#### Smart Print Shop. Simplified Manufacturing Allowing Repeatable Tasks.



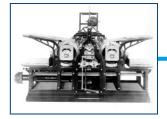
#### Anthony Thirlby





#### **Industry 4.0** and the printing industry.





1.0 Mechanization, water/steam power



2.0 Mass production

- 1810's onwards
- Steam powered newspaper press, cylinder presses and typesetting machines

production1880's onwards

• Newspapers, electric power for drive shafts, book printers



3.0 Computer and automation

- 1960's onwards
- Scanners, direct to plate, step and repeat machines



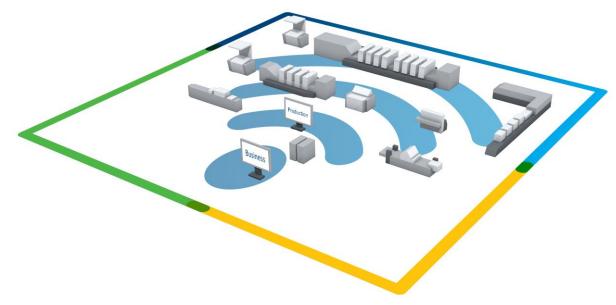
4.0 Cyber physical systems

- 2000 onwards
- Development of automated factories, JDF connectivity, cloud solutions

## The changing face of production workflows is system integration.



- → In Industry 4.0 all isolated, optimized production cells work together in a fully integrated, automated, and optimized production flow
- $\rightarrow$  Integration includes suppliers, customers and services



#### Today's print industry. At many times is going nowhere fast.

- → Consists mostly of unconnected or partially connected manufacturing steps
  - Manual data entry and transfer of information
  - Utilize paper job tickets and reenter information into disparate systems
- $\rightarrow$  In many systems that are somewhat connected
  - Combination of different manufacturer solutions pieced together into workflow
  - Limited information is transferred between parts of the process
  - Information that is passed is not correctly interpreted or used
    - $\rightarrow$  The information use is not maximized!

- $\rightarrow$  Localized optimization with limited scope
  - Not getting the full potential out of the complete manufacturing operation
- $\rightarrow$  Results in too much waste, waiting and WIP
- $\rightarrow$  Analytics are missing or limited in scope
  - How do you improve what you don't know?
  - Often only know about profit retrospectively!



# There are wide differences in the profit margins between printing companies.

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- → Profits of companies analyzed in the Printing Industries of America Ratio Studies
  - Companies participating represent a full cross section of the industry
  - Profit leaders ~ 10 percent
    → Top 25% of respondents
  - Average ~ 3 percent
  - Challengers ~ o percent or less
    - $\rightarrow$  Bottom 25% of respondents

#### What differentiates the profit leaders?

- → They have reduced their manufacturing costs
- $\rightarrow$  They have increased their productivity



Profit leaders compared to the industry average.



