
  - **Bagging**, **Palletizing and Strapping**
  - **Bagging**, **Palletizing and Strapping**
  - **Bagging**, **Palletizing and Strapping**
  - **Bagging**, **Palletizing and Strapping**
  - **Bagging**, **Palletizing and Strapping**

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November 2015

Rev. 03

[Image: Handling Systems Diagram]
Agenda

What is a Package

Market

Players and economics

Sustainability

Proposed actions
The global market for Packages is ~8.5B EUR (~10% of procured value for Oil&Gas plants)

Global market for Oil&Gas Packages, end users perspective (2014, B EUR)

- Process Packages 1.7B
- HVAC 0.3B
- Refrigeration 0.3B
- Process Filters 0.5B
- Storage Tanks 0.6B
- Water Treatment 2.7B
- Handling Systems 2.1B
- Silos, Cylinders and Spheres 0.1B
- Other Various Packages 0.1B
- Filters, Screens and Separators 0.2B

Total = 8.5B

Source: SupplHi analysis based on interviews with EPC Contractors
End-users’ universe is enlarging: more opportunities

“Illustrative Complexity / rigidity in specs

IOCs / large NOCs

Medium / small NOCs

Independents

“Aramco or Shell have complex standards that must be strictly respected, also on Packages.”

“Clients are changing. The new ones have less requirements and more flexibility in accepting our standards on Packages, reaching Manufacturers’ standards.”
End-Users and Contractors are “forced” to collaborate with Packagers

### NEED

**MANAGE RISKS**

**REDUCE COSTS**

**SHORTER DELIVERY TIMES**

### LEVER

- Mitigate risks with closer interactions
- Share / transfer risk to Packagers (also through Terms & Conditions)
  - They represent a cost and EPC Contractors are willing to pay for that
- Players to “buy directly key equipment, for 3rd parties execution”
- Leverage on Packagers’ knowledge
- Accelerate the conclusion of the Engineering of the Packages, to order to deliver better and earlier
EPC Contractors leverage on packagers’ know-how and forfeited some competences

“Packages started in the late ’80s from a saving perspective.

The idea was also to transfer some risks and leverage on the focused know-how of suppliers.

But our legal and managerial side is not yet aligned to needs: bringing to the extreme, the same person that purchases a pump follows the day after a 15 million euro purchase.”

“Packages always existed and we don’t have perception of an increase in utilization over the last years. But this is mainly due to the current competition in the industry.

Being an EPC Contractor, the make solution is theoretically the best one, especially for large packages.”

Source: interviews with ANIMP members
Major trends are creating long term opportunities for Packagers.
Continuous trend for modularization

HIGHER ACCESSIBILITY TO REMOTE OR CRITICAL GEOGRAPHIES

MODULARIZATION

PACKAGES

“Modularization is basically a package brought to the extreme.”
Regulations typically create a disruption in the supply chain

### Zero Discharge

- Advanced wastewater treatment technologies to purify and recycle virtually all of the wastewater produced, with **no discharge of any kind of pollutants into the environment**

### S-ECA

- Since 1/2015, all **vessels** in the Emission Controlled Area (ECA) of the Baltic Sea, North Sea, English Channel and waters 200 nautical miles from the coast of US and Canada, have had to **reduce their sulphur emissions to 0.1% m/m**
- ECA area may be **extended to new geographies**

### Flaring

- **Zero Routine Flaring by 2030**: endorsed by 9 Countries and 10 Oil Co.’s (>40% of global gas flaring)
- Some companies are **anticipating results** (e.g. eni in Nigeria, setting a strong reduction already by 2017)

Source: interviews with ANIMP members
ECA area may be extended to new geographies

**Current sulfur limits:**
- **ECA:** 0.10% m/m
- **Other sea areas:** 3.50% m/m (0.50% after 2020)

Source: ExxonMobil
Russia is currently the #1 country for **flaring** emissions, followed by Nigeria.
Packages are typically related to technology cycles...

