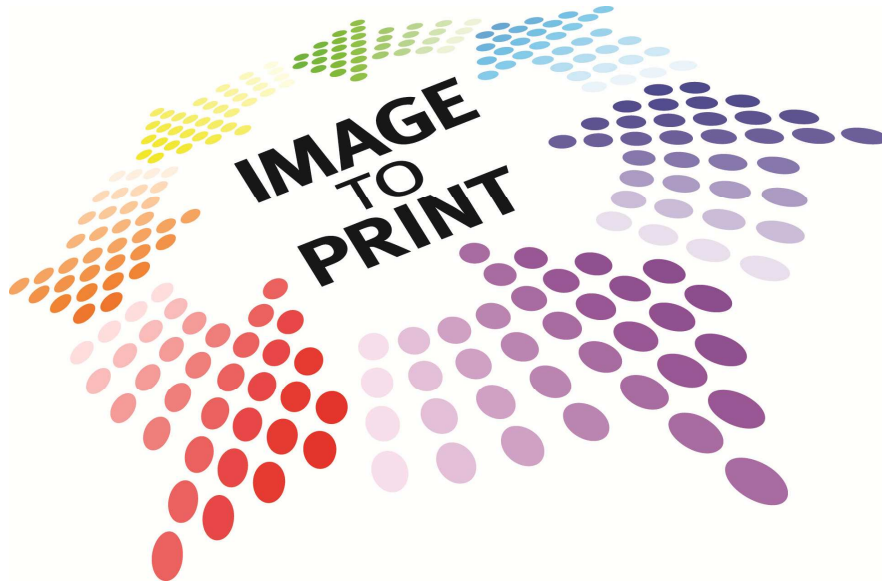


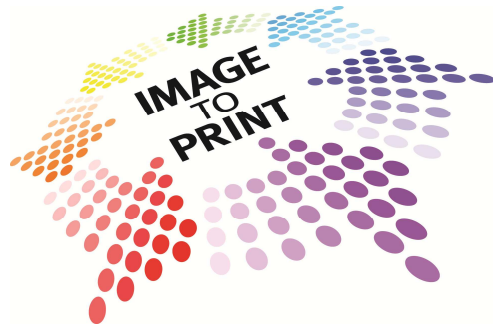
Technology & Innovation Days

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**« we as partners want to share our thoughts,
together with you, our customers,
to contribute all together
to overall improvements to our industry... »**



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The World
is changing...
and so do we!



Environment, Sustainability, CO₂ Footprint, ...

The Brands` Topic Today



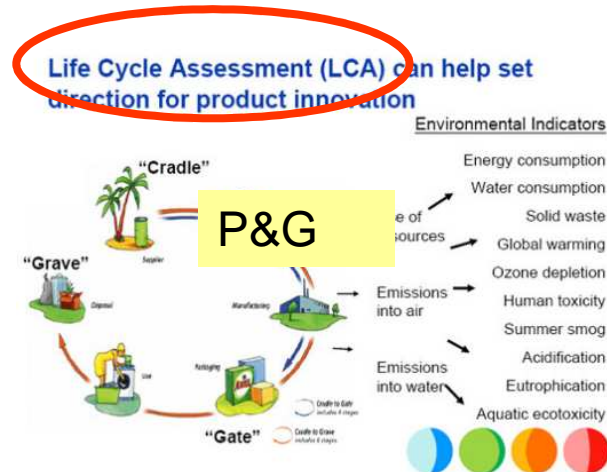
Kimberly-Clark
Growing Responsibly In A World Of Finite Resources

Our Sustainability Framework

K-C embraces sustainability through our commitments to...

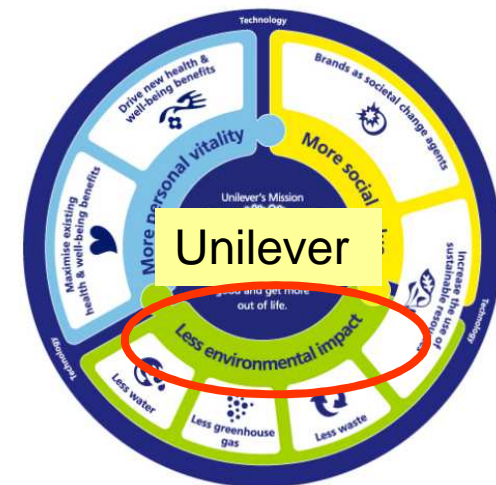
- PRODUCTS** The products we make...
 - Listening to the Sustainability insights of our customers/shoppers/choosers/users to help drive innovations.
 - Applying "Design for Environment" principles systematically to our product development and innovation processes.
 - Being a global leader in the responsible use of resources.
- OPERATIONS** The way we do business...
 - Reducing the environmental footprint of our operations, including fresh water reduction and energy efficiency.
 - Encouraging our business partners to adopt sustainable practices.
- COMMUNITIES** Our contributions to society...
 - Having a positive impact on local communities and the environment.
- EMPLOYEES** Empowering our employees...
 - Challenging employees to help K-C achieve success in its Sustainability efforts.
 - Encouraging employees to make better choices for the environment on a daily basis.
 - We need to care for our employees (health and Safety efforts).

