



jopack

المركز الوطني للتعبئة والتغليف

We think inside **The Box!**

Jopack role in improving potential recycling rates by Design packaging for recycling

Sep- 2022



jopack

المركز الوطني للتعبئة والتغليف

We think inside **The Box!**



Eng.Sujud Al-balawneh
Director - National Packaging Center JoPack
Board member – World Packaging Organization WPO
Amman- Jordan



jopack

المركز الوطني للتعبئة والتغليف

We think inside **The Box!**

In 2016 , Jordanian Chambers Of Industry established JoPack (National Packaging Center)

Objectives:

provides a range of specialized technical services and technical support for all packaging sectors (plastic, paper, cartoon, glass and metal in order to increase competitiveness and export capabilities of the Jordanian National Industries.



jopack

المركز الوطني للتعبئة والتغليف

We think inside **The Box!**

VISION

Innovative and eco-friendly packaging that aligns with international standards

MISSION

To implement all the technical and technological support services in packaging for different sectors through being professional and innovative using our latest laboratories and technology





jopack

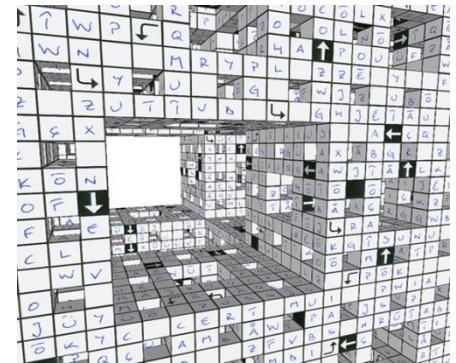
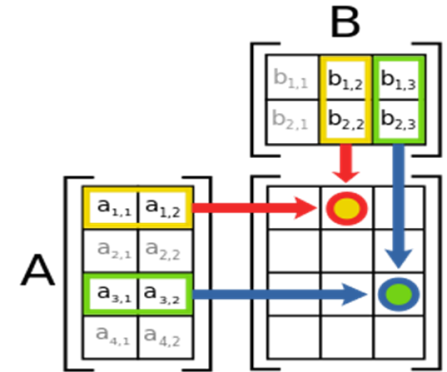
المركز الوطني للتعبئة والتغليف

Why we need packaging center?

The packaging world: a multidimensional matrix of solutions and technologies

- A lot of different suppliers: materials, containers, tools, machines, devices
- Each of them is specialised to a certain industry and technology
- At a first glance it seems a to be jungle
- But: There are a lot of **possibilities** and **opportunities**

We think inside **The Box!**





jopack

المركز الوطني للتعبئة والتغليف

We think inside **The Box!**

Methodology of providing packaging services



It is hard for any of SMEs to know which packaging material should be used and which Supplier for this material, JoPack does actually carry out this demand in a professional way. By focusing on the major function of packaging

- Preserve and Protect:
- Attract
- Inform
- Differentiate

01

02

For example, food waste in the supply chain in developing countries is between 30% and 50%, compared to 2% in Europe where sophisticated packaging solutions are more prevalent.

(UNIDO Assessment Study for Packaging in Jordan.2008)



jopack

المركز الوطني للتعبئة والتغليف

We think inside **The Box!**

“WE CARE ABOUT THE ENVIRONMENT ALL ALONG THE PROCESS TO REACH YOUR AND OUR SUCCESS, AND SINCE THERE ARE MANY PRODUCTS SOLD ON A DAILY BASIS, THE CONSUMPTION OF PACKAGING IS FAIRLY HIGH.”

JoPack provides you with the best choices of eco-friendly materials, which means we don't focus on industry in order to improve our economic system; we improve the economic system by saving the environment. Where both are complimentary for one another.



jopack

المركز الوطني للتعبئة والتغليف

We think inside **The Box!**

'Green Packaging Strategy'

where the negative impact is the minimum to the environment, considering the sustainable development and all stages of the product life cycle; Through eco-design process to select materials and use of packaging that we can manage and use of packaging that we can manage and control.

Reduce: Reducing the use of materials to avoid the generation of packaging waste.