#### The constant pressure of business.



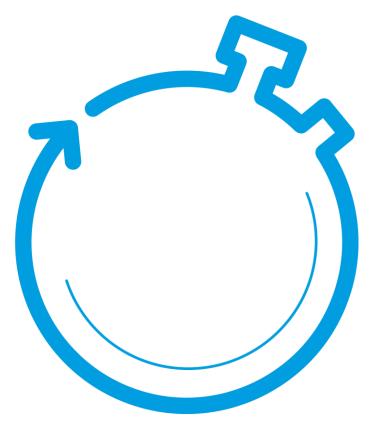


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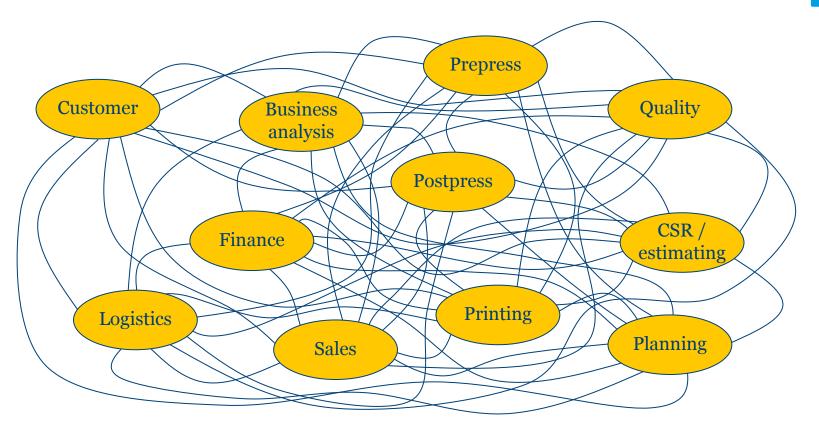
# What do printers sell ?







#### Today's production with disparate voices and activities.



#### Considering todays industry. How can we drive profitability / time to market.



- $\rightarrow$  Reduce touchpoints
  - Remove non-value added steps, automate where possible, increase throughput and velocity
- $\rightarrow$  Drive productivity and uptime
  - How available are all my areas in the facility
- $\rightarrow$  Repeatability and consistency
  - Right place, each time, every time
- $\rightarrow$  Reduce waste and inventory
  - Materials used, waste, warehousing ...

#### Change the way in which we do business



#### Driving profitability and growth.



Reduce touchpoints // Drive productivity and uptime // Optimize consistency and repeatability // Reduce waste and inventory

