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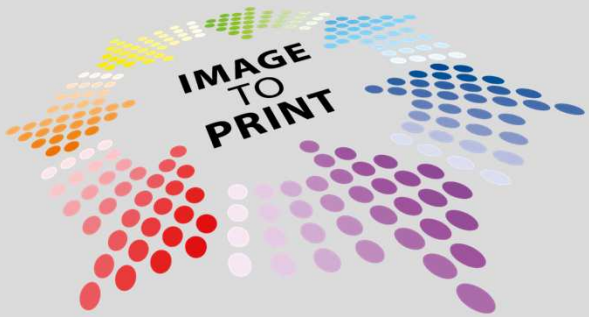

Image-to-Print

Rotogravure Technology & Innovation Days

Trends & Innovations in cylinder manufacturing in Europe

Rudi Weis-Schiff
Janoschka | 31 November 2011 | Jakarta

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Janoschka

…is one of Europe's biggest Network
for Pre-Press and Print Color Management
for the Packaging Industry

As a family-owned business
Janoschka has grown since its beginnings in 1976
by combining top talent,
state-of-the-art technology,
customer proximity and service.

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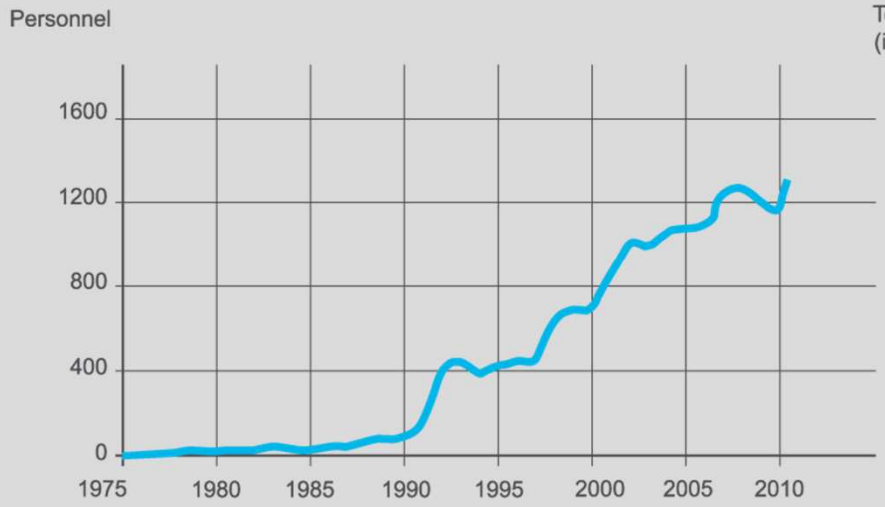
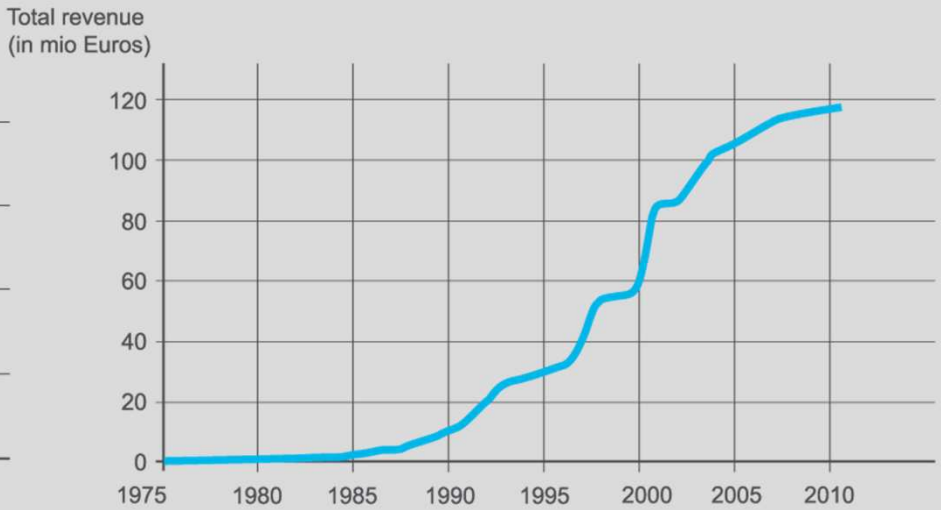
Continued Success

Since its foundation in 1976, the family-run company can look back on successful business development.





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Figures 2010

- **Turnover**
  - in Mio. EUR 115
- **Reproduction**
  - Artworks 100.000
  - Graphic Operator 300
- **Print form production**
  - Print forms produced 220.000
  - Steelbases produced 35.000
  - Direct-Laser Systems / Schepers-Laser ..... 7 / 4
  - Think Laser 2
  - Helioklischographs (Hell, Ohio, Daetwyler) 90

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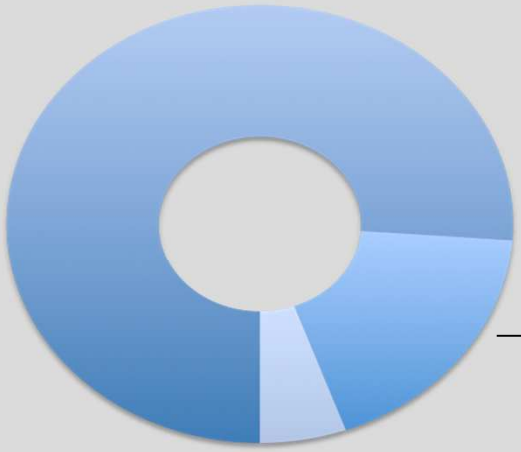
Our Markets

FMCG Packaging

food, personal care, home and pharmaceuticals



Tobacco Packaging

cigarettes, tippings

Decorative

laminates, napkins, gift wrap, wall paper

* Group figures

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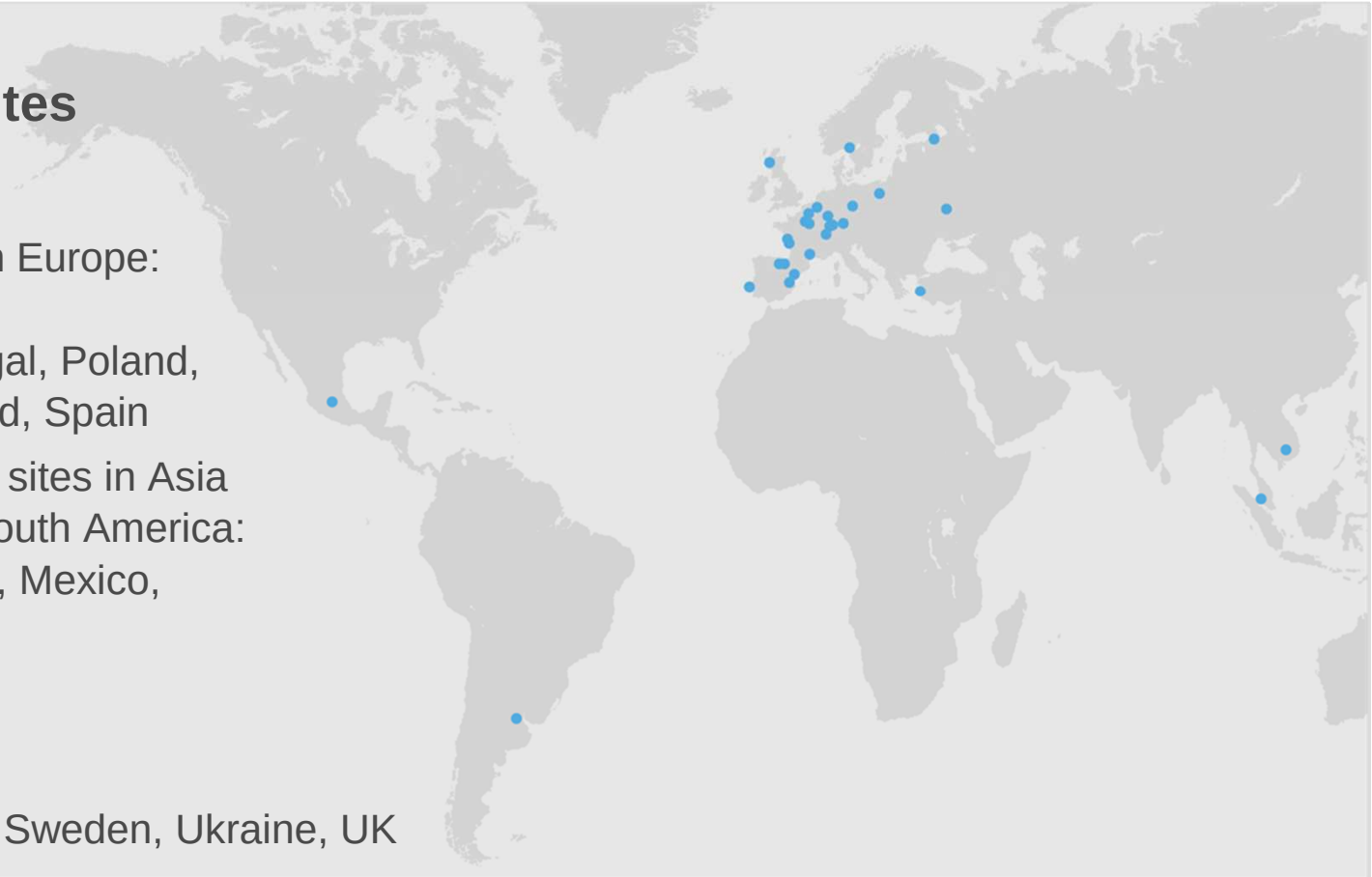
International Presence

- **26 production sites in 13 countries**
  - Leading network in Europe: Germany, France, Netherland, Portugal, Poland, Russia, Switzerland, Spain
  - Further production sites in Asia and Central and South America: Malaysia, Vietnam, Mexico, Argentina



- **Sales Offices**
  - Germany, France, Sweden, Ukraine, UK

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Products & Services

- Gravure cylinders for Flexible Packaging, Tobacco and Decorative printing
- Cylinders for Security printing
- Embossing cylinders
- Technical cylinders (special applications)
- Flexo Plates and Sleeves
- Cylinder bases, Light weight cylinders and Sleeves

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True to its origins

Headquarters of the family-run company in Kippenheim

- Research and Development
- Janoschka Academy (internal and external trainings)
- Basis for standardized processes, KPIs, etc.
- Investment, purchasing, administration

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APE
asiapacific
engravers

Janoschka in the Asia-Pacific Region

janoschka

APE
asiapacific
engravers

APE Malaysia

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APE asiapacific engravers

APE Malaysia

- Located outside of Kuala Lumpur
- 12.000 cylinders per year
- Artwork & Reproduction
- Electromechanical engraving (Hell)
- DLS Laser Line

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APE
asiapacific
engravers

APE Vietnam

janoschka

APE
asiapacific
engravers

APE Vietnam

- Located in Ho Chi Minh City
- 30.000 cylinders per year
- Artwork & Reproduction
- Electromechanical engraving (Hell)
- Think-Lab technology
- Base making

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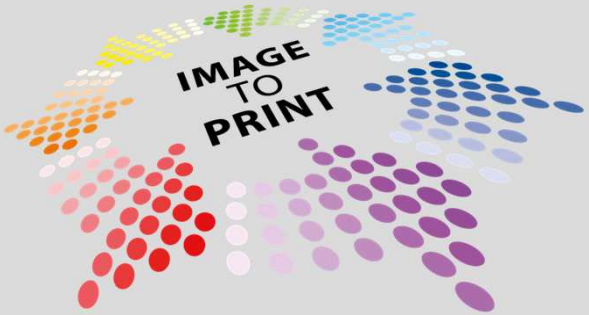
Trends & Innovations in cylinder manufacturing in Europe

