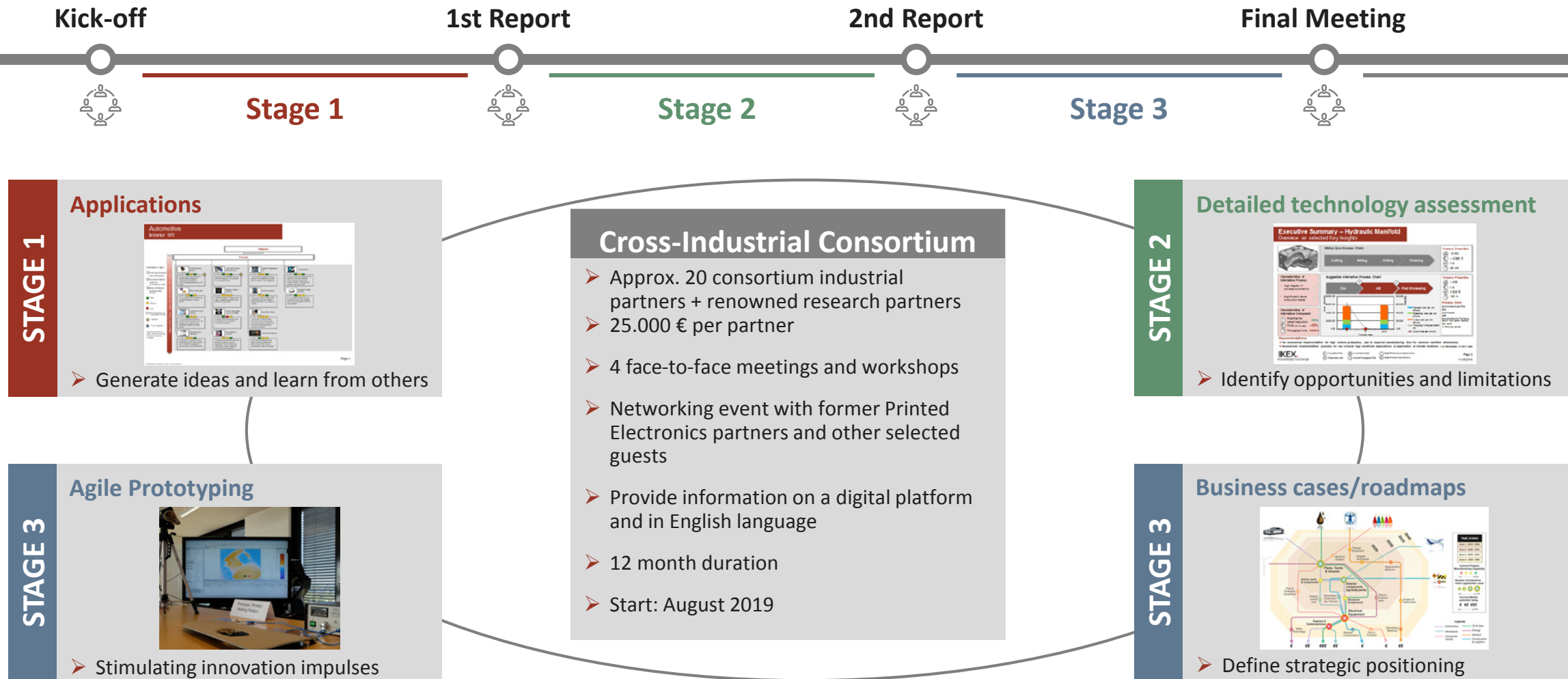


NEW: Possibility for Prototyping &  
Networking Event

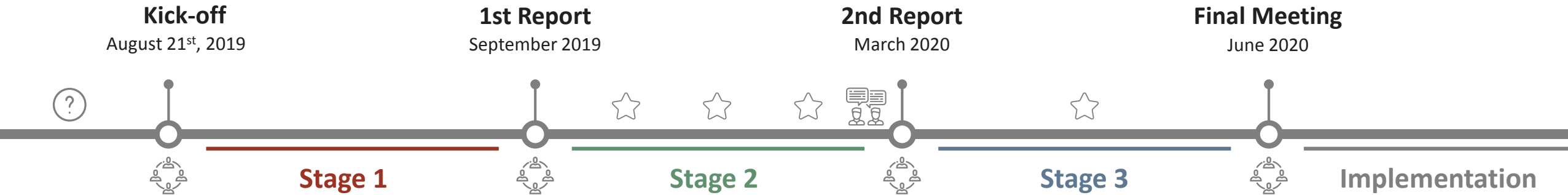
# Consortium Project „Printed Electronics“

