

Outlining  
(a few provocative thoughts on)

# The Future of Package Printing

Prof. Dr. Martin Dreher  
HdM Media University of Applied Sciences  
DFTA Technology Center  
Stuttgart / Germany

## (A few provocative Thoughts on) The Future of Package Printing

- There are sponsors, but also potential derailers for package printing
  - Online sales? Integration in packaging lines? Data goggles? 3D printing?
  - + Packaging is physical! Expertise of package printers! Cost!
- A mind-opening journey up to the year 2050
  - Upcoming digital printing
  - Integration of printing into the packaging lines
  - Mass production in future
  - Impact of 3D printing and data goggles
- Where do we stand at all? Where do we go from here?

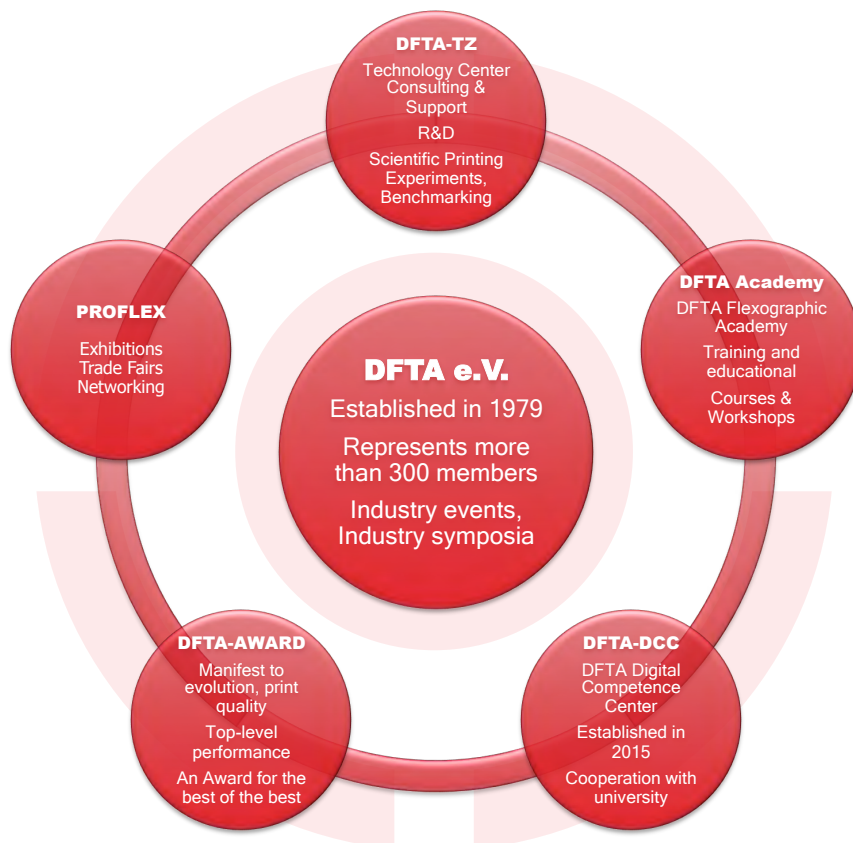
- Martin Dreher, Prof. Dr.
- DFTA Technology Center  
Scientific Director

and

HdM Hochschule der Medien  
Professor for Packaging Printing  
in the Packaging Engineering curriculum



- [martin.dreher@dfta.de](mailto:martin.dreher@dfta.de)  
[dreher@hdm-stuttgart.de](mailto:dreher@hdm-stuttgart.de)



# Uncertain Future?

- Future is always uncertain!