Kimberly-Clark

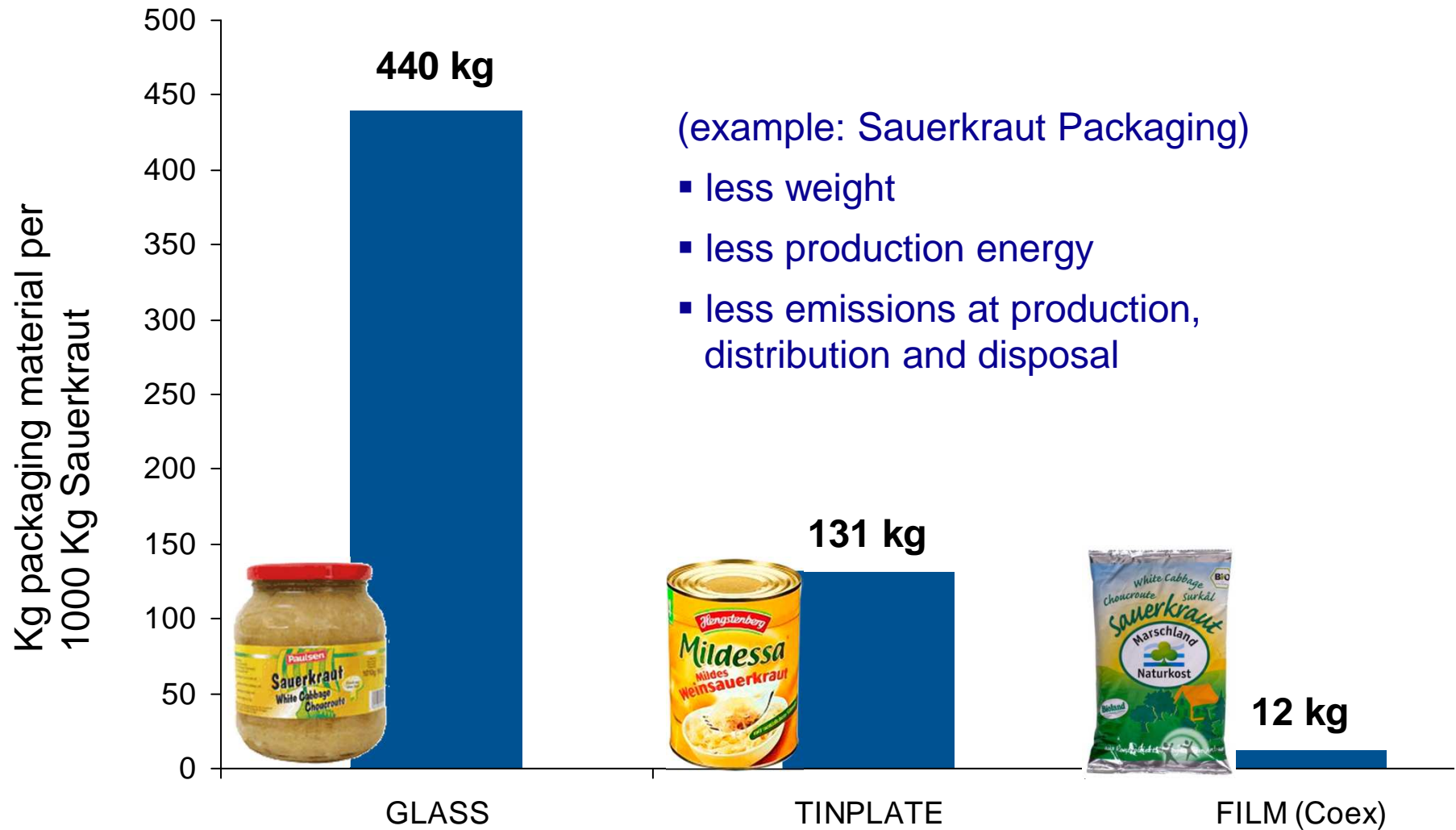


Environment, Sustainability, CO₂ Footprint, ...