Source: interviews with ANIMP members
... and some Packages’ application will require higher focus over the next years

INCREASED FOCUS

WATER TREATMENT

LNG MARINE

FLARING SYSTEMS

“NICHE MARKET”

EPDM

DCU

+ BROWNFIELD AND REVAMPING PROJECTS ARE OPPORTUNITIES ALSO FOR SMALLER PACKAGERS

Source: interviews with ANIMP members
Some types of *Packages* will be always needed

“EVERGREENS”
(present in all types of plants)

- **AIR DRYERS**
- **DOSING SYSTEMS**
- **FILTERS**
- **DESALTERS**

Source: interviews with ANIMP members
Systems integration can be delivered only by large players, uncommon in Italy

• Trend of systems integration by large players able to deliver multiple, large and integrated packages, with a cross-industry perspective (Oil&Gas, Power, Shipbuilding, ...)
  – leveraging also on technological and process competences and international commercial presence
  – increasing their bargaining power toward Clients as well as packagers and sub-packagers

Source: interviews with ANIMP members
Agenda

What is a Package
Market
Players and economics
Sustainability
Proposed actions
Photography of the *Italian Packagers* value chain, 2015

- ~170 companies
- ~50% of companies with <10 Mln EUR revenues
- >5000 employers
- Avg EBITDA margin ~9%
- 1.6 Bln EUR revenues
- 80% export

Source: SupplHi analysis, OneSource
Packagers mainly located in northern Italy (Lombardia and Emilia Romagna)

<table>
<thead>
<tr>
<th>HQ Region</th>
<th># of Suppliers</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lombardia</td>
<td>84</td>
<td>54%</td>
</tr>
<tr>
<td>Emilia Romagna</td>
<td>24</td>
<td>15%</td>
</tr>
<tr>
<td>Veneto</td>
<td>9</td>
<td>6%</td>
</tr>
<tr>
<td>Piemont e</td>
<td>6</td>
<td>4%</td>
</tr>
<tr>
<td>Marche</td>
<td>6</td>
<td>4%</td>
</tr>
<tr>
<td>Toscana</td>
<td>5</td>
<td>3%</td>
</tr>
<tr>
<td>Liguria</td>
<td>5</td>
<td>3%</td>
</tr>
<tr>
<td>Lazio</td>
<td>4</td>
<td>3%</td>
</tr>
<tr>
<td>Other</td>
<td>21</td>
<td>10%</td>
</tr>
<tr>
<td>Total</td>
<td>164</td>
<td>100%</td>
</tr>
</tbody>
</table>
The supply chain for Packages is highly interconnected ...
... and became too long

“This long chain has a strong impact on schedule are requires escalation and creates delays for decision making. It also fragments competences across the value chain. Profit margins are also spread around.”

“In such a long chain Technical Standards sum up and become very complex to assess.”

“Presence of Sub-EPC for Packages that typically add limited value to the picture and create further complexities.”

Source: interviews with ANIMP members
Examples of Italian Packagers

Note: includes international companies with Engineering and manufacturing activities in Italy
Increase in the number of small Italian Packagers together with lack of specialization

“Every week a new Italian Packager is knocking at our door and we are not able to fully understand its capabilities.”

“The new Packagers come from 3 different extractions:

• Former suppliers of large packagers that delocalized this part of the value chain in low cost countries

• Engineering companies willing to expand their scope of work

• Small companies not willing to grow in order to keep labour flexibility.”

Source: interviews with ANIMP members
~50% of companies with <10 Million EUR revenues suffered of reduced revenues

Source: SupplHi analysis, OneSource
The value of production of Packagers is on a roller-coaster

% VARIATION 2011-2013 OF THE VALUE OF PRODUCTION

+100%  
+50%  
+20%  
0%  
-20%  
-50%

~30%  

~45%  

~25%

Source: SupplHi analysis, OneSource
Packages are a **stronghold** of the Italian plant manufacturing Value Chain.

- **Full spectrum of packages for competitive export**
- **Some focus on process filters**
- **Focus on process filters, water treatment and hydraulics**
- **Focused on handling systems**
- **Packages mainly for the local market**
- **Mainly for the naval business**
- **Middle East** with limited number of players and basic skills to satisfy Local Content requirements
- **Limited competences to satisfy Local Content requirements, lack of global competitiveness**

Source: SupplHi, interviews with ANIMP members
Foreign Packagers do not possess the same level of execution flexibility

“Once the quality requirements increase, the total cost of supplying a Package from a Chinese tends to be equal to the Italian, considering for example Expediting and Inspection costs.”

“Foreigner Packagers have a lot less than Italians and lack first-class execution capabilities and flexibility”

Working with foreign players highlights the same issues. However, other value chains abroad are growing on Packages.”