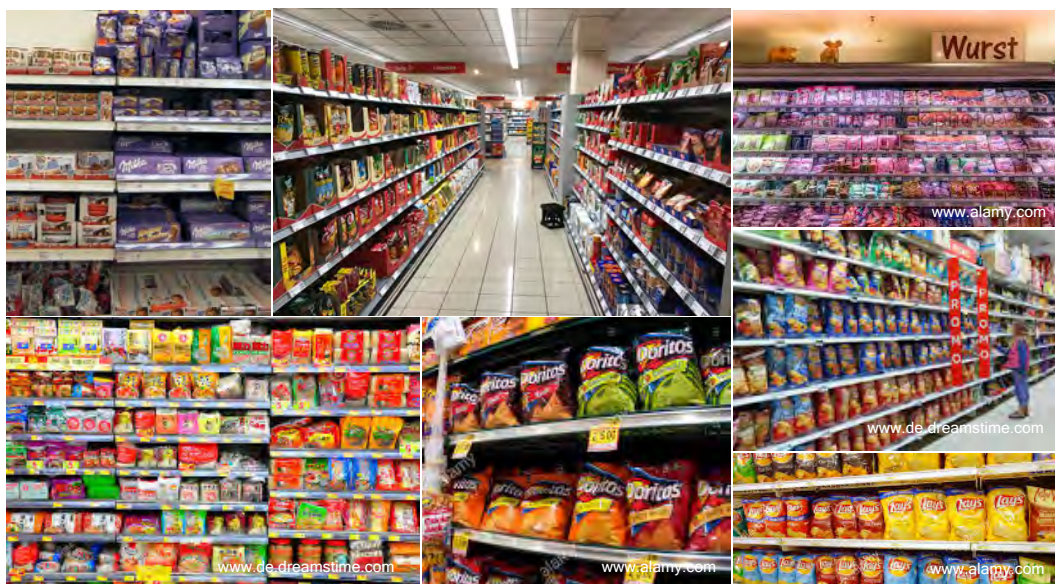


Future

- Here is some **Food for Thought** to manage your Future most effectively:



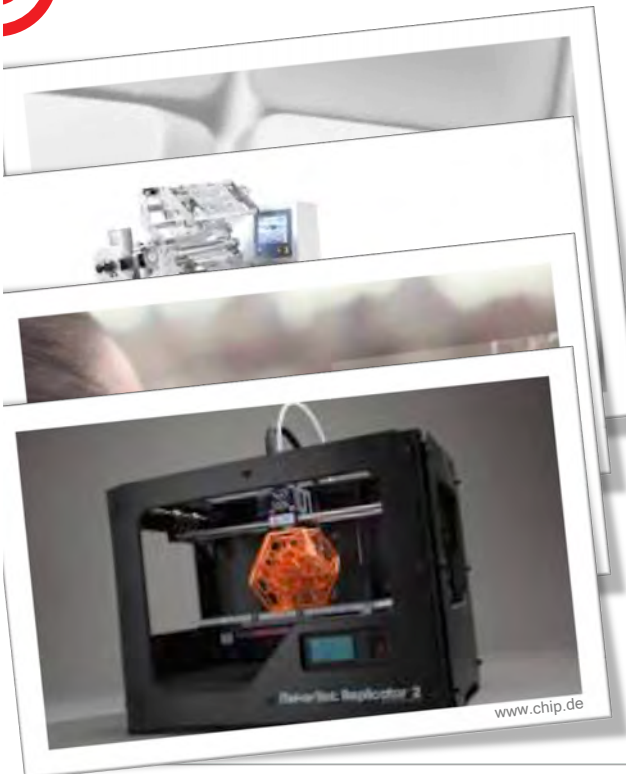
# Printed Packages - Defining the Scenario



- Please wait for a few minutes to learn about what this has to do with the Future of Package Printing



## Potential „Derailers“ for Package Printing

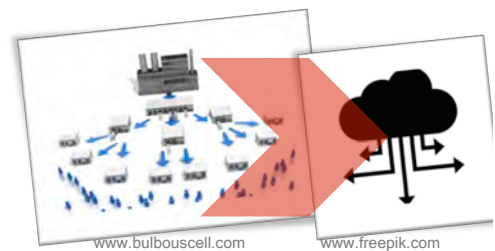


- Online-Purchases
- Integration of Printing into packaging lines
- Data goggles: No more surface decorations
- 3D-Printing of “everything” at home



## Potential „Sponsors“ of Package Printing

- No Transition from “Print & Distribute” to “Distribute & Print” as with commercial printing
- **Cost!**
  - Integration is costly and complex
  - Data goggles need separate identification of item
  - 3D printing is extremely more costly than mass production
- Expertise and Specialization of Players





## Roadmap of Package Printing (1) “2016”



- Concentration on Conventional Printing Method
  - Print Quality
  - Number & Character of Printing Inks: CMYK+“X”
  - (Minimum) Order Quantities
  - Lead Times
  - Flexibility
  - (Per-Item-) Cost
  - Etc.