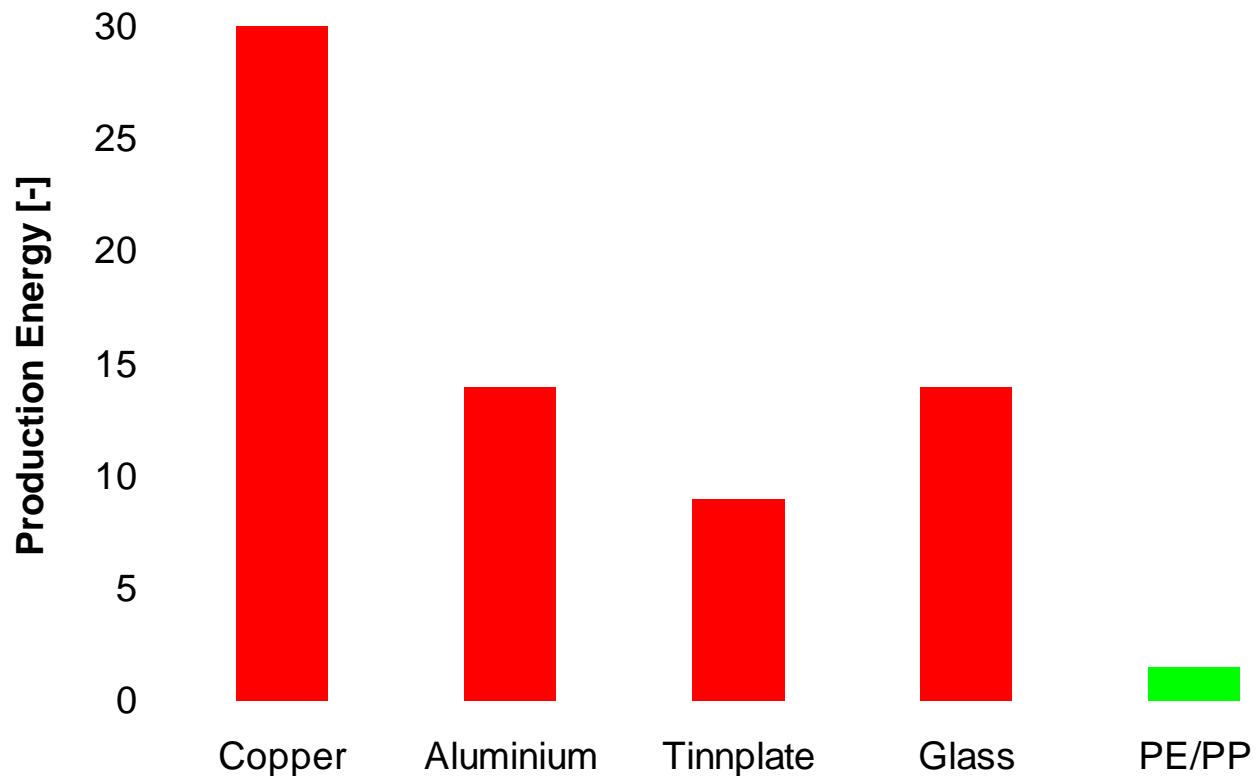
The Brands` Topic Today



Flexible Packaging is sustainable!



Production energy used for different types of packaging



Printing exists
since more than 500 years...

Printing has been
a major factor
for changes in this world...



Johannes Gutenberg
1408 - 1468



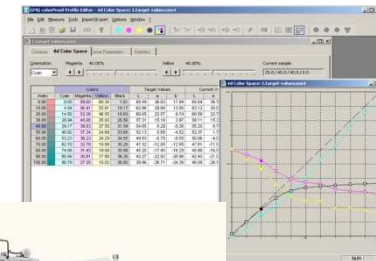


We don't want to look back 500 years –
but what has changed in our Industry
over the past 10 to 20 years?

Pre-Press Developments

By applying **PCM** (Print Color Management) in the pre-press stage, color matching times on press have been reduced significantly.

This means less **waste** and less **cost**!

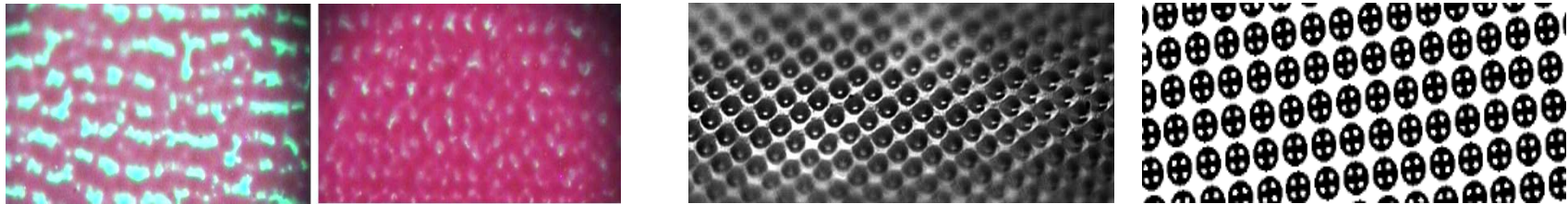


Multi-Color Process

- less ink storage (Spot Colors)
- no ink changes
- faster job changes and set-up times
- print multiple jobs at the same time
- reduced cost



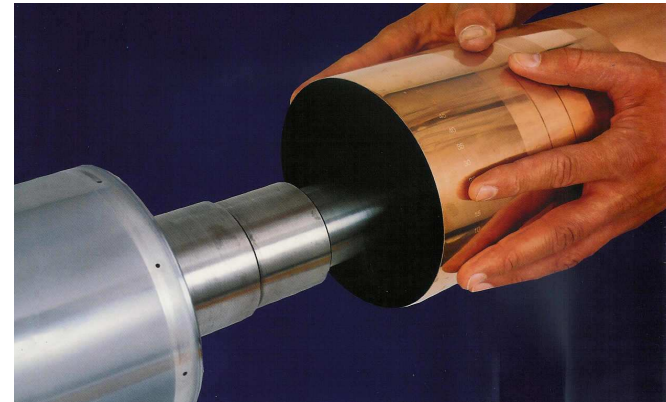
New Flexo Technologies



- New set of **screenings** in conjunction with **new plates** minimizes ink consumption, improves sustainability and **lowers printing cost**
- Offers **more tonal range**, gray levels, gamut and contrast
- Plates last **longer** on press