Source: interviews with ANIMP members
Agenda

What is a Package
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Proposed actions
Packagers growth is based on a pyramid of competences.
Packages go through the typical life cycle, with ~10 M EUR as the critical threshold.
## Typical causes of distress of Packagers

<table>
<thead>
<tr>
<th>EXAMPLE</th>
<th>CAUSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packager of analyzers shelters, wellhead control units and skids</td>
<td>• Not meeting required performance of the package</td>
</tr>
<tr>
<td>Packager mainly focused on skid-mounted machines (e.g. Compressors, ...)</td>
<td>• Too dependent on a single main customer, which absorbed almost full capacity</td>
</tr>
<tr>
<td>Packager of skid-mounted machines</td>
<td>• The increase in quality (and consequently costs) wasn’t recognized by the market</td>
</tr>
<tr>
<td>Traditional packagers</td>
<td>• Complex financial sustainability</td>
</tr>
<tr>
<td></td>
<td>• Complex owner’s succession plan in a family business</td>
</tr>
</tbody>
</table>

Source: interviews with ANIMP members
What are the competences required to deliver a Package?

1. Business Development and Strategy
2. Project Management
3. R&D
   - Commercial (Sales, Marketing, Proposals)
4. Engineering
5. Procurement and Post Order
6. Fabrication
7. After sale services
8. Quality and HSE
9. Legal (T&C, TM protection, Claims, ...)
10. Financing
11. Logistics
   - General Services and other support functions
• Italian Packagers are SME / family companies usually too small, lacking of critical mass

• Italian Packagers do not have a clear strategic direction and a growth path

“We totally lack of medium / long term planning. We are a family business and all our investments are operative and not strategic.”

“We would like to find the right product but we don’t have idea of where to focus on.”

“With 10/15 M EUR of revenues, Packagers are looking for contracts of similar size, or even larger.”

Source: interviews with ANIMP members
2 Project Management

- Italian Packagers sometimes lack of a fully empowered and endorsed Project Manager
  - EPC Contractors highlight the frequent lack of knowledge of basic PM tools

“Very small family-owned companies have some leadership, but small to medium companies lack of PM culture.”

“I was attending a Project Management course at ANIMP and some Packagers close to me were 1 step behind, missing some basics.”

Source: interviews with ANIMP members
• Packages are typically **not patented** and rarely use proprietary technologies

• The majority **have no specialization** and do not focus on technologies

• Possibility to **trade mark the “Utility model”**

“Specialization in Packages is strongly preferable because it implies expertise, higher levels of professionalism, as well as long-term success.”

“Packagers are typically worried about filling their production capacity and do not care about developing specific technologies.”

Source: interviews with ANIMP members
• **Supplier scouting is complex and takes time and resources**
  – Lack of tools to find and pre-qualify Packagers

• **Packager are not always qualified with key End-Users**

• **Sales are not connected to Execution**

“We would like to use a common vendor database ("albo") of Packagers that highlights their capabilities based on an agreed set of competences”

“There is a quick turnover of salesforce and Technicians are not aligned with younger salesforce.”

Source: interviews with ANIMP members
5 Engineering

- **Specifications** are not always understood in full.
- Client arena is changing and has more **flexibility** in accepting new standards for Packages (e.g. “not all clients are like Aramco or Shell”).
- Technical standardization is required to reduce costs.

“Our packagers don’t digest the specifications: they typically say lots of yes, without understating all the terms and conditions and specs and that’s when issues will arise.”

“Technical standardization is required to reduce complexity and costs but needs to be driven by Packagers.”

Source: interviews with ANIMP members
Procurement and Post Order

- Procurement and **Post Order** (Expediting and Inspection) are delivered with **random performance**
- EPC Contractors find **complex** the handling of **warranties** in case of semi-finished goods surrendered to the **Packager**

“Packagers are sometimes not able to buy due to low bargaining power toward large vendors of key machineries, and require support from the EPC Contractor.”

“It’s very complex for a packager to manage a warranty claim if something goes wrong, given the low bargaining power toward larger vendors.”

Source: interviews with ANIMP members
7 Fabrication

- Fabrication is one of the main strengths of the value chain, but typically is subcontracted to smaller fabricators.

- It is the result of the contribution of many companies and players, in a very long value chain.

“We can improve our Packagers value chain reducing the length of the value chain, getting closer to EPC Contractors and End-user needs.”

“Larger players should Investigate local fabrication in countries with high Local Content requirements (e.g. Saudi Arabia, Kazakhstan, ...) through local Partner.”

Source: interviews with ANIMP members
After-sales services

- After-sales is typically done by the OEM and it is a pass-through - easy for a Packager to not assess properly the after sale rate of an OEM and submit a wrong bid

- **Complex to deliver** by SMEs

“We have an increasing need of assessing After-sales capabilities of Package suppliers: this is due to the presence of new smaller clients that are also the operators and want to reduce their full TCO.”

“Large Packagers have stronger competences on After-sales, but SME are sometimes not even able to manage the documentation”
9 Quality

- Business Process and **Quality procedures** are **minimum requirements**
- Quality requires **competence and presidium**, but it is not always the case

“We always need to show a real Business Process and Quality procedures.”