## Roadmap of Package Printing (2) „2022“



- Concentration on Conventional Printing Method
- Digital Printing complementing
  - Smaller & smallest Order Sizes (Fragmentation)
  - Minimum Order Quantities
  - Pre-Press Cost
  - Lead Times
  - Obstacles persist!
    - **Packaging Requirements!**
    - Very few presses ww
- Will Online-Sales simplify Package Printing Graphics???
- Lesser no. of colours?
- Fixed Colour Palette? (7C rather than 4C+++)?



## Roadmap of Package Printing (3) „2030“



- Concentration on Digital Printing Method
- Flexography complementing
  - Remaining Large Order Quantities
  - MUCH better Per-Item-Cost
  - Colour Separation like Digital Printing!  
CMYKRGB?
- Massive Integration in Packaging Lines





## Roadmap of Package Printing (4) „2040“

- Package Decoration mostly integrated in Packaging Lines
- Digital and Conventional Printing complementing





## Roadmap of Package Printing (4) „2050+“

- **Surface decorations mostly redundant** through Data Goggles!
- Virtually **no more**
  - Printed packages
  - Printed walls of cars
  - Wallpaper
  - ...
- See “Matrix” Movies



# Roadmap of Package Printing (4a)

## „2050+“

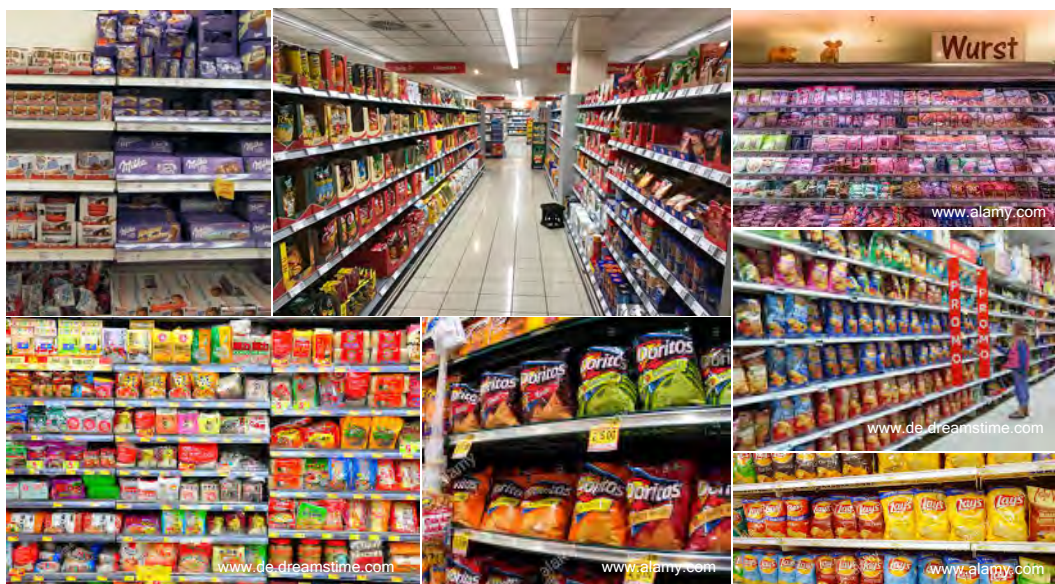
- We may all look like we WANT to look!



# Résumé

- Packaging Printing may not be everlasting, but ...
- It will be performed for quite a number of years to come - ...
- Flexography and Digital Printing in particular!

# Printed Packages - Back to Today



- A lot of this has undergone a change in the printing method used for decoration of the package! And there is more to come!



# HAND ON HEART, HAVE YOU NOTICED HOW MANY OF THESE PRODUCTS HAVE BEEN CONVERTED TO FLEXO OVER THE LAST YEARS?



## Flexography: Underdog - or rather Unsung Hero?

Flexo **Print Quality** is the key!