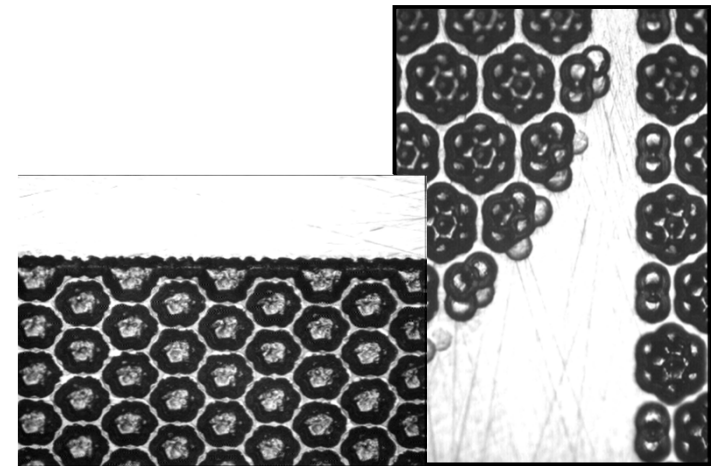
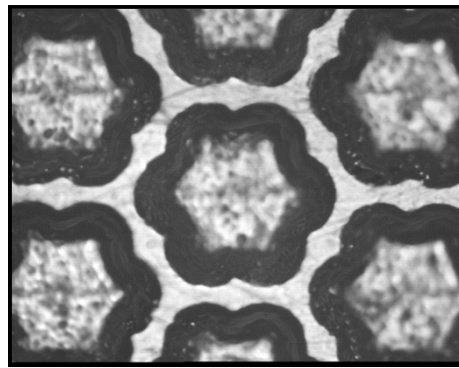
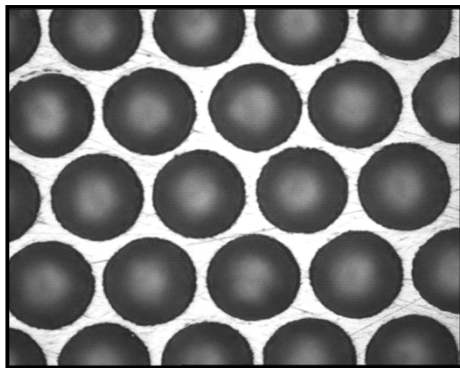
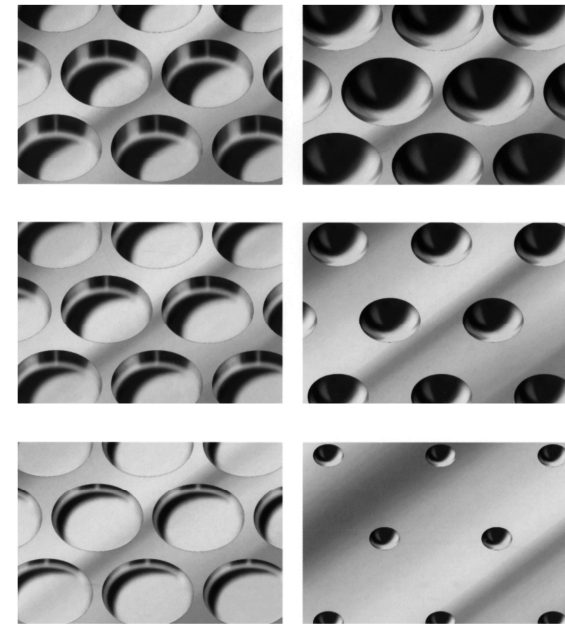
Light Weight Solutions for bases and Sleeves

- easier handling
- reduced set-up times
- reduced storage costs
- reduced transport costs