Rudi Weis-Schiff
Managing Director



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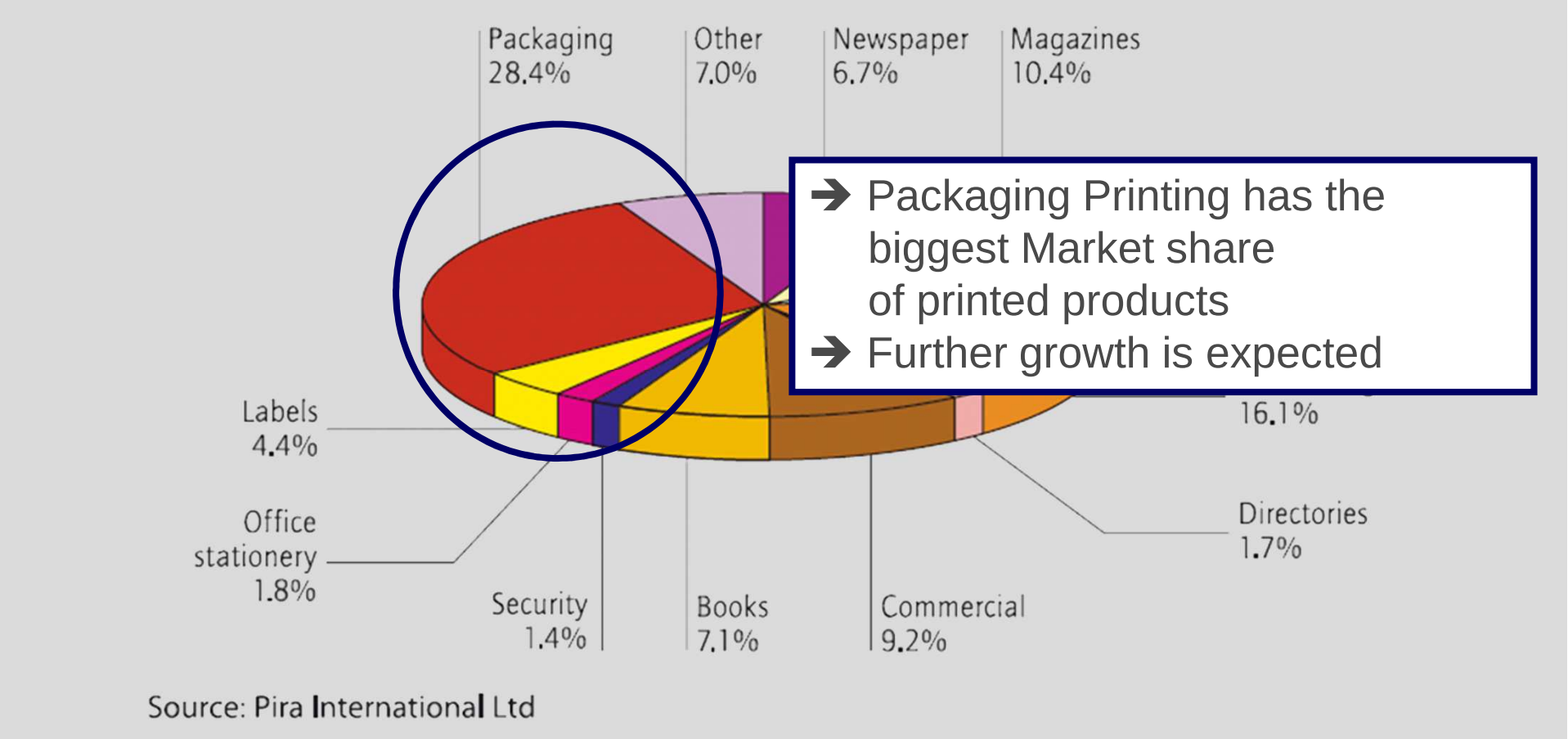
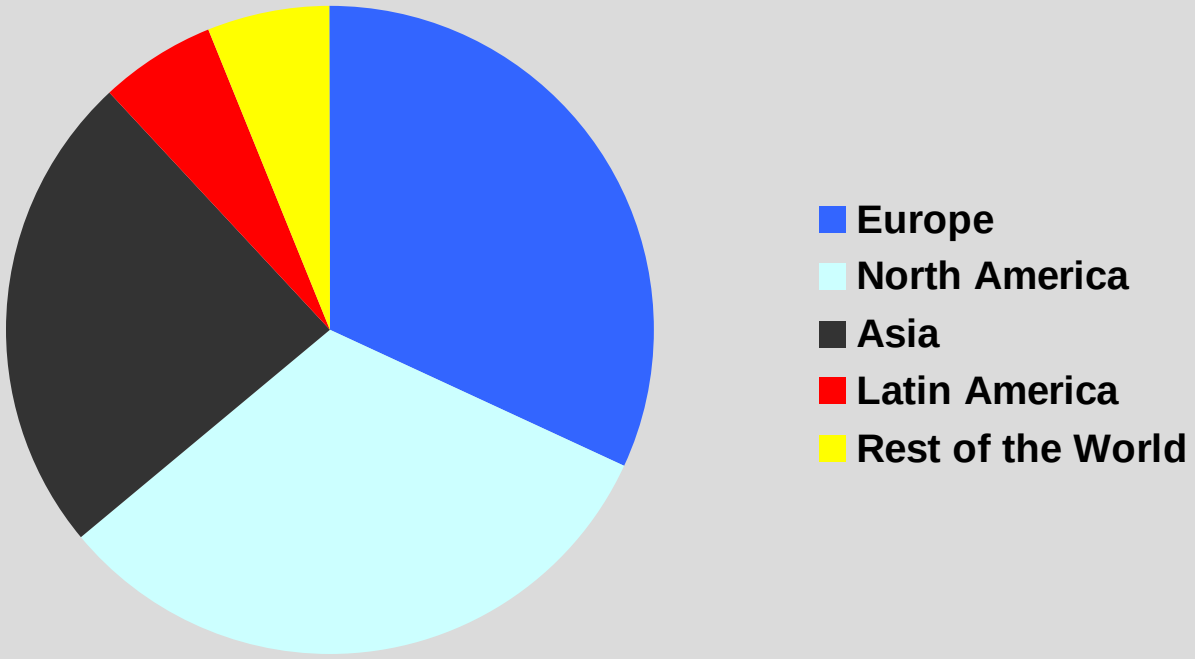
Shares of „printed“ products



➔ Packaging Printing has the biggest Market share of printed products

➔ Further growth is expected

Packaging markets in regions



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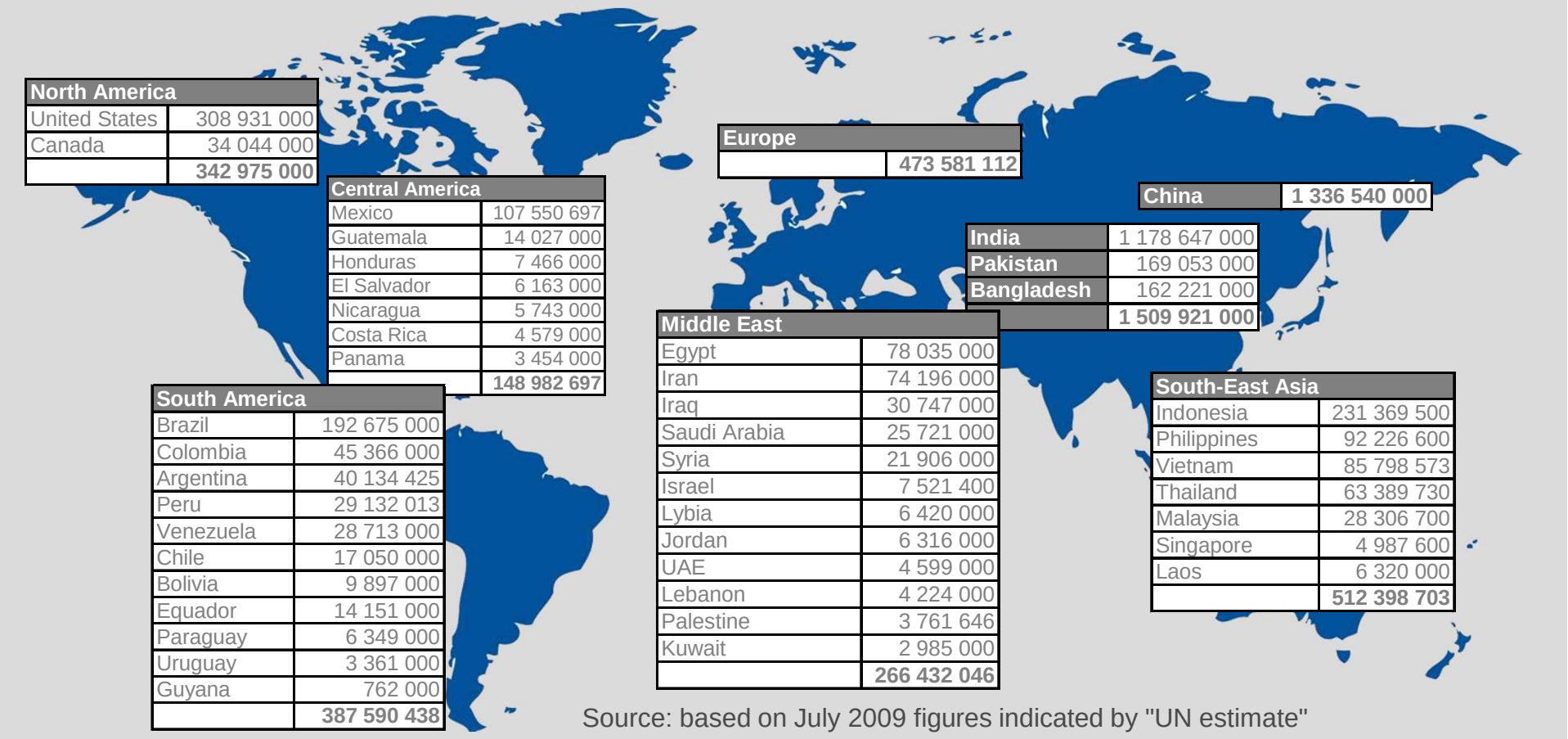
The population of the world is currently 6.810.400.000



North America	
United States	308 931 000
Canada	34 044 000
	342 975 000

Central America	
Mexico	107 550 697
Guatemala	14 027 000
Honduras	7 466 000
El Salvador	6 163 000
Nicaragua	5 743 000
Costa Rica	4 579 000
Panama	3 454 000
	148 982 697

South America	
Brazil	192 675 000
Colombia	45 366 000
Argentina	40 134 425
Peru	29 132 013
Venezuela	28 713 000
Chile	17 050 000
Bolivia	9 897 000
Equador	14 151 000
Paraguay	6 349 000
Uruguay	3 361 000
Guyana	762 000
	387 590 438

Europe	
	473 581 112

Middle East	
Egypt	78 035 000
Iran	74 196 000
Iraq	30 747 000
Saudi Arabia	25 721 000
Syria	21 906 000
Israel	7 521 400
Lybia	6 420 000
Jordan	6 316 000
UAE	4 599 000
Lebanon	4 224 000
Palestine	3 761 646
Kuwait	2 985 000
	266 432 046

China	1 336 540 000

India	1 178 647 000
Pakistan	169 053 000
Bangladesh	162 221 000
	1 509 921 000

South-East Asia	
Indonesia	231 369 500
Philippines	92 226 600
Vietnam	85 798 573
Thailand	63 389 730
Malaysia	28 306 700
Singapore	4 987 600
Laos	6 320 000
	512 398 703

Source: based on July 2009 figures indicated by "UN estimate"

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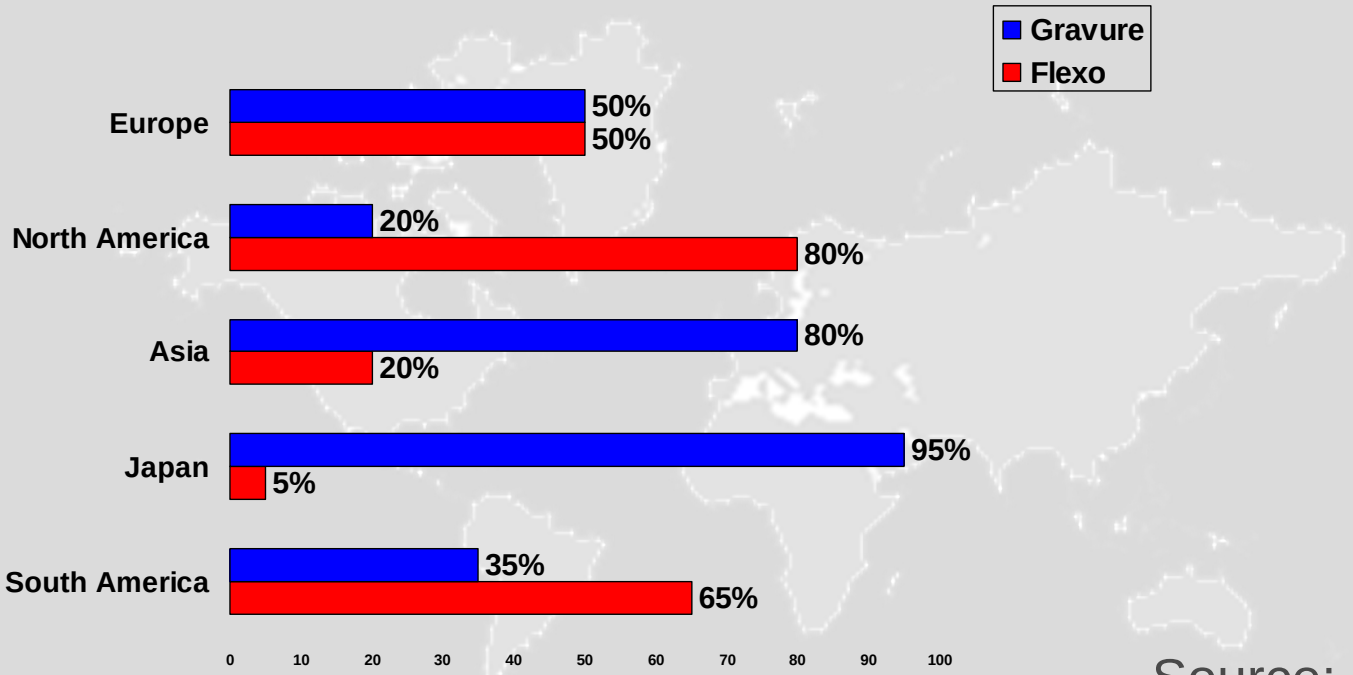
Market share: gravur ⇆ flexo