- No different from Offset or Rotogravure
- Much bigger colour gamut than Offset
- High halftone screen rulings (>100 L/cm / 254 lpi)



... Coupled with strongest INNOVATIVE CAPACITY, leading in

- Fixed Colour Palette Printing,
- Multi-channel digital Colour Management,
- Simplification of digital Colour Management,
- Linking with Digital Packaging Printing, etc.

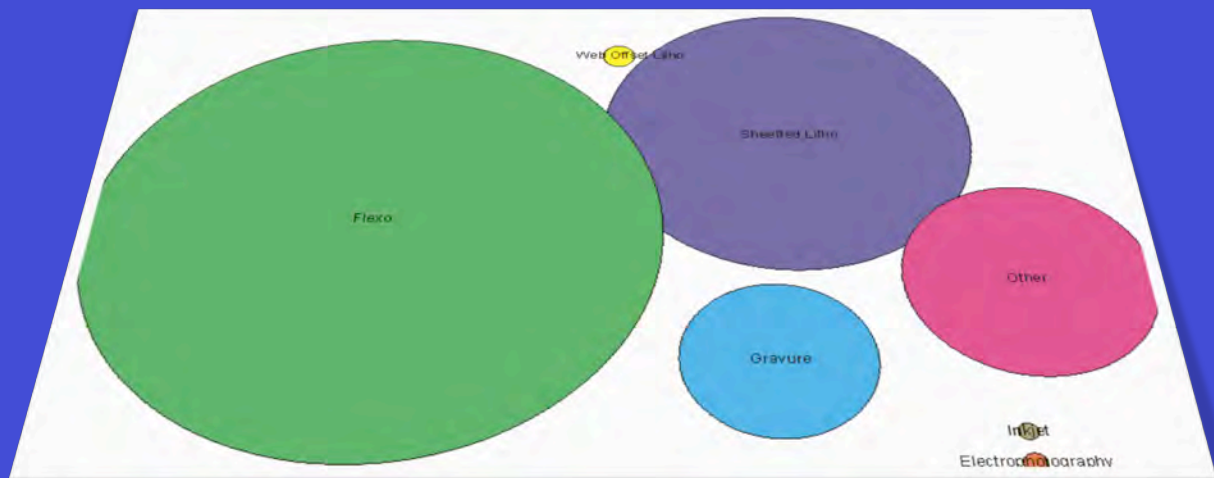


@

- Short turn-around times
- Cost competitiveness



## Packaging Market by Value in 2015



Source: Smithers Pira, Sean Smyth, DrupaCube 2016



# THE FUTURE\* OF PACKAGE PRINTING

Conclusions on ~

1. Hard times ahead for Rotogravure
2. Offset (Folding Carton), Digital and Flexo complementing each other

\* Next 20+ years

# The Latest: Stochastic Screening

- Improved photographic image quality @ lesser demand!
- Limited to Flexo & Offset
- Perfectly aligned with Digital Printing



**DFTA**  
FLEXODRUCK AKADEMIE

**DFTA**

HOCHSCHULE DER MEDIEN

**DFTA** TECHNOLOGIEZENTRUM  
Die FlexoKompetenz.

## Don't just believe! - Convince yourself!

Print Quality Assessment Workshop @ ProFlex 2017



- ProFlex 2017: March 8<sup>th</sup> and 9<sup>th</sup>, Stuttgart, HdM
- Public Workshop for attendees

But ...



Non-attendees are invited, too!

- Free of charge
- Please contact me under [martin.dreher@dfta.de](mailto:martin.dreher@dfta.de) and ask for samples
- Use online form under <https://www.surveymonkey.de/r/5WN5WV6>  
(German language, but English version to come in due course)

Go learn about what really matters!



**Thank you for listening!**

**Questions?**

Prof. Dr. Martin Dreher  
[martin.dreher@dfta.de](mailto:martin.dreher@dfta.de)  
[dreher@hdm-stuttgart.de](mailto:dreher@hdm-stuttgart.de)