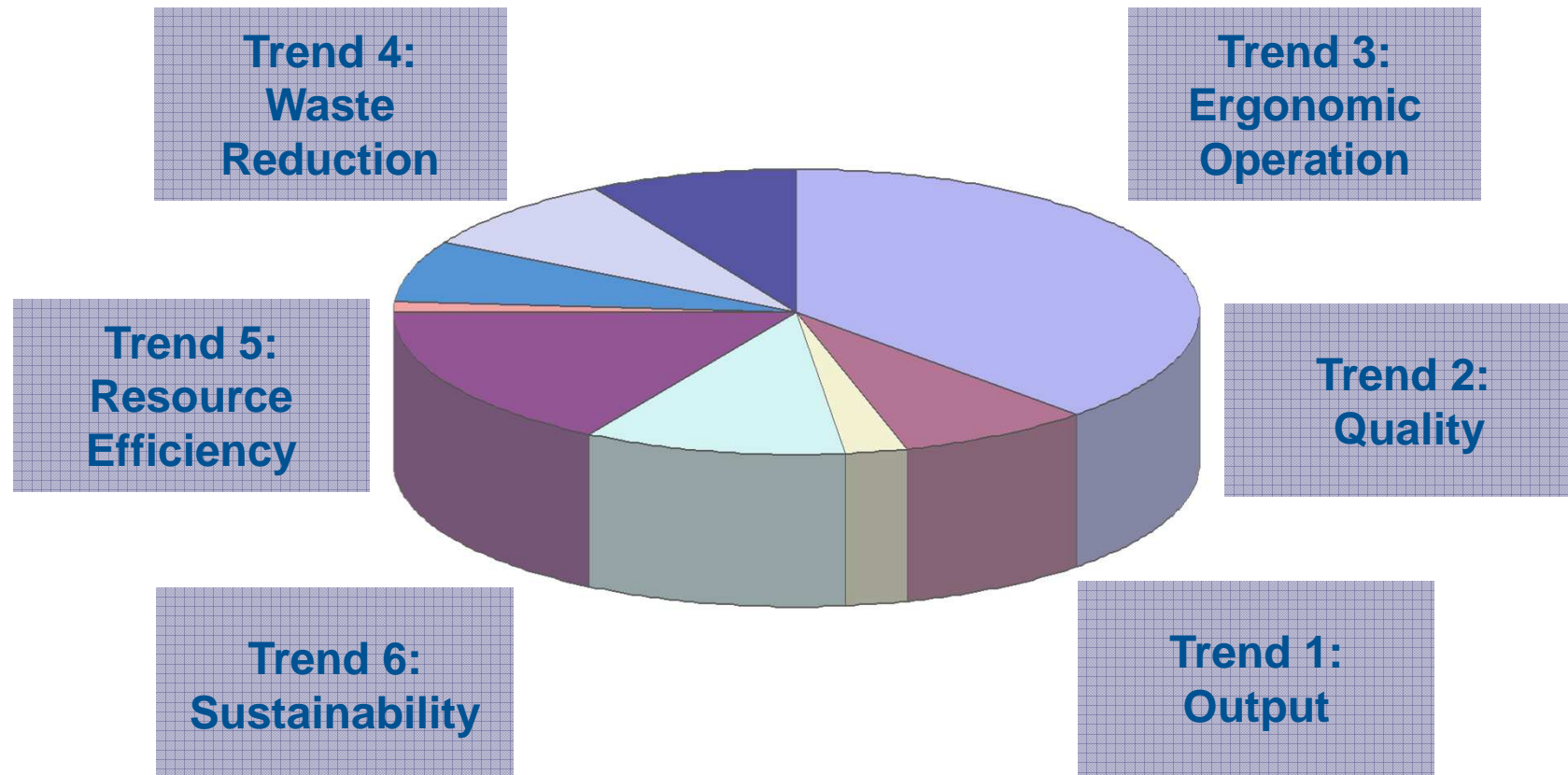


Developments such as **Laser-Engraving**

- **faster** engraving time
- higher **quality** and higher **definition**
- better **printability** and ink transfer