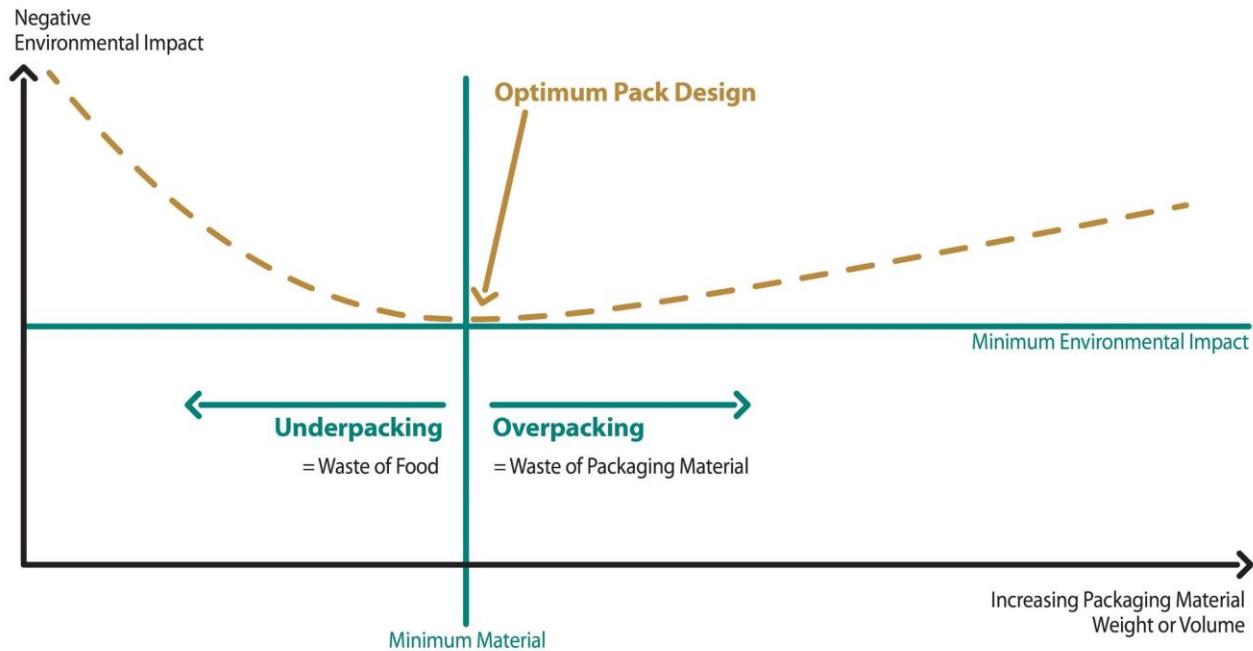
Reuse : Enabling the reuse of the packaging material used, for example, after cleaning.

Recycle : Design of packaging to enable high quality recycling.



jopack

المركز الوطني للتعبئة والتغليف





jopack

المركز الوطني للتعبئة والتغليف

We think inside **The Box!**

Sustainable packaging offers maximum functionality with the best possible product protection, it causes minimal ecological damage and is as circular as possible.

The **Circular Economy Package** in the EU that entered into force in July 2018 includes provisions for enhancing circular approaches to raw materials at the European level.

In 2018, the package of measures led to amendments to the **EU Packaging and Packaging Waste Directives (94/62/EC)** in combination with the **Landfill Directive (1999/31/EC)** and the overarching **Waste Framework Directive(2008/98/EC)**.

The focus is on increasing the recycling rates of all packaging materials and expanding the EPR extended producer responsibility, as well as restricting the marketing of individual plastic articles. Producers of plastic packaging, in particular, are facing important challenges, given that mandatory recycling rates will be raised from the current level of 26% to 55% by 2030 (**2018/852/EC amending Directive 94/62/EC**).



jopack

المركز الوطني للتعبئة والتغليف

We think inside **The Box!**

Design for recyclability : means that the packaging is designed in such a way that the highest possible recycling of the materials in use can be achieved, by applying various recommendations:

1. Differ depending on the type of packaging and material.
2. The 'correct' separation of components should not depend on end users (consumers), as their behavior cannot be directly influenced. so measures should be taken to make it as easy as possible for the end consumer to separate the products correctly, such as **clearly legible information on the packaging, clear labelling of the material type, as well as visible and easy-to-use perforations for removing the decoration.**



jopack

المركز الوطني للتعبئة والتغليف

In order to be able to apply recyclable packaging design, a certain fundamental knowledge of sorting and recycling processes is necessary.