Source: ERA

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Market trends – our experience in Europe

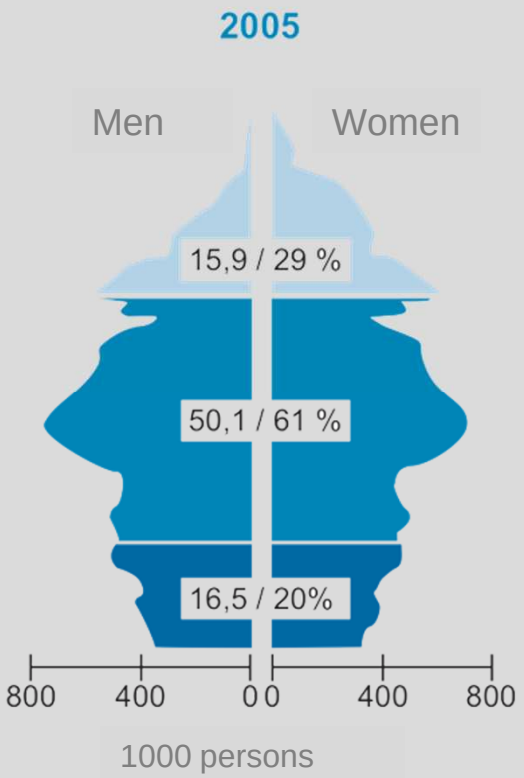
Insights into FMCG*

packaging requirements

in **Europe**

* FMCG = Fast moving consumer goods

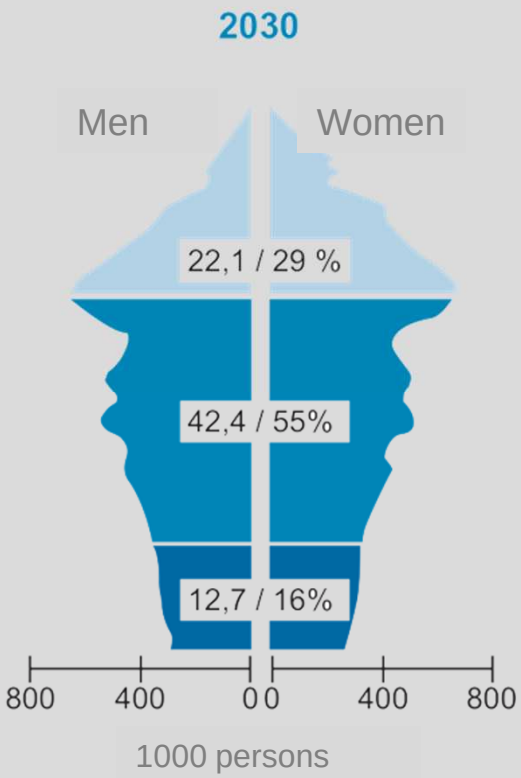
Insights: FMCG packaging requirements in Europe consumer changes - demographics



65 years and older

20 – 64 years

0 – 19 years



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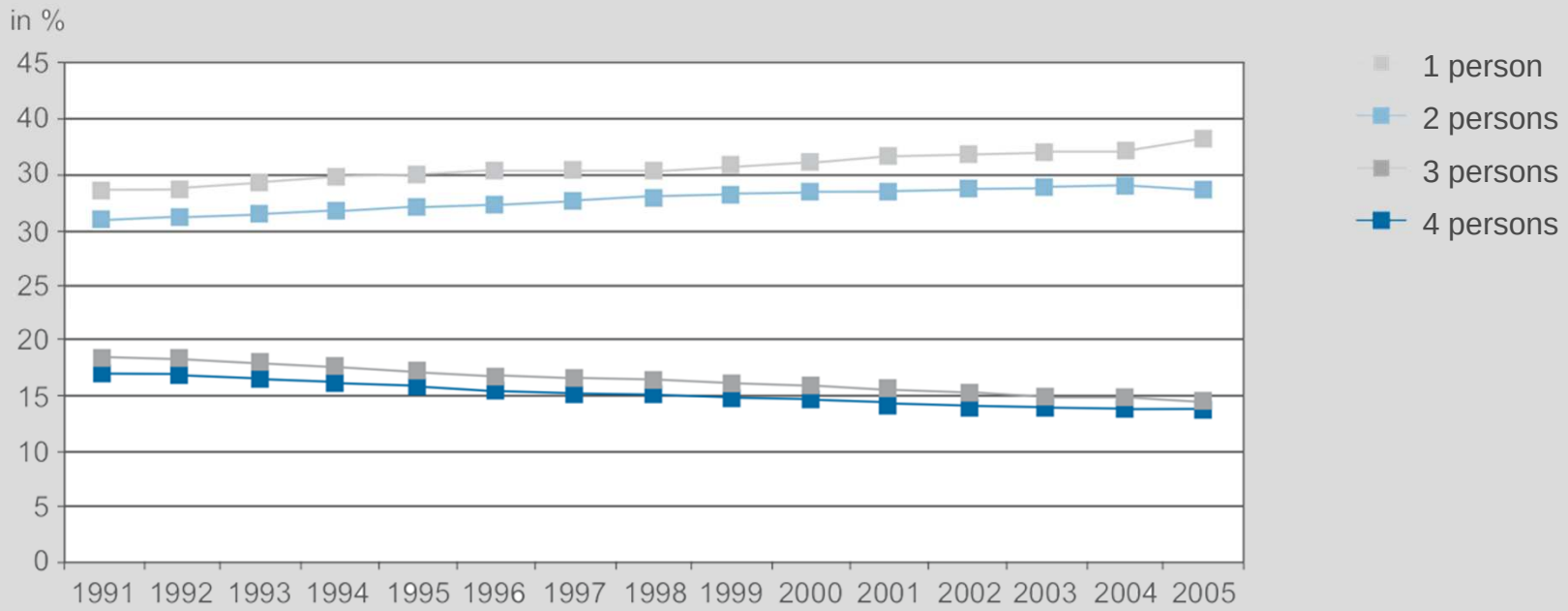
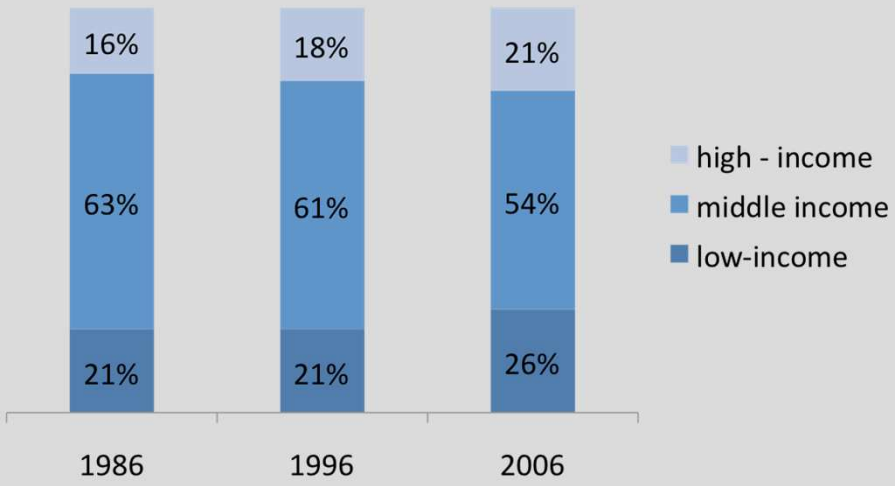
Insights: FMCG packaging requirements in Europe consumer changes - household size



Evolution of „person per household ratio“ in Germany

Insights: FMCG packaging requirements in Europe

Consumer changes – spendable income



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Insights: FMCG packaging requirements in Europe

Consumer changes – target group classification

A few examples…

- WOOF (Well off older folks)
- DINK (Double income no kids)
- LOHAS (Lifestyle of health and sustainability)
- ...

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FMCG market trends

Environmental trends

reduce

reuse

recycle

“carbon footprint”

“biodegradable”

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FMCG market trends

„Recycle“

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Insights: FMCG packaging requirements in Europe

Market Evolution

up until the 60s

introduction between 60s an 70s

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Insights: FMCG packaging requirements in Europe

Brand concentration in the supermarket

Sensory overload!

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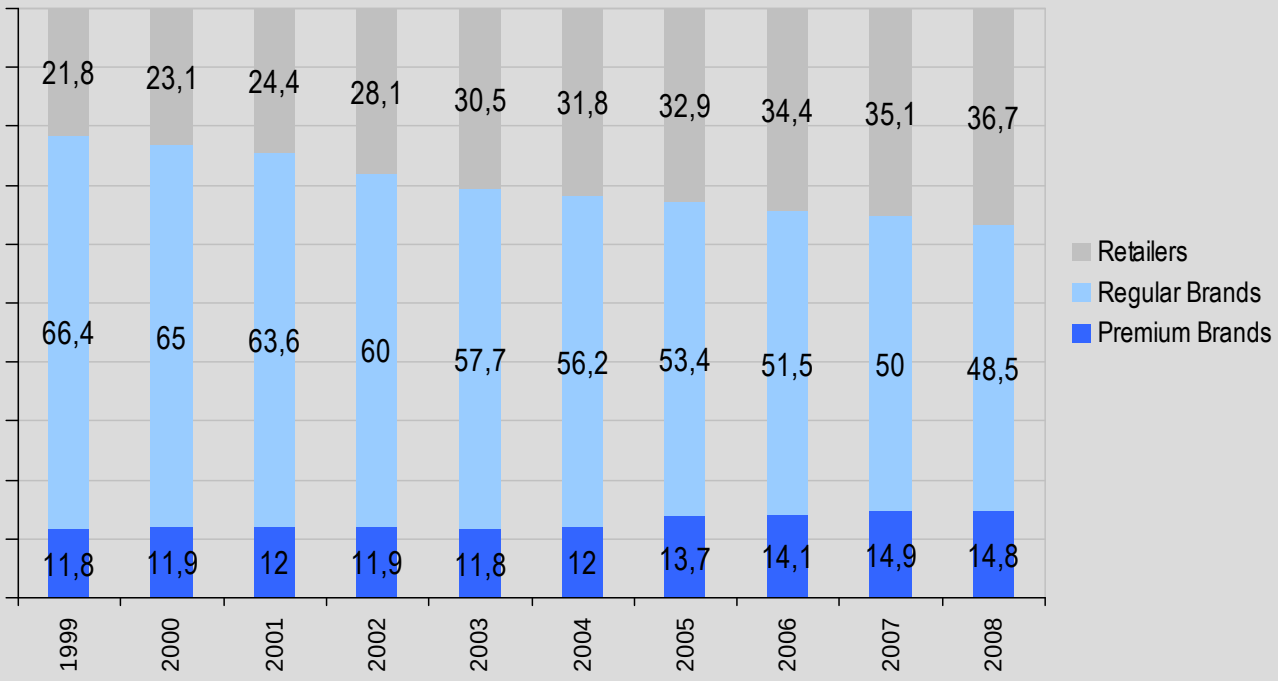
Retailers gain market share, brands loosing ground