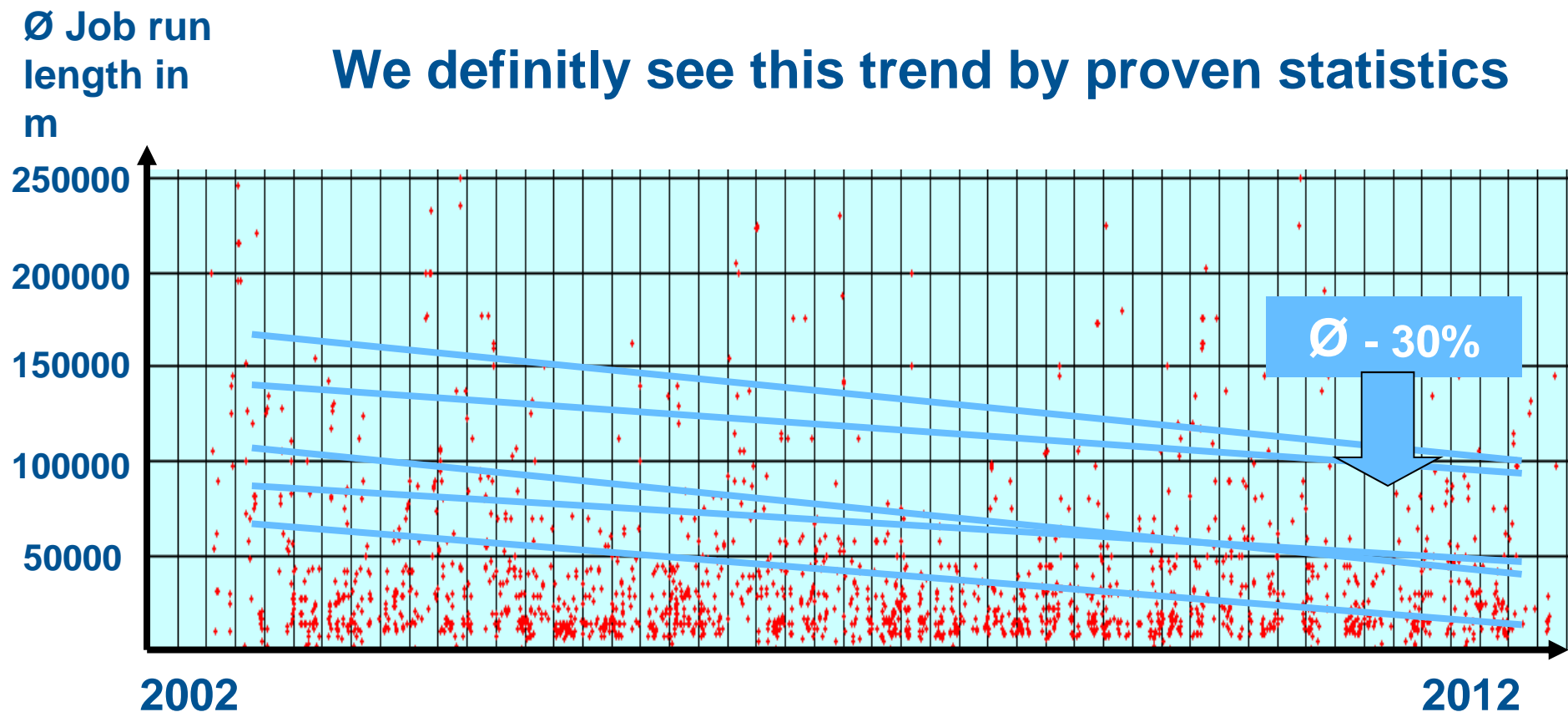


Trends in Printing



Today's Topic: Shorter Jobs

We definitely see this trend by proven statistics



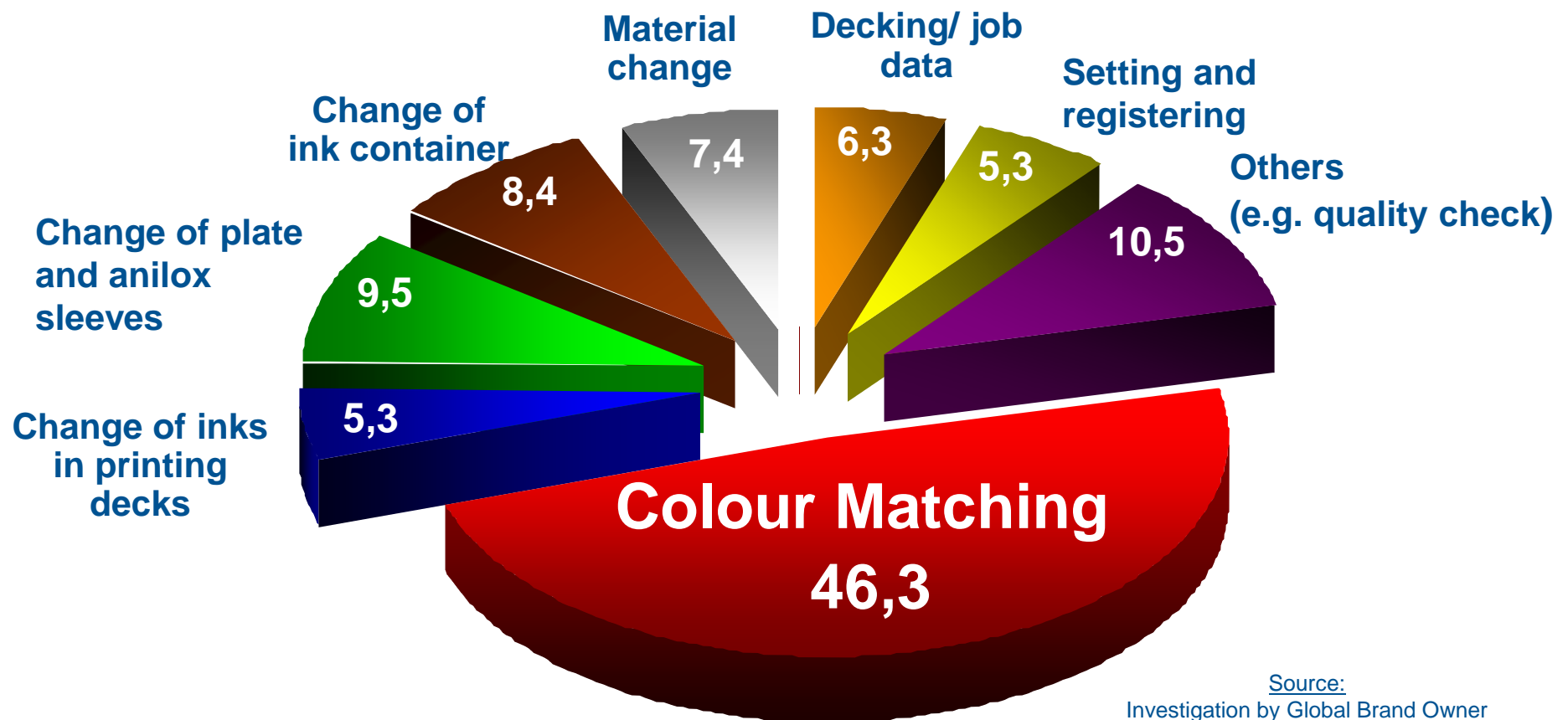
Results of flexo production analysis at
worldwide flexible packaging printers



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Time Required for Job Change Procedures (Flexo)



Results in Flexo Press Developments ...