Key Facts





# TIMELINE & POTENTIAL RESULTS



## STAGE 1

### 3 months Segmentation & application scanning

- **Structured overview** on 2D, 2.5D and 3D processes in the field of printed electronics
- **Segmentation** of relevant markets
- **Scanning & Scouting** for cross-industrial applications and segments, where hidden potentials are expected
- Detailed overview in **application maps**

➤ Information basis for further evaluation in Stage 2

## STAGE 2

### 4 months Detailed technology assessment

- Systematic selection of attractive **applications** and specific **technology questions** by the project partners
- Detailed **technology studies** for each selected application and question e.g. assessment of **technological feasibilities** or **cooperation partners**
- **Networking event** with former Printed Electronics partners and other selected guests

➤ Information basis for your selection of relevant focus cases in Stage 3

## STAGE 3

### 5 months Business case/Roadmap/Agile Prototyping

- Different evaluation opportunities possible depending on consortia demands:
  - Derivation of detailed **business cases** for selected applications/components
  - Creation of **technology roadmaps** for 2D, 2.5D and 3D processes
  - Realization of **prototypes** in cooperation with research partners

➤ Information basis for partner-specific roadmaps/strategic decisions



Questionnaire



Consortium meeting

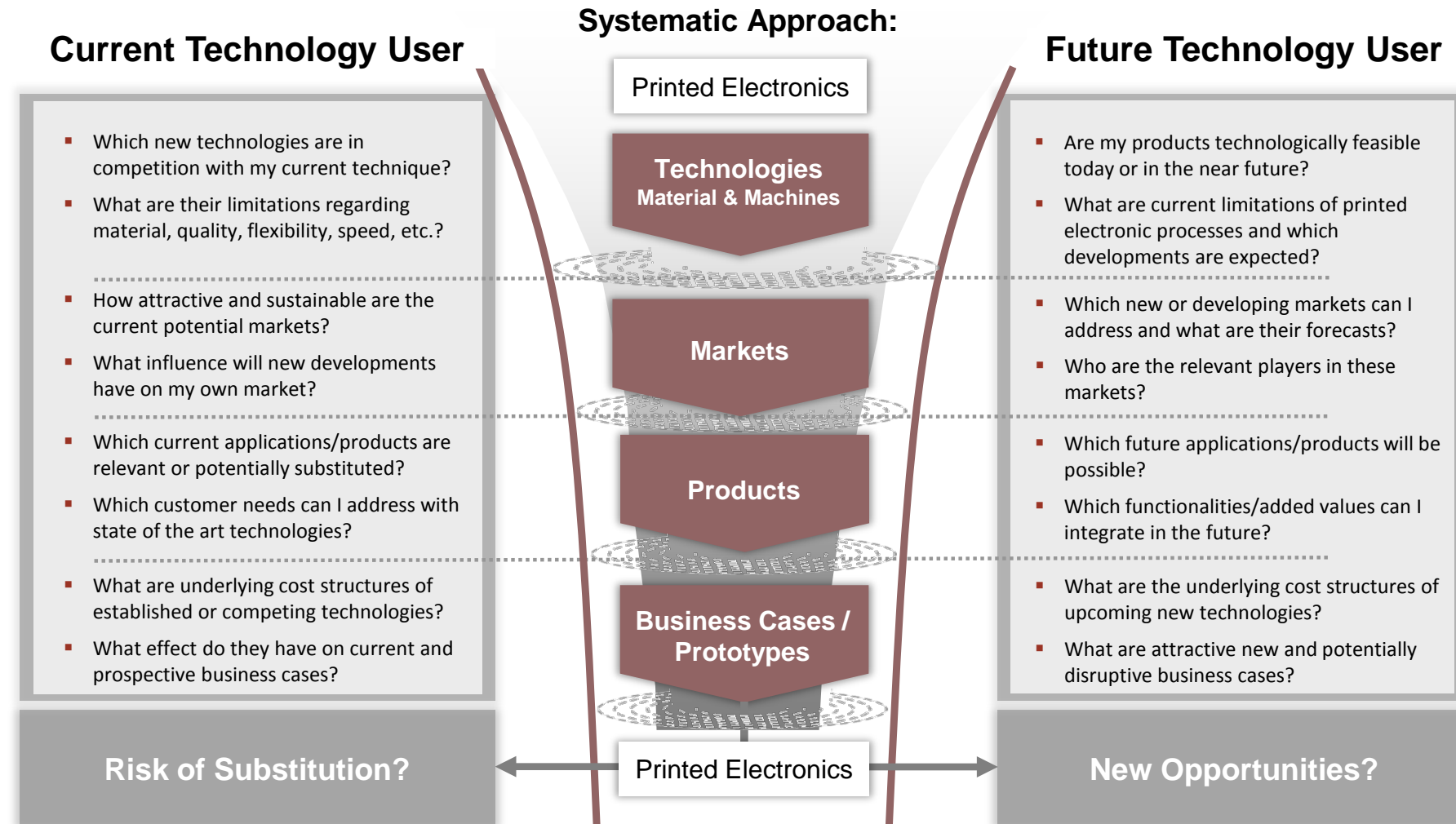


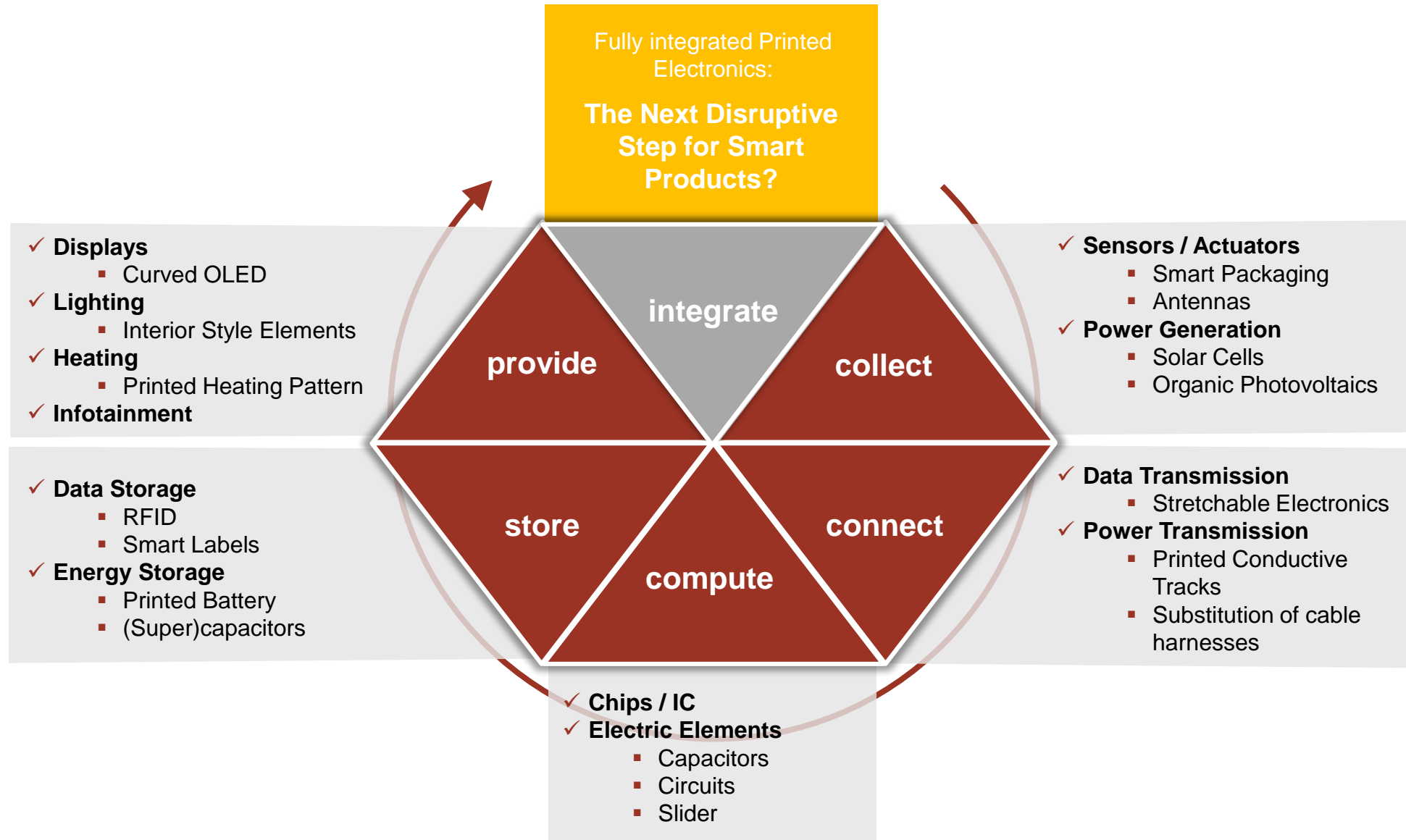
Optional workshops  
with partners/experts