Daily used products – Market development in %



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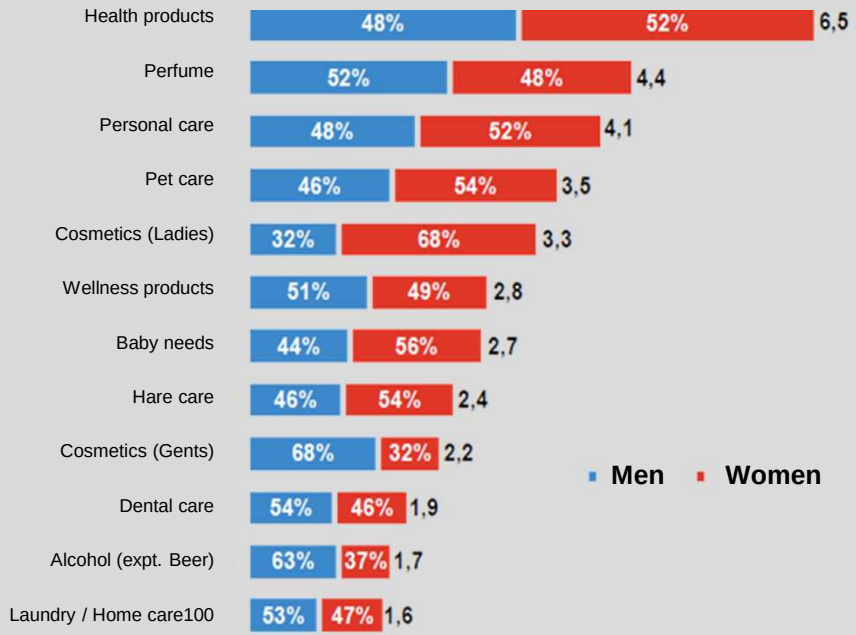
FMCG market trends - Internet Shopping

FMCG internet purchases

…online shoppers within the last 12 Months in %



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Packaging is the most important communication tool…

The first moment of truths…

- 1,6 seconds...

is the average time to make a purchase decision at the “point of sale”

KERITING RASA
AYAM
GORENG
KORNET
GRATIS
3.600
3.600
MIGELAS

KERITING RASA
AYAM
GORENG
KORNET
GRATIS
3.600
3.600
MIGELAS

PANGTOA
PANGTOA
붕어
싸만코
붕어
싸만코
요맘때
요맘때
요맘때
요맘때

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Packaging is the most important communication tool…

- 1,6 seconds...

is the average time to make a purchase decision at the “point of sale”

- 60% of all purchases are un-planned
- 60% → the price
- **60% for packaging and product presentation**
- 74% of all purchases
  are decided on the point of sale

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Packaging „is the single biggest driver of sales increases in the world.“

– Muthar Kent, CEO of Coca Cola

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Insights: FMCG packaging requirements in Europe

Diversification – private labels vs. premium brands

private labels

premium brands

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Each product is only as good as its packaging…

- individual appearance prevents from forgery
- protection against forgery has become a major topic
- innovations and new technologies are required to do so!

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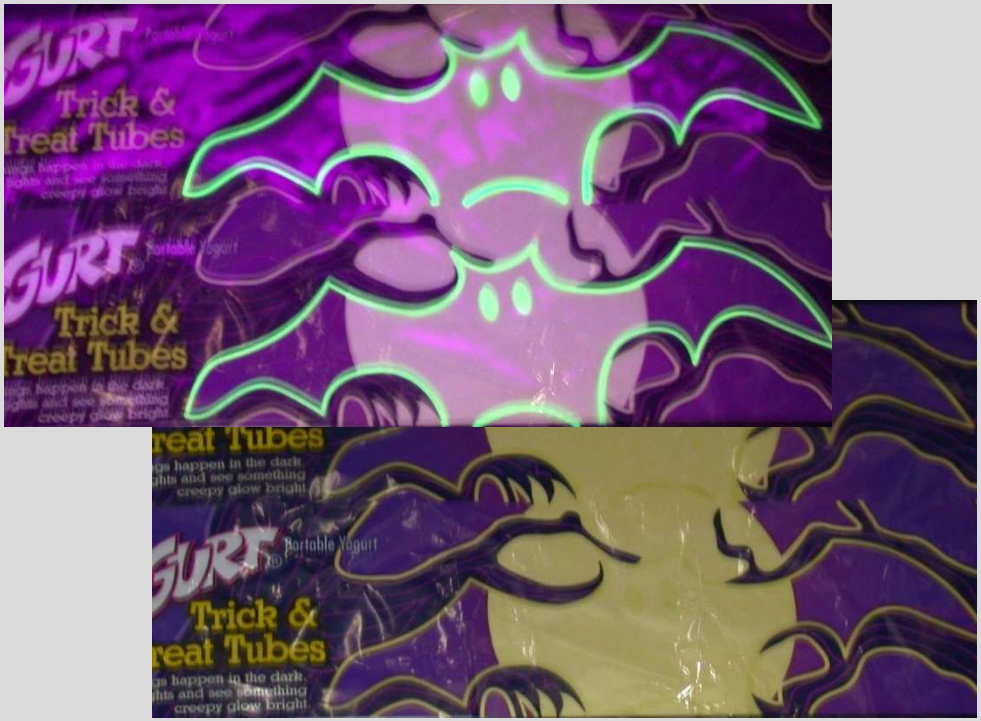
Each product is only as good as its packaging…

- innovation and new technologies help to create new products & marketing ideas

NIGHTGLOW

Special printing inks with phosphorescent pigments give your packaging a lasting glow



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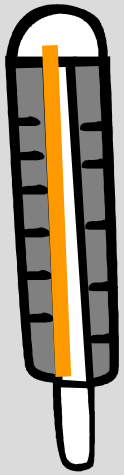
Each product is only as good as its packaging…

- Temp-control:

  Reversible thermo-chrome inks

These are printing inks which are sensitive to temperature and react to different temperature ranges by changing color.



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These facts & figures influence the global packaging market

We need to be:

1. better
2. faster
3. cheaper

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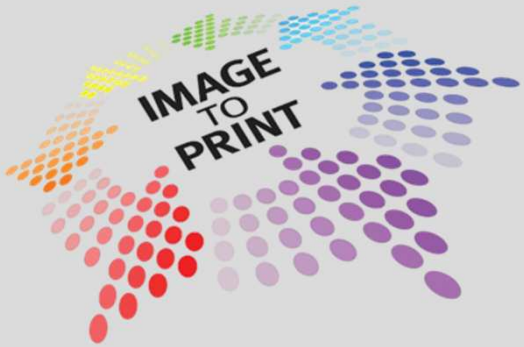
And how does all this relate to:
“state of the art cylinder manufacturing”?



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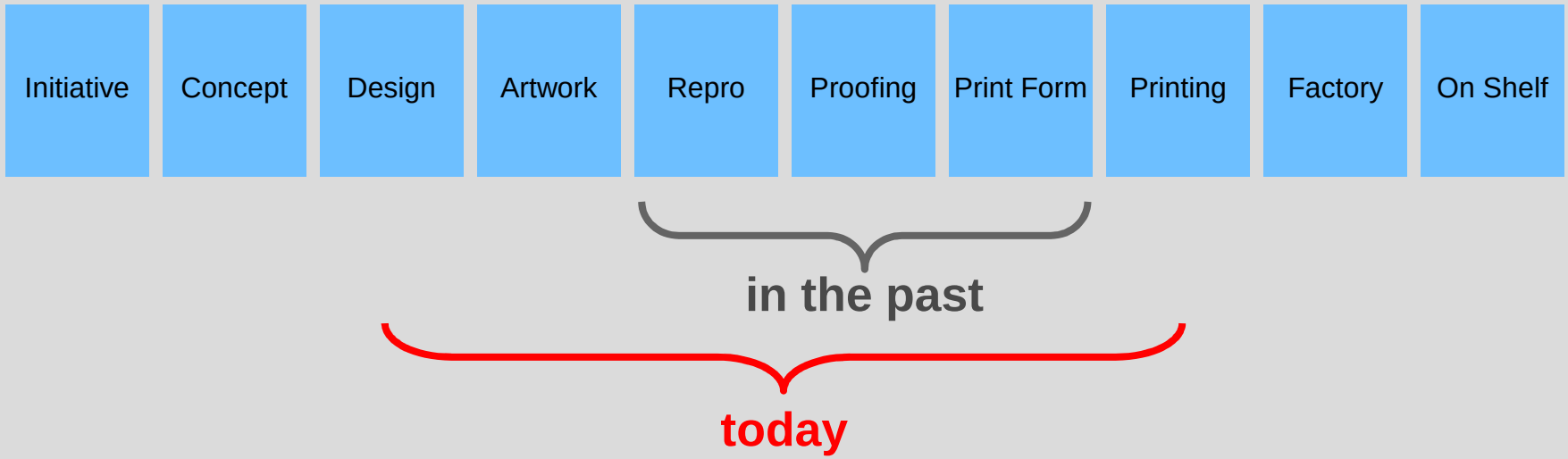
Process ownership in the print supply chain



➔ Enlargement of the process ownership

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Brand management

- Brand management (all processes)
- Design consulting (feasibility)
- Artwork creation
- Color separation (reproduction)
- Workflow-tools and project management
- Central archiving
- Additional services

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Janoschka network

Janoschka has artwork & repro houses in various different countries across Europe, Asia and Latin America

- 18 dedicated on-sites
- more than 60 Remote-Proof installations throughout our Network
- Same language, same culture

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Fast moving consumable goods

"The identification and recognition of a product is **the most important asset** of the brand".

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Fast moving consumable goods

Different printing results, for ever what reason, make customers quite unhappy…

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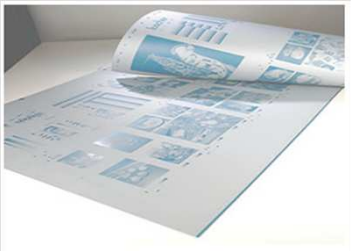
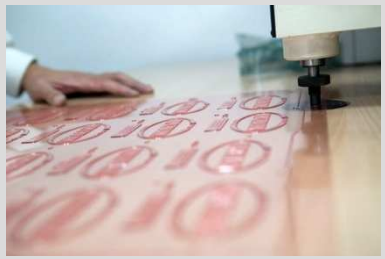
Our portfolio

Therefore we offer graphic services and printing tools
for all printing technologies





- Offset
- Gravure
- Silk screen
- Flexo

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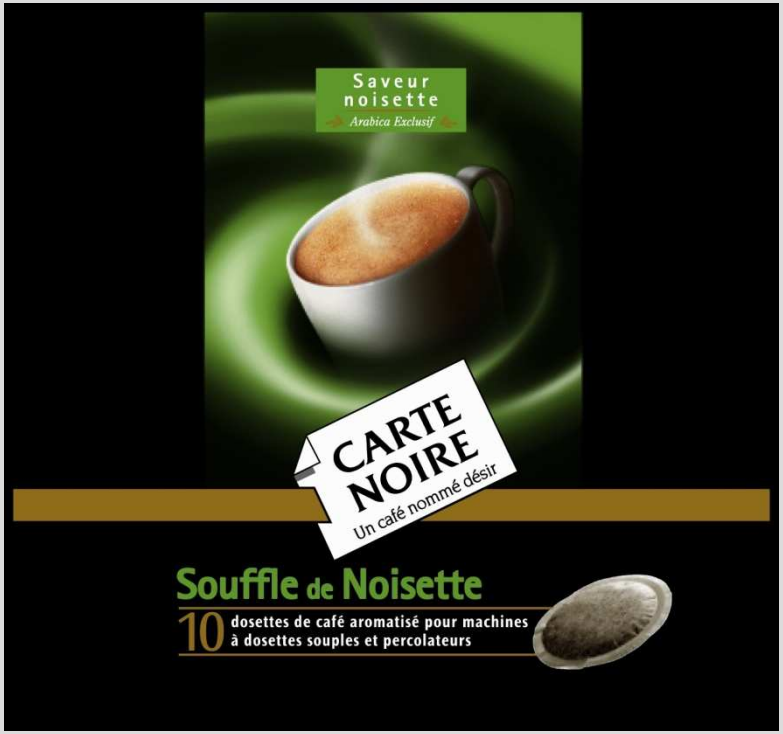
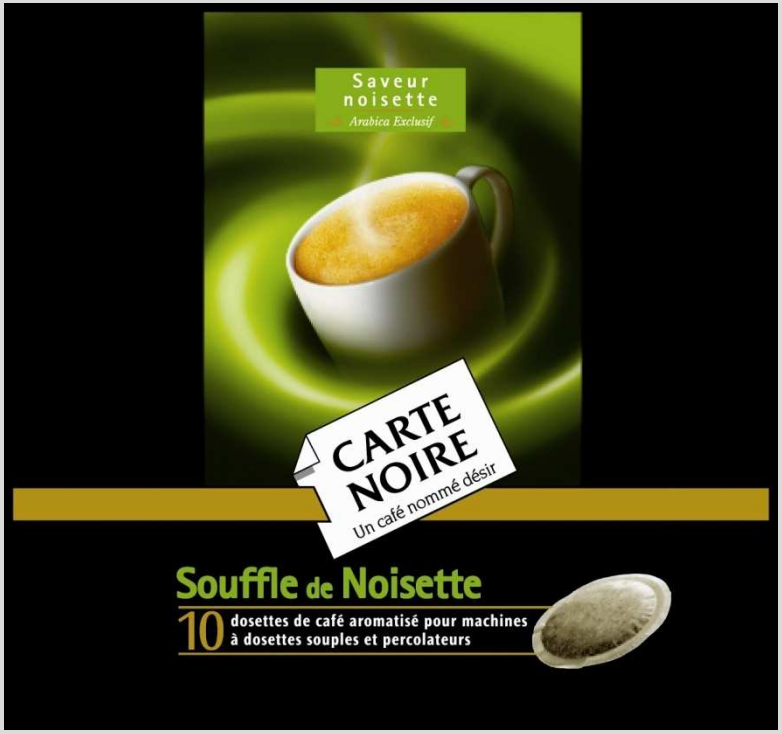
Significant difference in color are not accepted anymore



Approved color-target



Print-run

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Print Color Management (PCM)

PrePress knowledge

- Customized parameters, individual fingerprints
- Dedicated profiles
- Specific production software / colour management requirements

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Print Color Management (PCM)

Perfect use of new technologies
and software which is now available

- Simulate the printing results
- Show marketers only what you can achieve

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Impact on the printing result

- Different printing Inks
- Different substrates

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Impact on the printing result

But also different printing machines, processes and different machine settings have big influence on the printing result

- Type of machine
- Number of colors
- Printing speed
- Impression rollers / pressure
- Viscosity
- Doctor-blade setting
- etc.