STARFLEX 1990

(Equal Job,
20.000 meters)



MIRAFLEX CM 2013

■ Total production time:	156 min	106 min	- 32%
■ Energy consumption:	383 kWh	222 kWh	- 42%
■ Total waste:	1720 m	480 m	- 72%
■ Waste of ink:	21,45 kg	7,8 kg	- 64%
■ Solvent consumption:	60 ltrs.	40 ltrs.	- 33%

Rotogravure Press Developments



MERKUR HELIOSTAR 1990

(Equal Job,
30.000 meters)



HELIOSTAR SL 2013

■ Production time:	130 min.	85 min.	- 35 %
■ Energy consumption:	450 kWh	285 kWh	- 37 %
■ Waste of substrate:	1120 m	320 m	- 71 %
■ Waste of ink:	14,9 kg	7,9 kg	- 47 %



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PRINTING INK DEVELOPMENTS

Development of gravure inks for high temperature retort packaging

Lowered print production costs due to high speed printing capability and low solvent retention properties

Facilitated development of convenience packaging

Can be used for up to 135' retort sterilisation processing applications

Enabled packaging design trend from metal cans to flexible packaging solutions



PRINTING INK DEVELOPMENTS

**Multipurpose Inks for multi-
substrate and surface &
lamination applications in
one system**

Lowered waste

Lowered downtimes

Higher speeds

Lowered solvent retention

**Simplified systems for less
inventory and cost**



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PRINTING INK DEVELOPMENTS

Water based gravure inks for film printing

More sustainable solution

No solvent abatement issues

Low VOC

Print quality improvement to
Solvent Based Standards



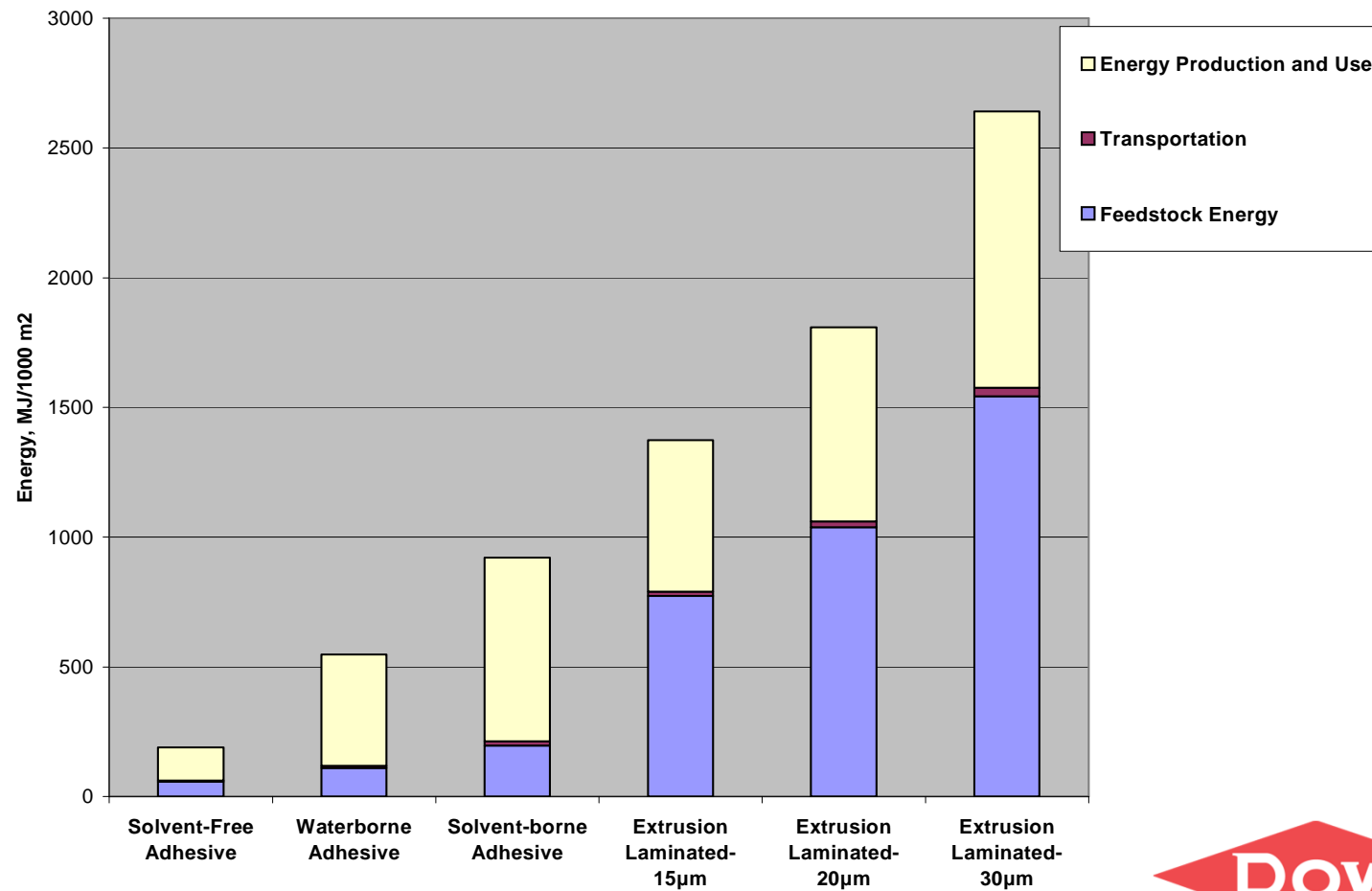
nordmeccanica solutions
for a **Better Life**