Networking event









- Integrated circuits
- Print on demand
- Interactive Touch displays
- Smart labels and RFID
- Printed antennas
- Integrated sensor technology
- ...



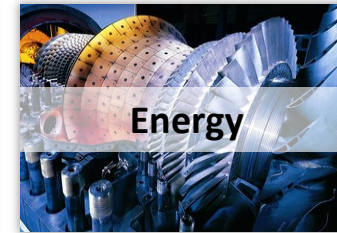
- Smart packaging
- OLEDs for design lighting
- Flexible displays
- Smartphones & watches
- Wearables
- Tracking device
- ...



- Printed circuit board PCB
- Printed Antennas
- Curved OLED Displays
- Conducting path for sensor systems
- Touch-sensors
- ...



- Smart blister packaging
- Flexible electrodes
- Glucose test strips
- Interactive medication packaging
- ...



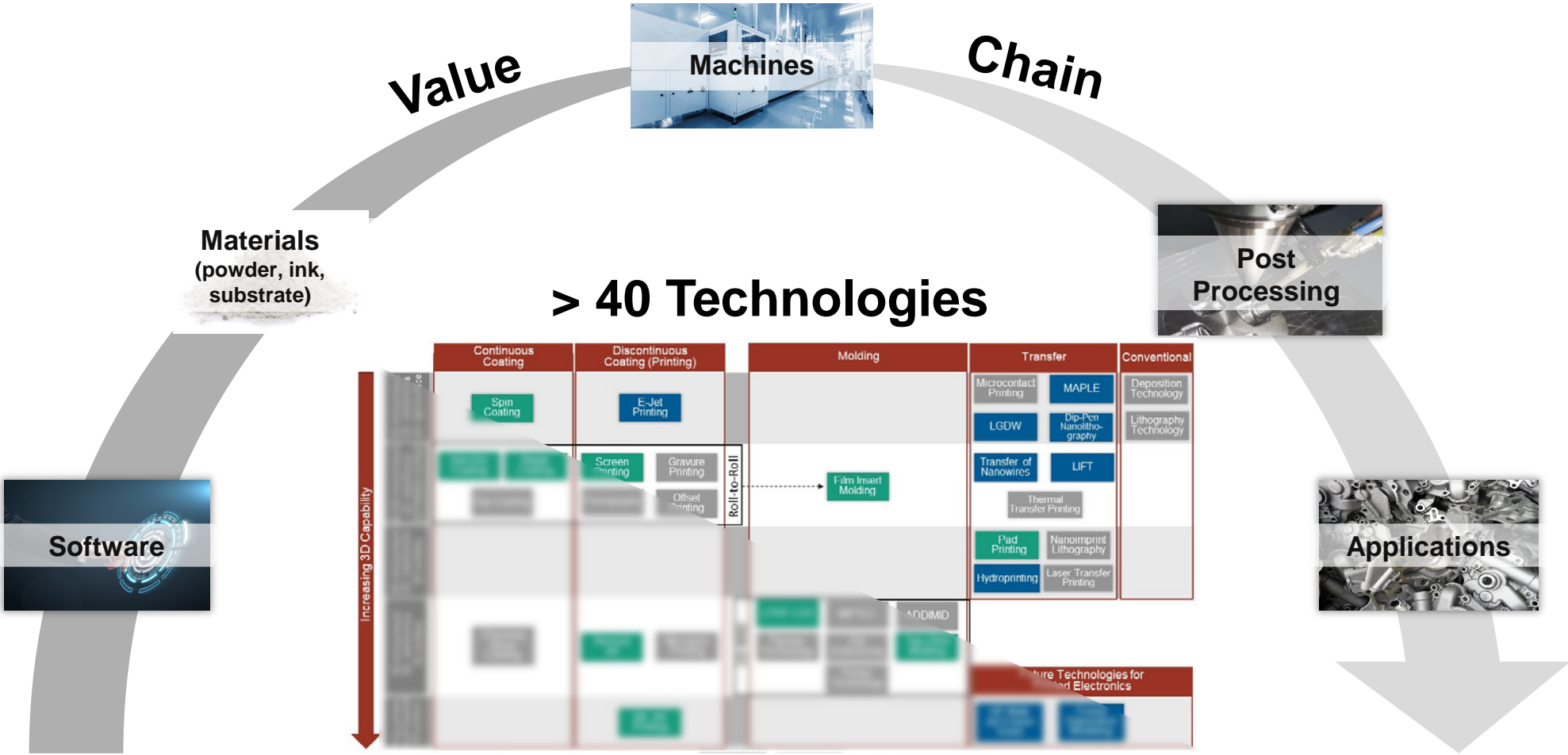
- Printed energy storage
- Printed Batteries
- Integrated sensor technology
- Transparent electrodes
- Solar cells
- ...