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Print Color Management (PCM)

«finger-print» test form

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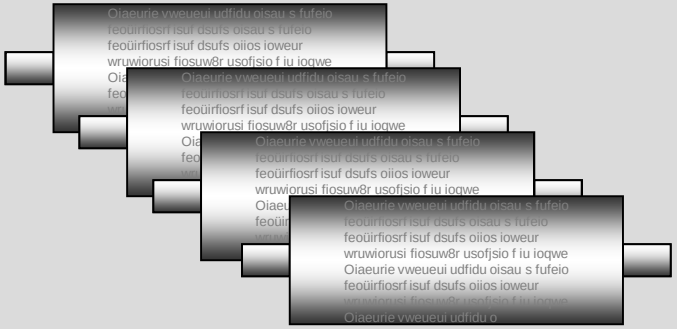
Engraved set of cylinders

YMCK



YMCK

Standard parameters

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Print run | printing result under perfect conditions

Printing machine with standard settings

- Printing speed
- Doctor blade setting
- Ink density and viscosity
- Substrates
- etc.

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Print Color Management (PCM)

The values of „optimum print result“ will be spectrophotometrically captured and the profile will be generated

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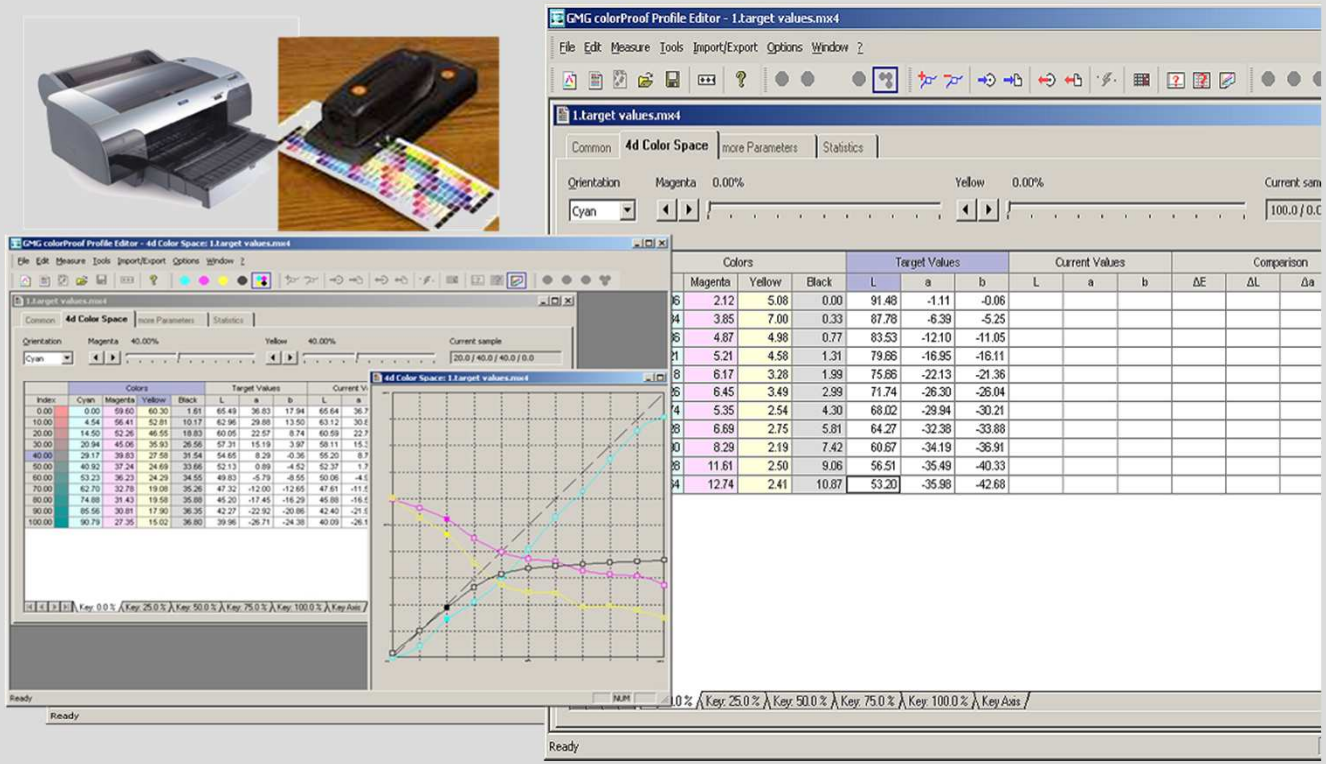
Print color management (PCM)

Generating a «printer specific profile»



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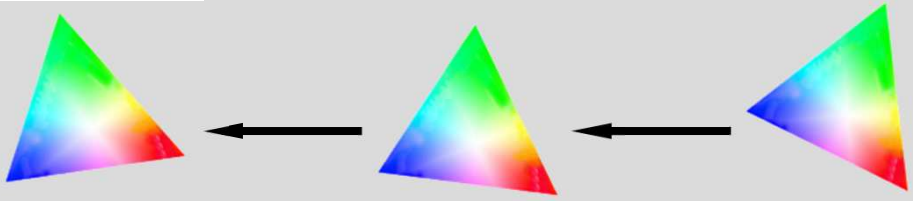
Print color management (PCM)

“Turn things around and do the work upfront…” !

- printing machine with optimum settings
- Digital-proofers with “printer specific” profile…
- “Printer specific” repro



Converted by software for color treatment

Printed with digital proofers

Industrial Printing

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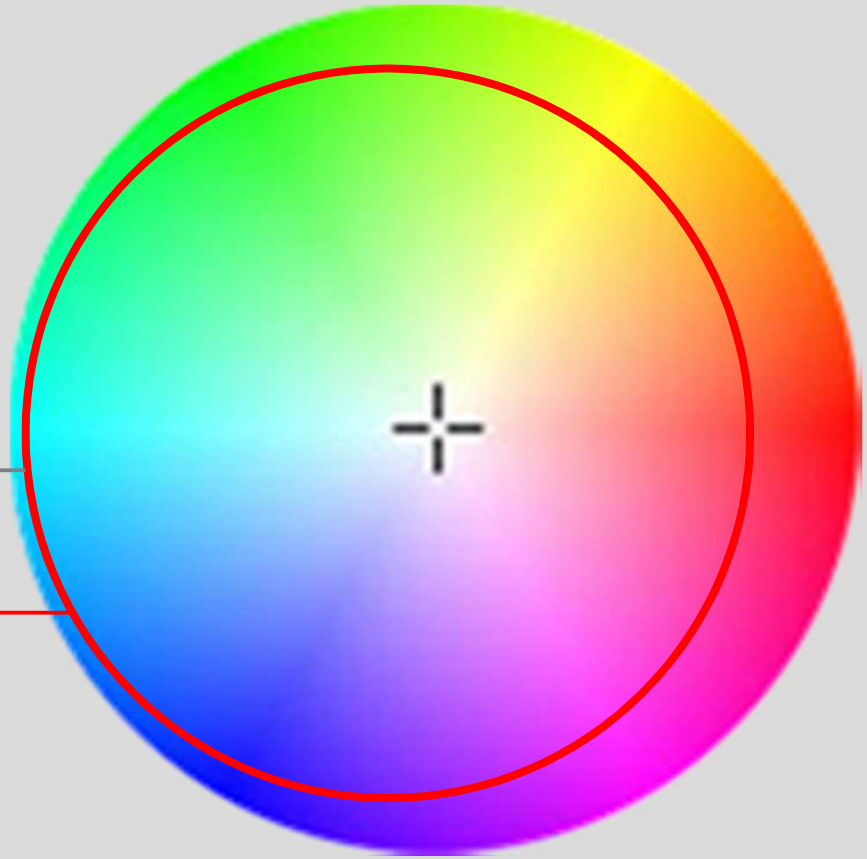
Print color management (PCM)

The Result:

The digital target-proof and the printed result **will match!**



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Print color management (PCM)

Our Target: Target proofs and printing results will match!

Original Target

Printing Results

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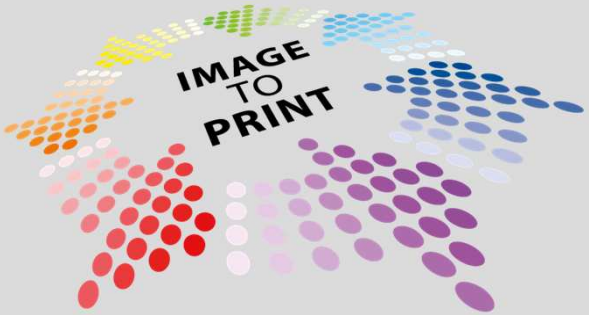
Developments in cylinder making

Rudi Weis-Schiff
Managing Director



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Automization: streamlined cylinder production

- 24 h
- 7/7

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Developments

Electromechanical cylinder engraving

Development of faster engraving heads:

➔ 3500 Hz ➔ 8000 H ➔12000 Hz*

*Beta test

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Developments

Electromechanical cylinder engraving

XtremeEngraving

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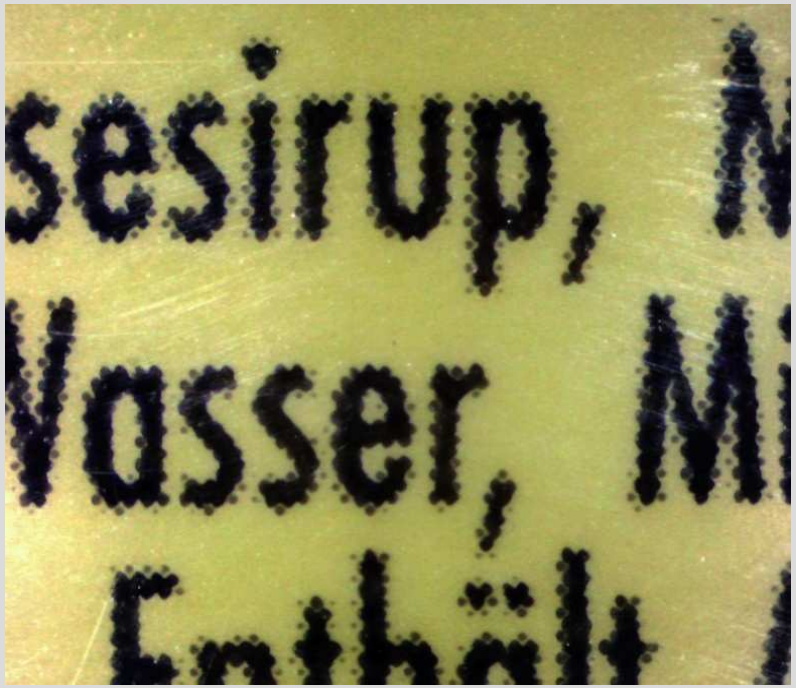
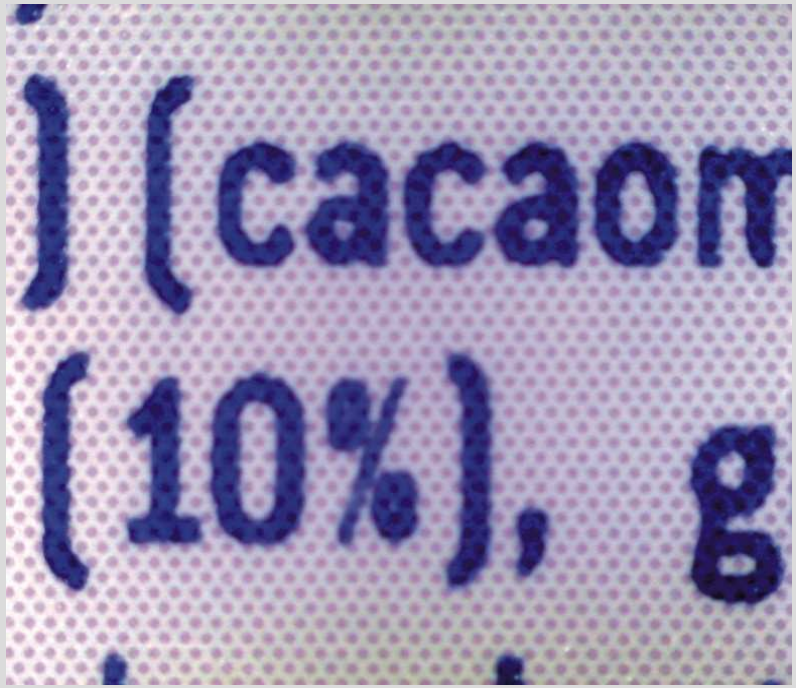
Conventional engraving