Packaging must, therefore, be suitable for state-of-the-art sorting and recycling processes in addition to its basic functions

(storage, transport, product protection, product presentation and convenience).

We think inside **The Box!**





jopack

المركز الوطني للتعبئة والتغليف

We think inside **The Box!**

General Recommendations:

1. Packaging material :

- ✓ Optimally reusable packaging (returnable) with recyclable design.
- ✓ Greatest possible reduction in the use of packaging materials (without negatively affecting product protection).
- ✓ Use of recycled materials/recyclates where possible.
- ✓ Push **mono-materials**, use material combinations that are recyclable. Economical colouring.

2. Ink and adhesive

- ✓ **EuPIA**-compliant printing inks and coatings.
- ✓ Use adhesives that do not have a negative impact on sorting and recycling processes.
- ✓ If possible, laser engraving for **best-before date** and batch numbers.

3. Easily sorting and separation :

- ✓ Winding aids/closures should be firmly attached to the packaging to avoid the creation of small parts.
- ✓ The packaging should be designed in such a way that residual emptying is as effective as possible.
- ✓ In the sense of 'design for recycling', packaging should be designed in such a way that, in the event of a necessary separation of individual **packaging components** the participation of the final consumer is not necessary for the disposal.





jopack

المركز الوطني للتعبئة والتغليف

We think inside **The Box!**

- ✓ Rare materials that are not recyclable and / only exist in small quantities on the market.
- ✓ **Additives** that lead to quality problems in the recyclate during recycling processes (e.g. due to potentially **contaminating** degradation products).
- ✓ In addition, dyes based on **Carbon black** can lead to misclassification of the material or rejection during **NIR** detection in the plastic sorting process (however, NIR-detectable black and dark dyes are already on the market).







jopack

المركز الوطني للتعبئة والتغليف

We think inside **The Box!**

- 
- ✓ Use materials that are as widely available as possible (PP, PE, PET).
 - ✓ Recyclable material combinations (ideally mono-materials).
 - ✓ The surface area of the base material should, at best, be covered to a max. 50 % with the sleeve/label/banderole.
 - ✓ Easy mechanical separability of the individual components in the sorting process. If possible, use transparent materials.
 - ✓ As few additives as possible.
 - ✓ Adhesives recyclable or washable under certain conditions.
 - ✓ No barrier layers, but if necessary: carbon plasma coating, SiO_x- or Al₂O₃ barrier.

- 
- Avoid small parts that can be separated by the last consumer (**Littering**).
 - Non-recyclable material composites (see specific design recommendations).
 - Density-changing **additives** (for example, density-increasing additives in PE and PP packaging lead to problems in sorting).
 - Use of **Carbon black** -based inks




Plastic



jopack

المركز الوطني للتعبئة والتغليف

We think inside **The Box!**

- 
- ✓ The fibres for the production come from coniferous and deciduous trees in the best case.
 - ✓ If possible without coating, if necessary -> single-sided plastic coatings or plastic laminate (fibre content in the best case > 95 %).4
 - ✓ Adhesive applications that do not lead to the formation of problematic stickies. Inks that can be removed in the de-inking process.
 - ✓ As little colouring as possible and minimal printing with
 - ✓ EuPIA-compliant colours

- 
- Plastic coatings on both sides.
 - Wax coatings.
 - Silicone paper (exception: feed to special recycling plants).
 - Wet-strengthened fibre components.
 - Integrated windows and other plastic components which cannot be easily separated from paper



Paper\Carton



jopack

المركز الوطني للتعبئة والتغليف

We think inside **The Box!**



- ✓ Ferromagnetic metals.
- ✓ Paint coating.
- ✓ Closure also made of ferromagnetic metal.
- ✓ Decoration by means of embossing or paper banderole.



- Aerosol cans with hydrocarbon-based propellants and/or residual contents.
- Non-compliant colours.



Tinplate



jopack

المركز الوطني للتعبئة والتغليف

In corporation with WPO world packaging organization we have the Arabic copy of A Global recommendation for circular packaging design we use it in [packaging design for recycling](#)

We think inside **The Box!**





jopack

المركز الوطني للتعبئة والتغليف

We think inside **The Box!**

Thank you