- Conformal sensors
- Flexible displays
- Organic photovoltaics
- Electronic circuitry
- OLED Lighting
- ...

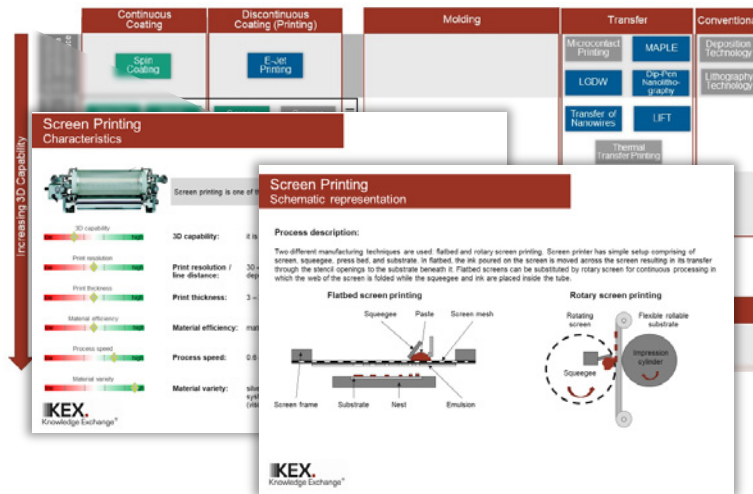
# ADDRESSED VALUE DRIVERS

Complete Value Chain and Wide Technology Range



# PROCEEDING – EXAMPLE OF A PREVIOUS PROJECT

## Stage 1: Technology Landscape, Segmentation & Application Trees



### Technology Landscape for Printed Electronics

- Structured overview on 2D, 2.5D and 3D processes in the field of printed electronics
- Overview of the technologies including assessment of the technologies with regard to their performance parameters and their technology readiness level (TRL)

### Market Segmentation

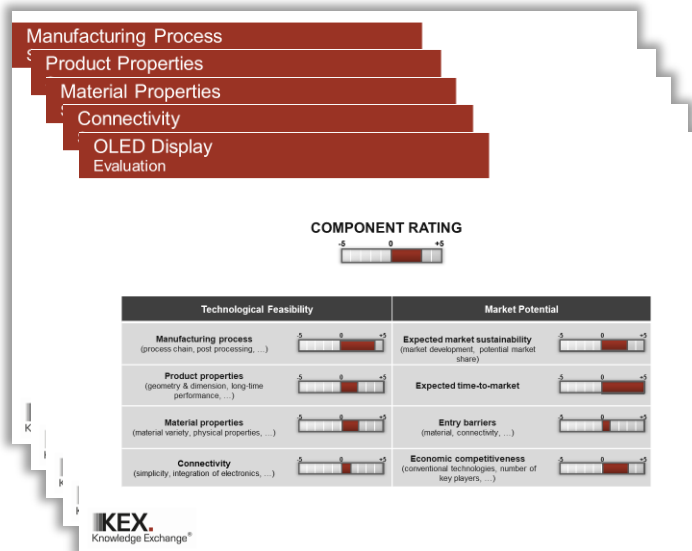
- Selection of focus areas based on consortium preferences (questionnaire)
- Systematic overview on market segments, structure and overall market volume within the focus areas