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Developments

Electromechanical cylinder engraving

Cell-guard III

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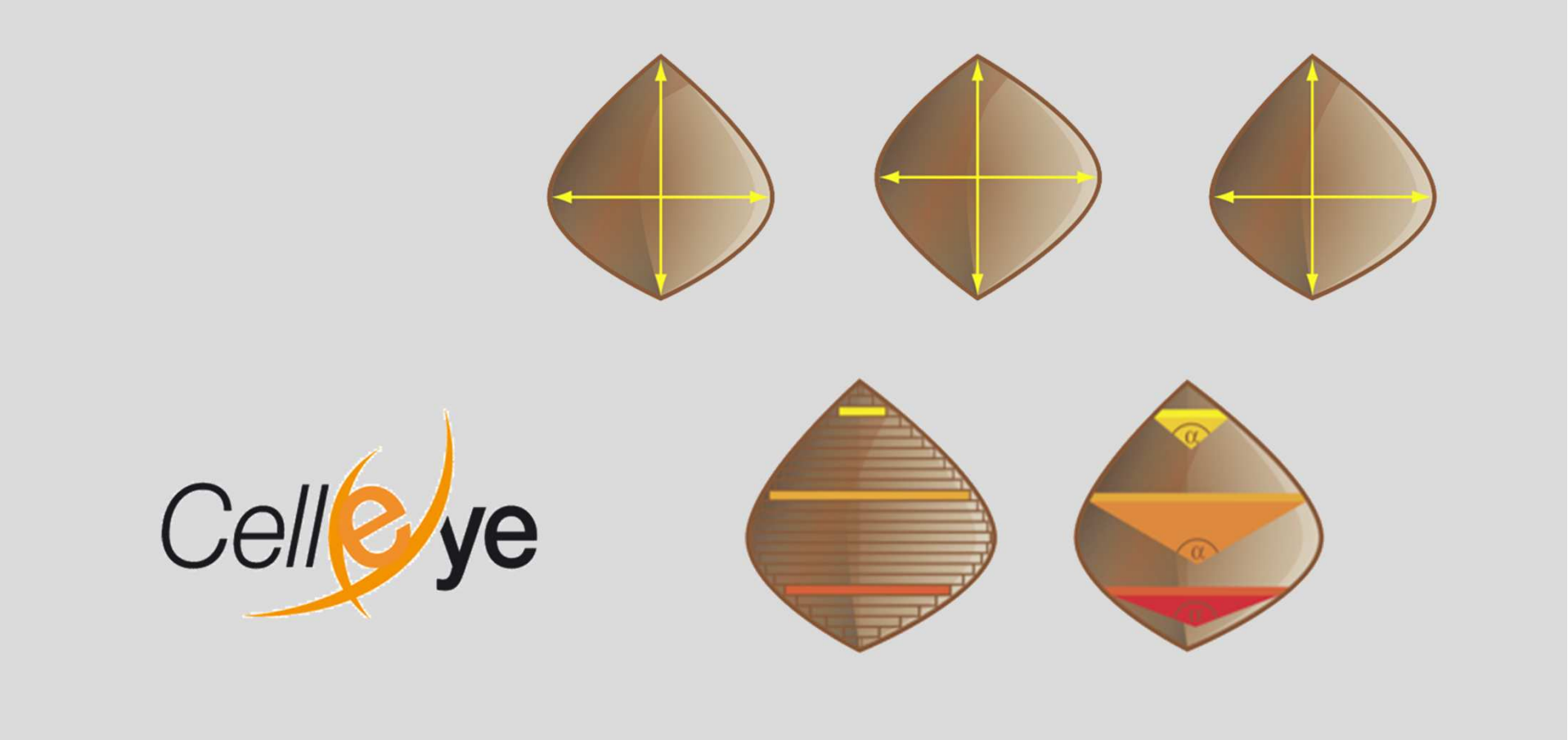
Standard test cut | Volume control



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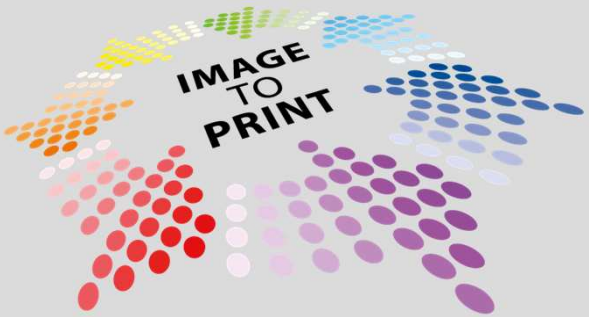
The future is Laser…

Rudi Weis-Schiff
Managing Director



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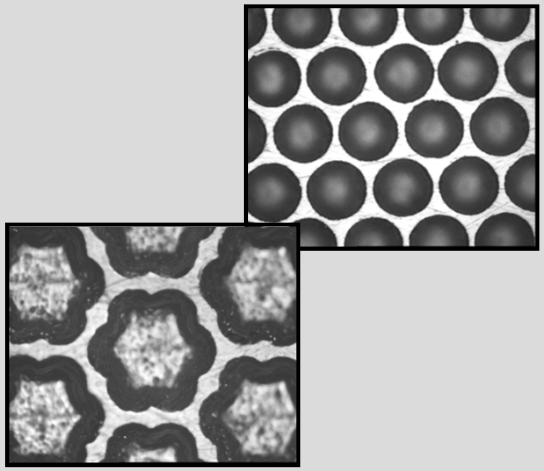
Laser engraving with Daetwyler DLS (Direct Laser System)

…has become
the ultimate reference
for quality…



Today, Janoschka produces
more than 20.000 Laser cylinders per year
in Germany, Russia and Malaysia,
Argentina & Mexico.

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Development of Laser technology

Janoschka is the only service-house who has all 4 Laser technologies available:

- Daetwyler DLS
- Hell Cellaxy
- Digilas
- Think Lab

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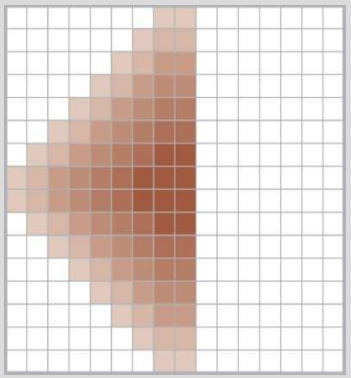
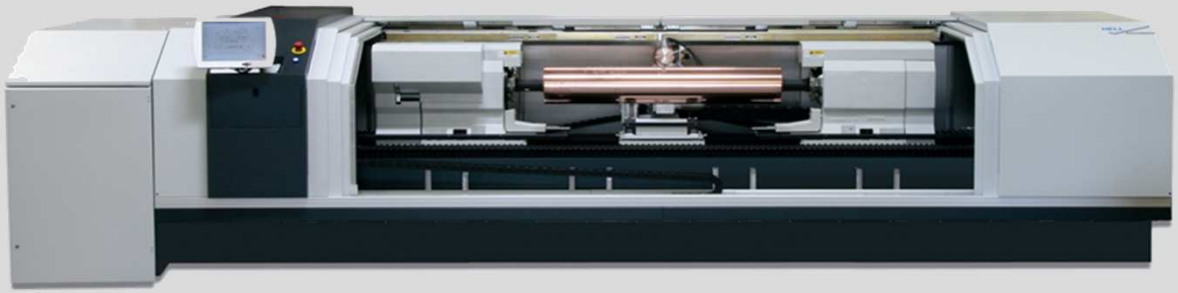
Laser engraving | Hell Cellaxy

- Direct laser engraving
- Similiar to Offset ImageSetter (Cells are created by multiple exposing lines)
- Engraving in copper
- Beta test





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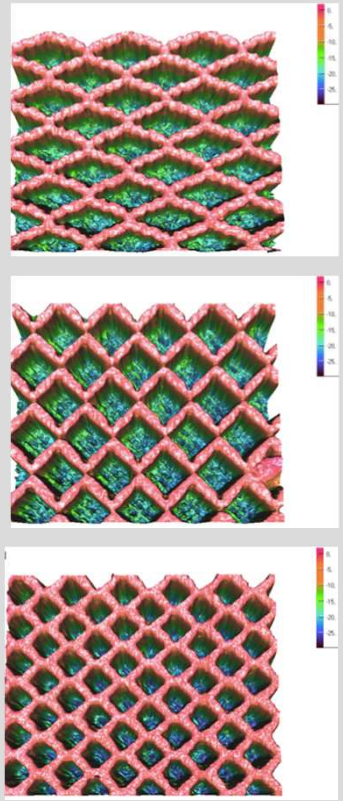
Hell Cellaxy | engraving in copper



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DIGILAS | Exposition Laser

- Fiber laser in a one beam- or multiple beam configuration or imaging specially coated gravure cylinders.
- Dot size and resolution < 10 µm
- Provides special screens, razor-sharp lines even at high quality level

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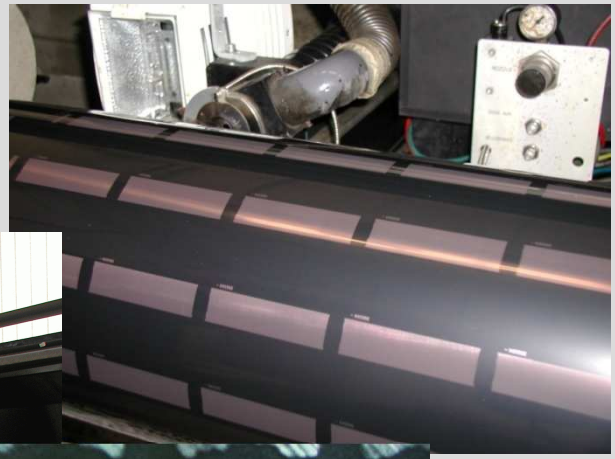
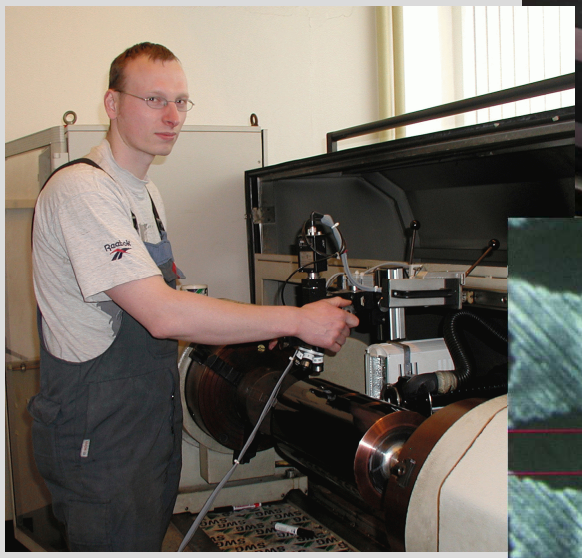
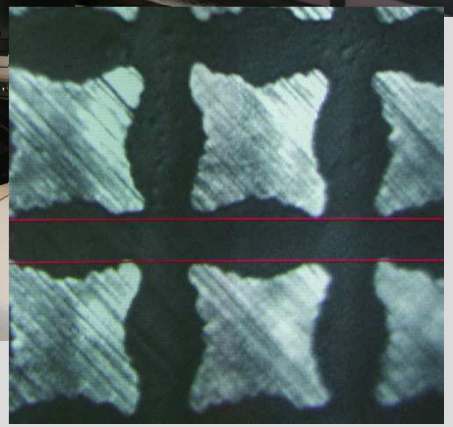
DIGILAS | Laser-engraving with YAG-laser