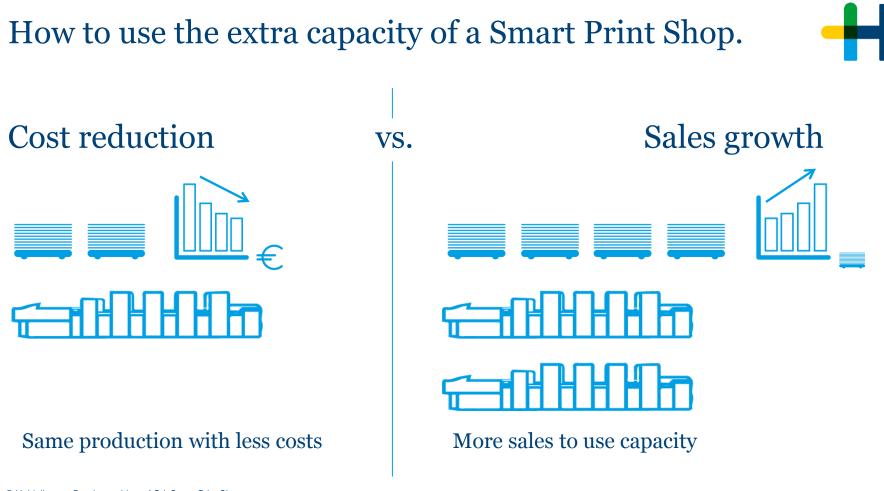
Customer relationship and retention

### Commercial positioning

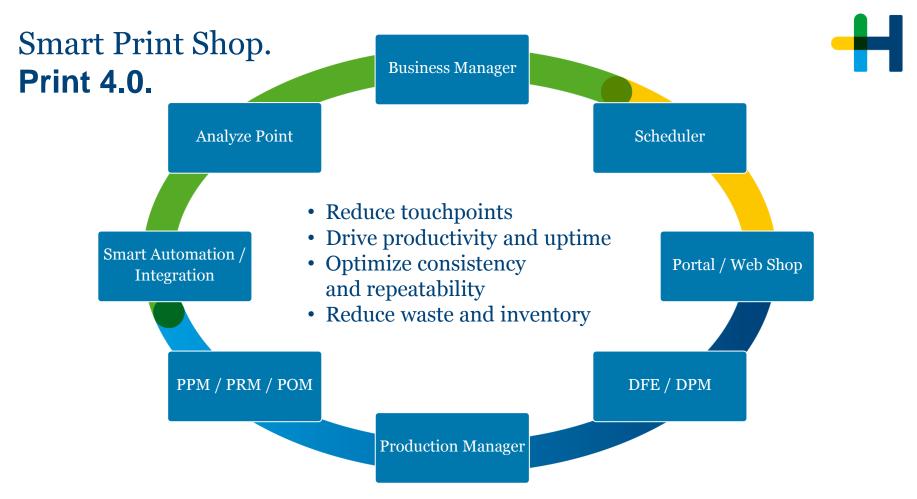
Reduced operational costs

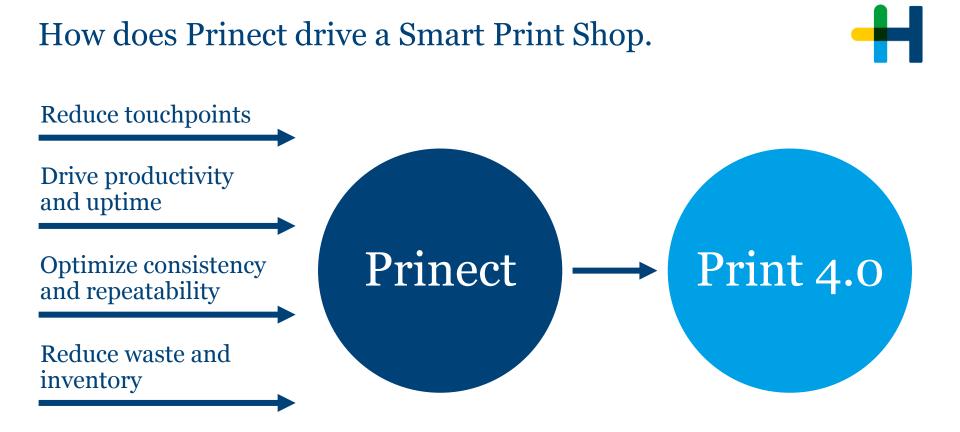
Business analytics and financing





# What does Prinect do for you?





#### From Industry 4.0 to Print 4.0



→ With the technology available the print process should be like a car manufacturing process:

- Known output per hour
- Known cost
- Known quality

→ All OPTIMIZED and nobody touches the approved process! Volume – Automation, Innovation – Margin

#### Prinect = Business Intelligence Platform (BIP).

#### Prinect = Business Intelligence Platform (BIP).

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- → Prinect is the only option to enhance our clients productivity and performance. Facilitates full Push-To-Stop capabilities in production and changes the manner in which you can run your business
- → Creates a simplified One Touch Manufacturing process to enable the foundation for optimized performance
- → Prinect is the Business Intelligence Platform that ensures key components support and guide enhanced trading possibilities



"The fully implemented Prinect System allowed us to put 40 percent more jobs through the shop this year. This also brought us full Transperancey of our costs."

Neil Foster North Star Printing, Spanish Fork, USA













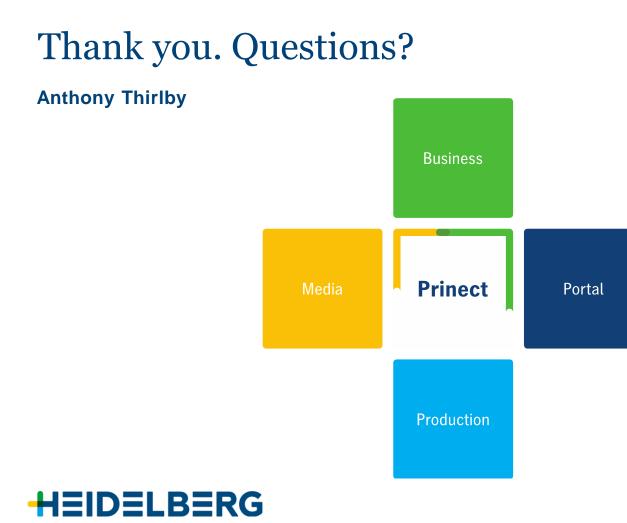
#### Thank you. Questions?

**Anthony Thirlby** 













#### Describe what is Prinect doing to support the 4 elements