### »Application Trees«

- Market requirement-based breakdown of relevant sub-segments into relevant and attractive applications for printed electronics technologies (2D, 2.5D and 3D)

➤ Information basis for application/component selection for Stage 2





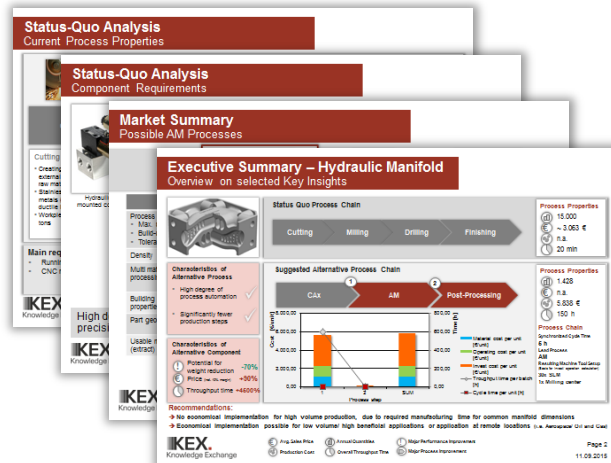
### Detailed Technology and Market Analyses

- Aggregation of relevant technology- and market-related information
- Current pros and cons of different printed electronics technologies and its development potential in the next years
- Assessment of different technological concepts leading to a technological deep dive
- Identification of potential technology partners
- Executive summary for quick evaluation

### Value-Chain Overview

- Connected and/or synergetic technologies within the value-chain of the component at hand
  - Visualization and quantification of added value steps
- Information basis for selection most promising highlight components/applications in Stage 3





### Business Case Analyses

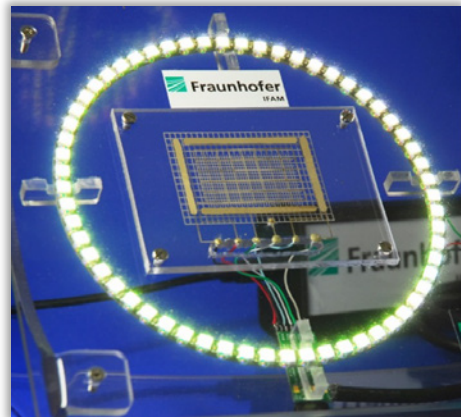
- Detailed calculation of business cases for the selected highlight applications/components
- Estimation of cost structure over the next 5-10 years
- Derivation of relevant technologies, materials and/or services to address these highlights
- Assessment of chances and risks for the project partners

### Technology Roadmap

- Analysis on the research activities in the specific technology field for 2D, 2.5D and 3D printed electronics
- Estimate the time of market maturity
- Identification of applications and additional functions that can be manufactured in the future with the new technologies
- Impact on conventional procedures (e.g. risk of substitution)



- Information basis for partner-specific roadmaps/decisions for internal projects and implementation



## NEW

### Prototyping

- Based on the detailed technology studies (stage 2), prototypes can be defined and manufactured in close cooperation to our research partners
- Ideas and requirements of the consortium are recorded in several iteration loops and potential solutions will be evaluated afterwards
- In a first minimum viable product, the technological feasibility in a specific application will be evaluated

➤ Decisions for internal projects and implementation





### **Project Manager**

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Frederik Klöckner  
Technology Manager

frederik.kloeckner@kex-ag.com  
+49 241 51038 617



### **Deputy Project Manager**

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Daniel Führen  
Senior Technology Scout

daniel.fuehren@kex-ag.com  
+49 241 51038 636

KEX Knowledge Exchange AG ■ Campus-Boulevard 30 ■ 52074 Aachen ■ [www.kex-ag.com](http://www.kex-ag.com)