Laser Cylinder



Cylinder check



„pillow-shaped“ cell

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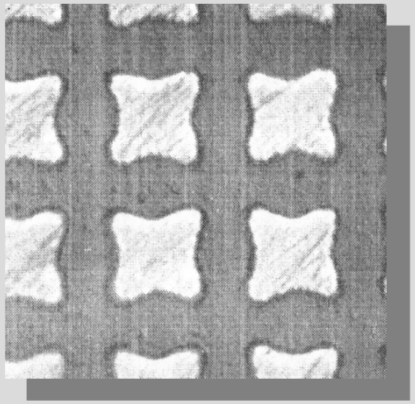
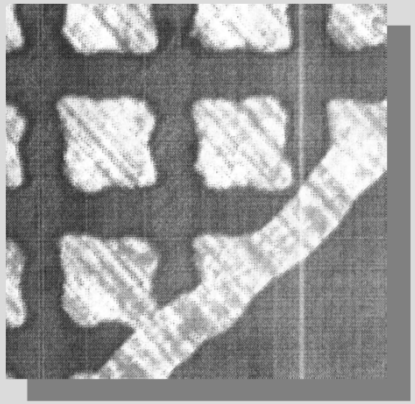
DIGILAS | special screens

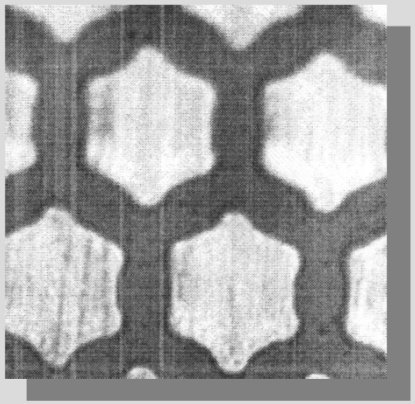
„Pillow“
shaped cells

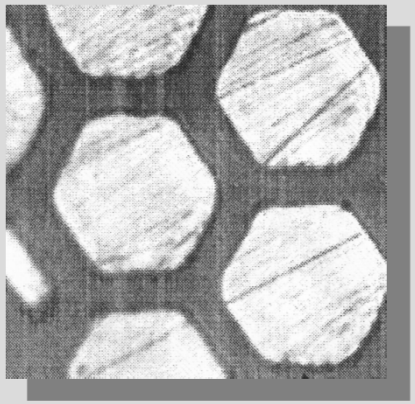




„Pillow“
shaped cells
with outline

Hexagonal
shaped cells





Hexagonal
shaped cells

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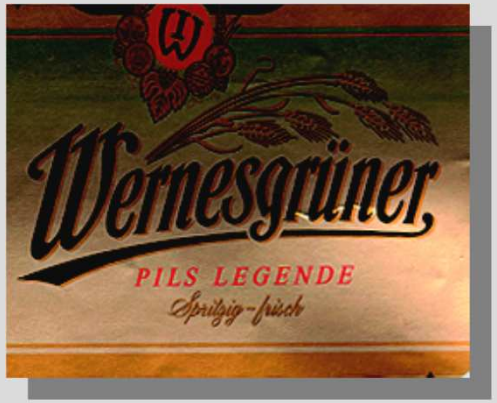
DIGILAS | "high resolution“ applications

Labels (with fine gold images)



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DIGILAS | “low resolution“ applications

- Hotmelt/ Wax
- Coldseal
- Laquer
- Primer
  exemple: Medical packaging
- Embossing cylinders
  for example: Acrylic cylinders for foam transfer (for wall paper)

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Embossing | Gaufrages

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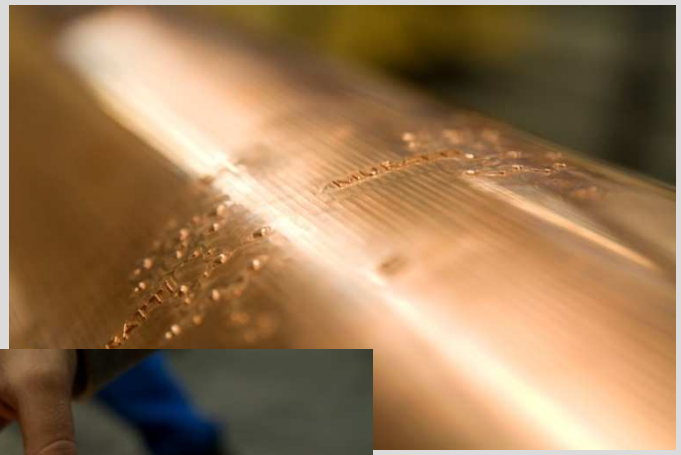
Technologies

- Milling
- Etching
- Photopolymer
- Direct Laser System in Polymer
- Direct Laser System in Zinc
- (other developments)



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Markets

- Tobacco
- Flexible Packaging
- Wall-Paper
- Automotive
- Textile
- Aluminum-foil
- Tissue
- Furniture
- Interiors

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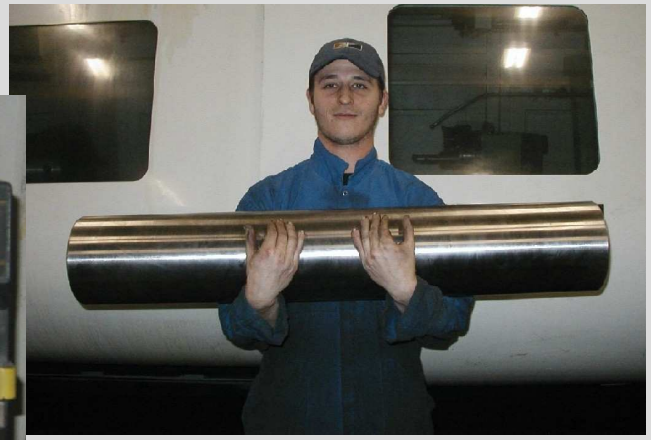
Cylight ®



Cylinder size:

face-width: 900 mm
Circumference: 600 mm
Weight: 28,2 Kg

➔ ~50% less weight…

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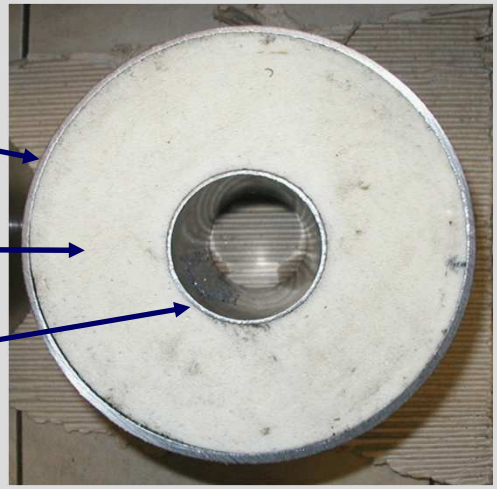
Cylight ®

Technology Concept of „Light-Weight“ Cylinders

- Thin steel pipe outside
- PU-Sandwich
- Thin steel-pipe inside



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Cylight ®

The advantages

- Ideal for small face-width (less than 1000 mm)
- Optimum weight (25 kg / Cylinder)
- Easy Handling
- 50% less weight, less transport costs
- less storage costs

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Cylight ®

More than 40.000 cylinders in the market.

Customer comments:

- „We reduced our set-up times significantly…”
- „Very easy handling…“
- „Far better working conditions…“
- „We can store on the same space
- about 1/3 more cylinders…“

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Cylight ®

Easy handling, even before printing

at manufacturing

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Cylight ®

Easy handling, even before printing

at proof-printing

Typical cylinder storage in Europe

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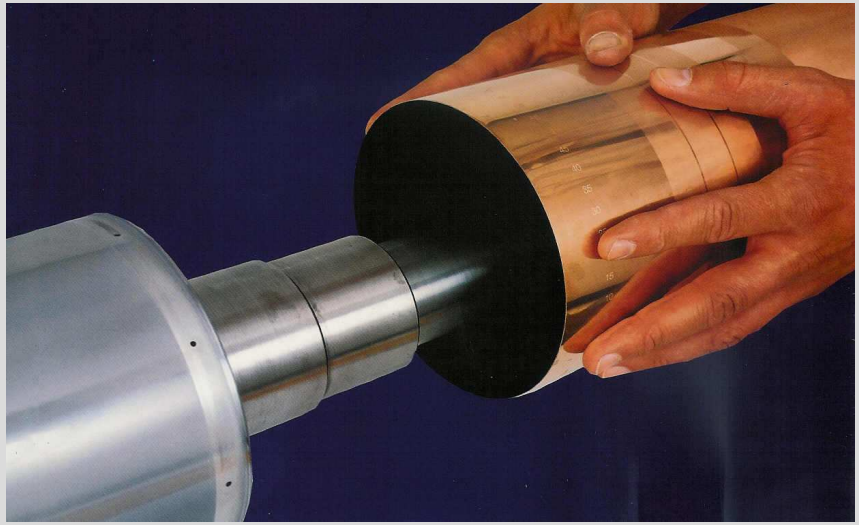
Sleeve technology

- Light weight cylinder solutions



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Sleeve technology

- Weight reduction of more than 90%
- Easy handling and shipping
- Easy storage

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Sleeve technology

- Easy, fast, cost effective
- but un-flexible if you need different diameters!

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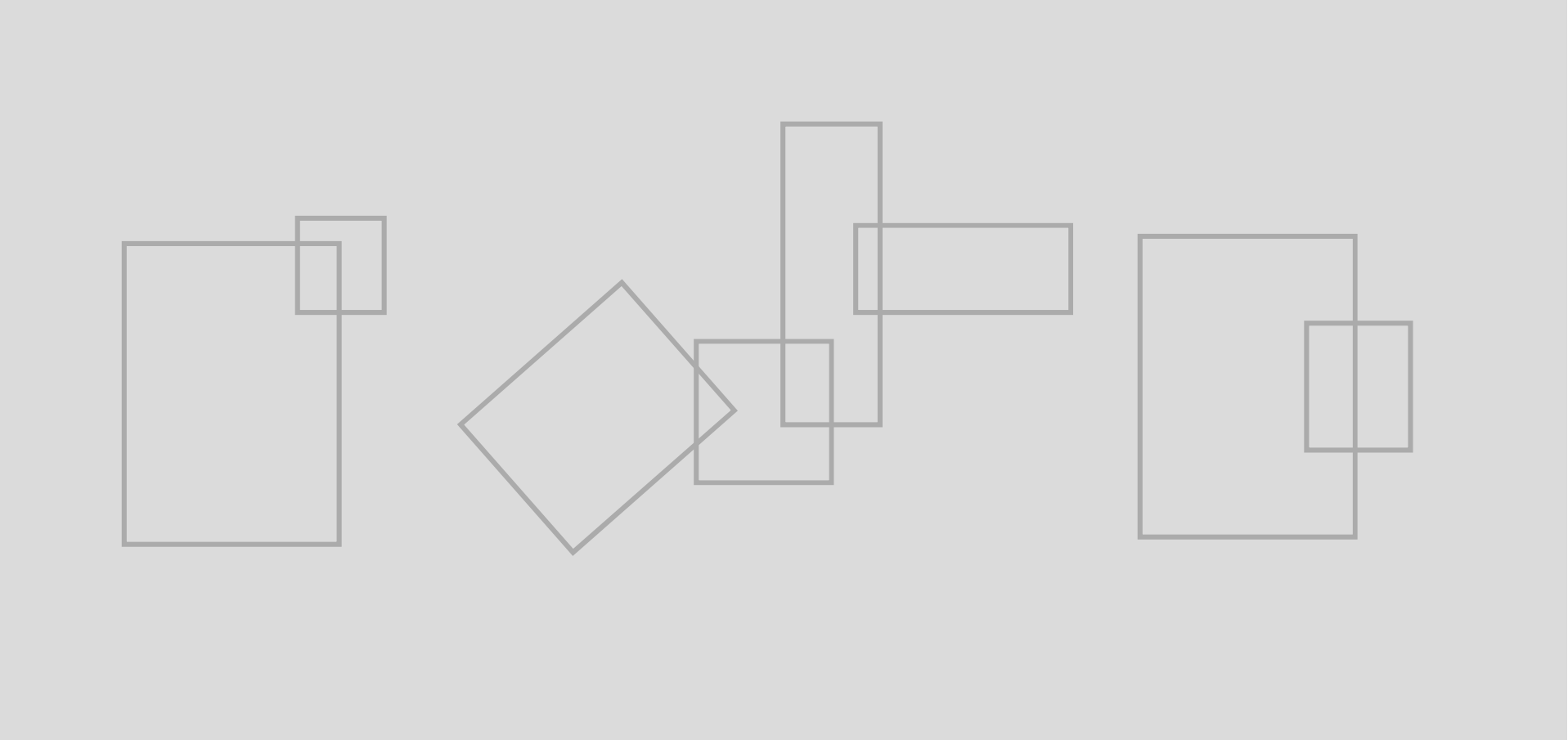
Innovation, Research & Development