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Energy Use in MJ/1000 m²



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Technical Sessions 2010 - April 28th
Celebrating Earth DAY



FOCUS ON: SUSTAINABILITY

Don't miss the opportunity
 to see machinery, adhesives,
 films and inks performing together
 to deliver practical answers
 to your packaging needs.


HANDS ON PURE FACTS

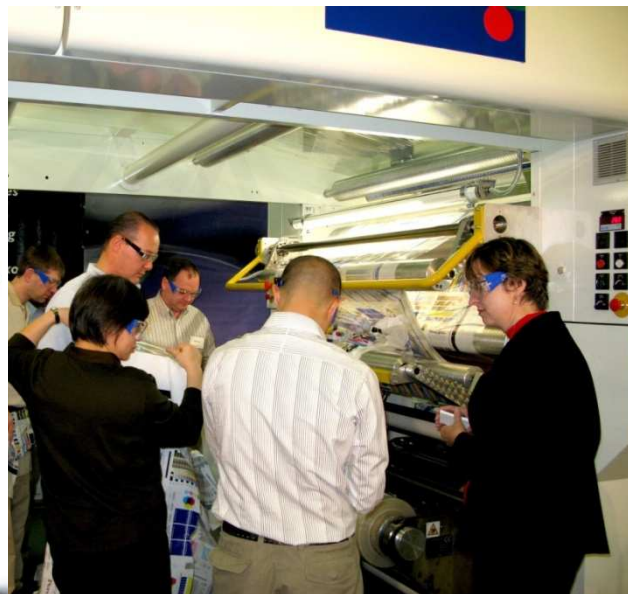


nordmeccanica group

technical partners





SunChemical
 a member of the DIC group 

 **WINDMÖLLER & HÖLSCHER**

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The Easy Way to Sustainability



"One Shot": Why?

- **Zero emissions.**

-Lower installation and handling costs:

- - 20% capital equipment investment.
- - 25% auxiliary equipments.
- - 100% savings on after burner (incinerator).
- - 25% maintenance costs.
- - 10 % spare parts.

-Lower energy consumption:

- Competitors: 1200 kW.
- Triplex Combi Vertical: 1000 kW.
- One Shot: **200 kW.**



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We believe in the future!
We innovate and we develop technologies for the future!



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**“We are partners,
we care for our Industry,
and our world...”**

**Thank you for being here
and thank you for your attention!**

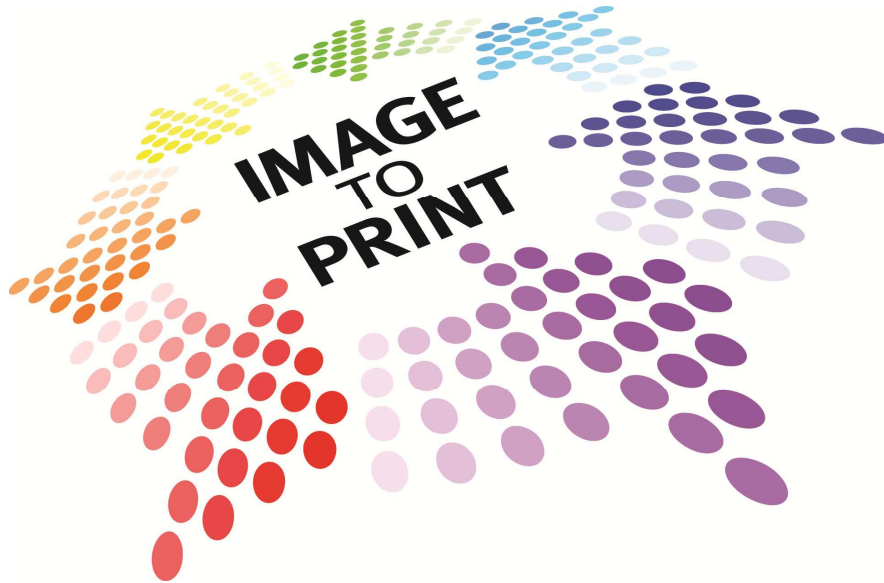


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Thank you...



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