“Quality is a must and a value. It requires shared belief and focus of the entire organization, not just the Top Management, and continuous investments.”

Source: interviews with ANIMP members
• Not all Packagers are able to manage liabilities and this is “boomerang” for a Contractor

• Claim is frequent but the style is not always professional and supported by adequate documentation

“T&C are every day more demanding and we registered an escalation over the last 3 years. They are reaching unlimited responsibility that are complex to accept as a Packager. That generates complex internal decisions.”

“T&C represent a cost and EPC Contractor are willing to pay for that. T&C are always similar but experiences are not shared.”

Source: interviews with ANIMP members
Financing

- Typically managed on a project-by-project basis, leveraging on the single contract
- Financing toward banks is complex and can impact execution

“The lack of money to purchase goods and services can have a terrible impact on the schedule of a project.”

“Some Packagers are under-capitalized and this is an obstacle to bank guarantees.”

Source: interviews with ANIMP members
Agenda

What is a Package
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Proposed actions
What we have heard during the interviews

25 potential Value Chain actions
25 potential Value Chain actions

1. **Business Development and Strategy**
   - **1a** Shared market analysis, ad-hoc for packagers
   - **1b** Information sharing on Corporate tools
   - **1c** Support the creation of a Cluster of Italian Packagers driven by leaders
   - **1d** Join forces, as a Consortium of small complementary packagers

2. **Project Management**
   - **2a** ANIMP Project Management courses to strengthen these critical skills, with dedicated focus for Packagers
   - **2b** Development of PM culture and skills through the support of retired Managers

3. **R&D**
   - **3a** Further investigate the possibility to leverage on the “Utility model” for Packagers
   - **3b** Shared R&D investments among Packagers

4. **Commercial**
   - **4a** Use an online platform to get prequalification visibility
   - **4b** Shared marketing effort with leading End-Users
   - **4c** Define the rules of engagement for a Packager with EPC Contractors
   - **4d** Support Co-Engineering with EPC Contractors

5. **Engineering**
   - **5a** Share knowledge of main End-user specs, creating a network of Experts
   - **5b** EPC Contractors and vendors to co-engineer the solution
   - **5c** Set shared standards for selected types of Packages

6. **Procurement and Post Order**
   - **6a** Procurement via Frame Agreement of non-critical items

7. **Fabrication**
   - **7a** Reduce the length of the value chain, getting closer to EPC Contractors and End-user needs
   - **7b** Investigate local fabrication in countries with high Local Content requirements

8. **After-sales services**
   - **8a** Build After-sales competences: allocate dedicated resources, manage effectively the documentation
   - **8b** Promote after-sale capabilities with End-Users

9. **Quality and HSE**
   - **9a** Stimulate Continuous improvement and investment, also supported by external Experts
   - **9b** Design and deliver a “certificate of Italian quality” to the value chain

10. **Legal**
    - **10a** Share experience among Packagers on Terms & Conditions
    - **10b** Investigate if Banks and insurance Co. are willing to support the Packages’ value chain in managing complex T&C through umbrella contracts

11. **Financing**
    - **11a** Engage primary financial institutions to setup / extend a “value chain program” dedicated to Packages

Source: interviews with ANIMP members
Opportunities for *Packagers* start today

<table>
<thead>
<tr>
<th>~6 months</th>
<th>~1-2 years</th>
<th>&gt;2 years</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SHORT term</strong></td>
<td><strong>MEDIUM term</strong></td>
<td><strong>LONG term</strong></td>
</tr>
<tr>
<td>Business Plan</td>
<td>After-sales organization</td>
<td>M&amp;A based on complementarity</td>
</tr>
<tr>
<td>Rules of engagement</td>
<td>Local presence (commercial, after-sale, manufacturing, ...)</td>
<td>• Process Integration</td>
</tr>
<tr>
<td>Competences</td>
<td>Modularization</td>
<td>• Build of Owner Succession Plan</td>
</tr>
<tr>
<td>Visibility</td>
<td></td>
<td>• Enlarge Manufacturing capability</td>
</tr>
<tr>
<td>Standardization</td>
<td></td>
<td>• Financial sustainability</td>
</tr>
</tbody>
</table>

- Get strategic direction
- Improve processes
- Complement expertise (PM + Expert)
- Obtain visibility (what and how)
- Assure financial stability

- Extend market coverage
- Extend stable organization
- Create competitive advantage

~6 months

~1-2 years

>2 years
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Grazie per la cortese attenzione