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Innovation, R&D

Continues developments:

- in Laser Technology
- Light-weight cylinders and "sleeve systems"
- RFID – "Cylinder tracking"
- Color Management and profiling

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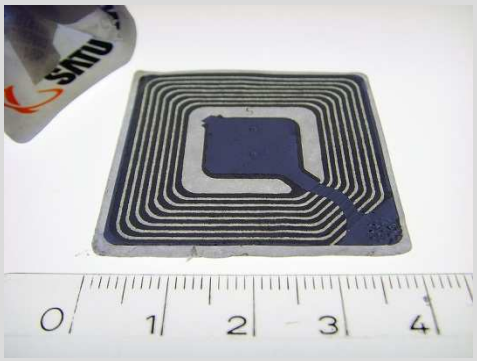
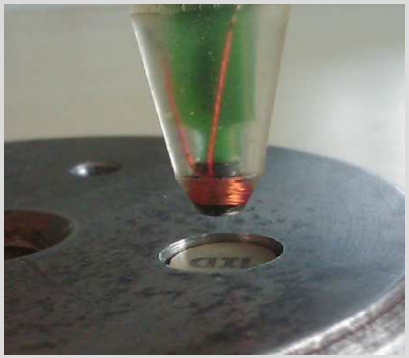
R&D - Innovations

- RFID - Cylinder tracking
- RFID = Radio Frequency Identification





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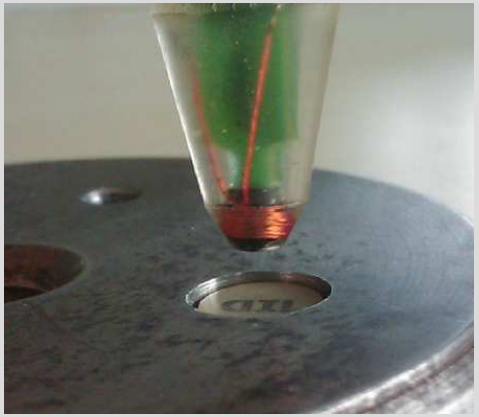
R&D - Opportunities for rotogravure

- Workflow and storage optimization
- Product Life Cycle
- Printing Costs savings
- Automatization of printing pre-settings (reduction of waste and setup time)
- Improved Process consistency:
  Print adjustments can be known before the job enters the press



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Protecting consumers I security features

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Facts

- The economic loss is estimated around 168 trillion dollar per year.
- Approximately 2000 children die per day because of counterfeit medicaments.

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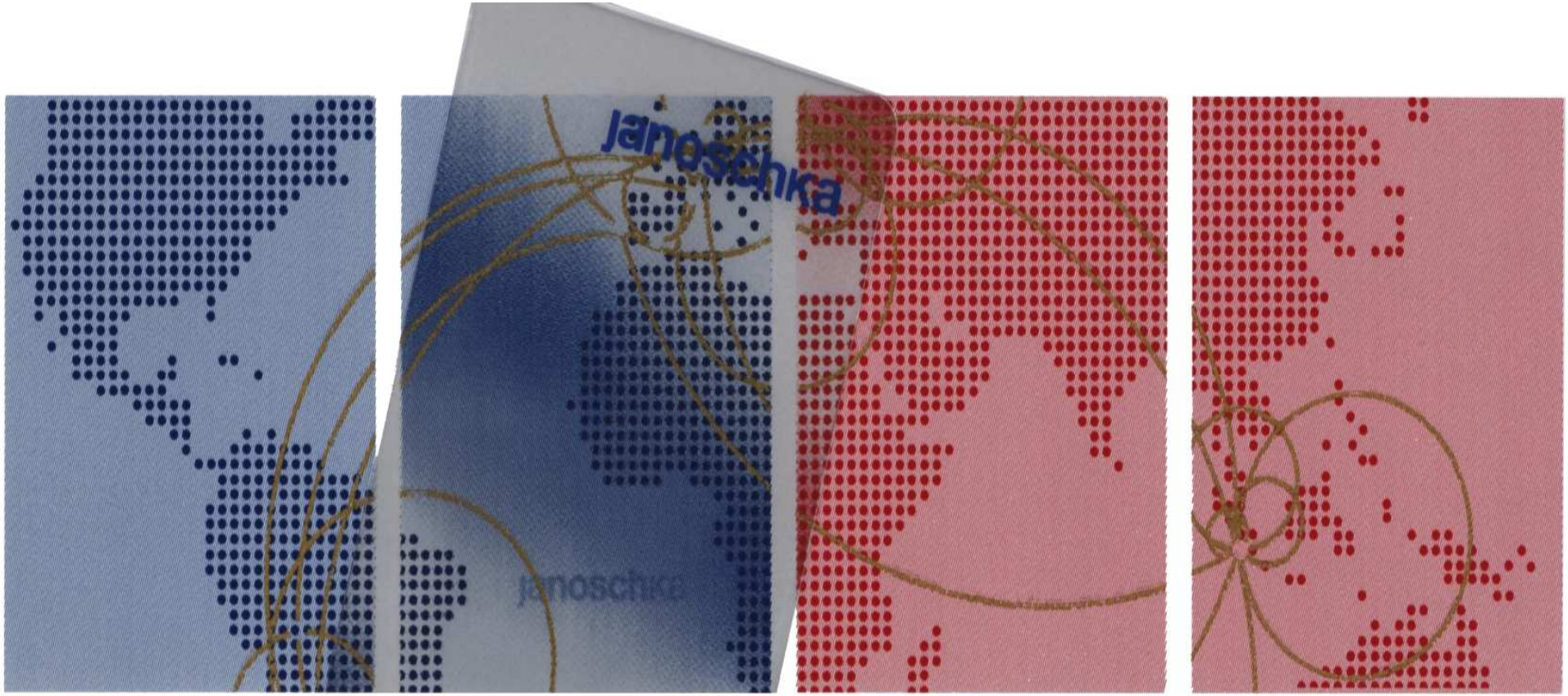
Security features I hidden images



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Security features I Luminescence color

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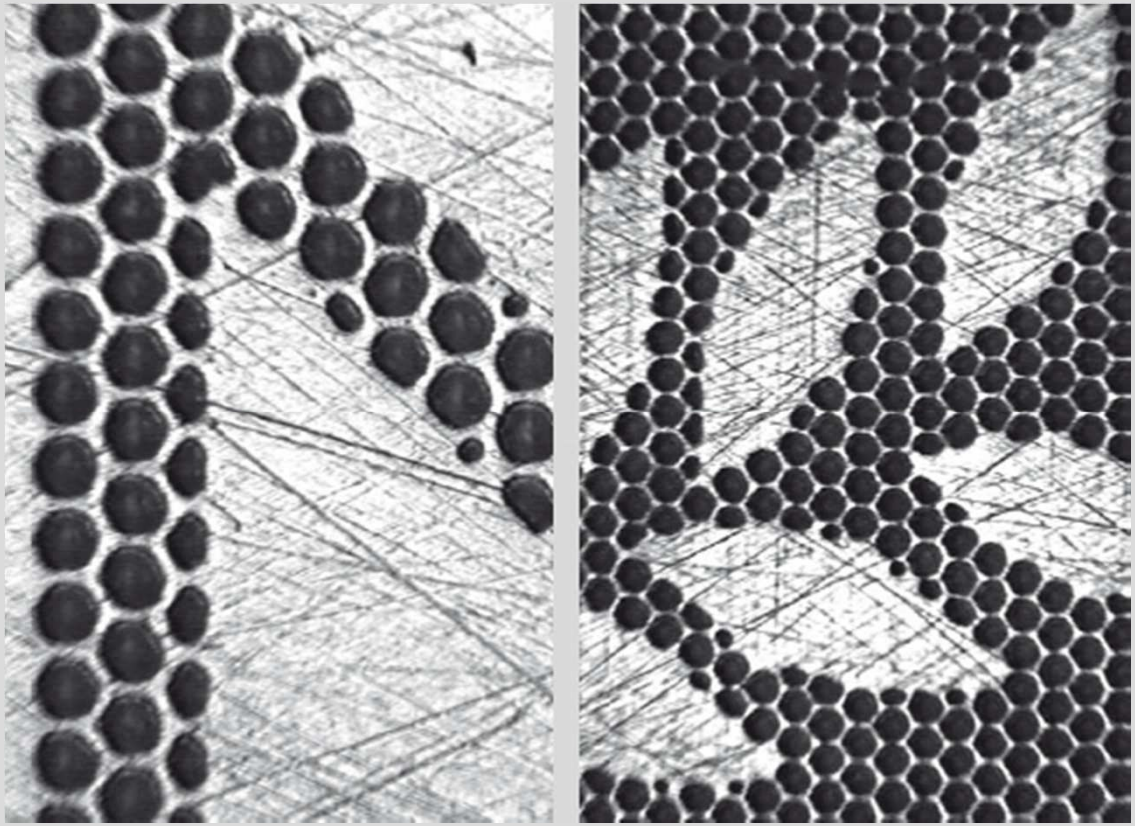
Security Features I Hi-Res Technologies



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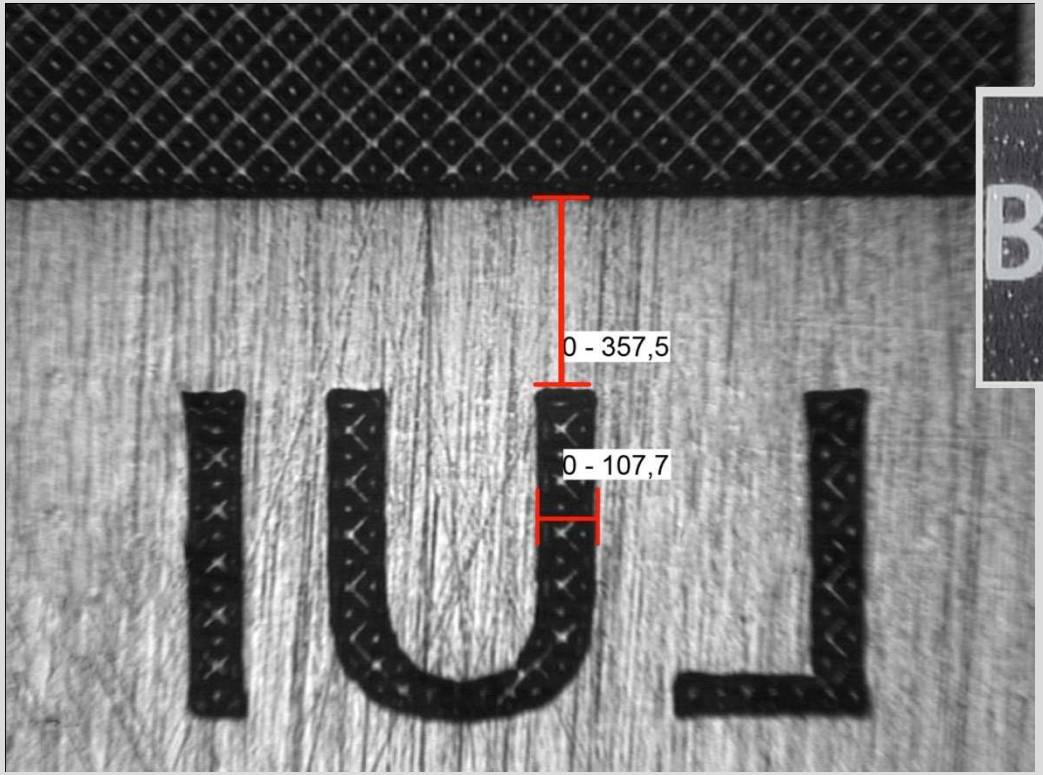
Security Features I Hi-Res Technologies



Screen-less types
with line sizes > 0,05 mm

Communication | Training

IMAGE TO PRINT

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janoschka insight

janoschka academy future leadership

Thank you for your attention

Rudi Weis-Schiff
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