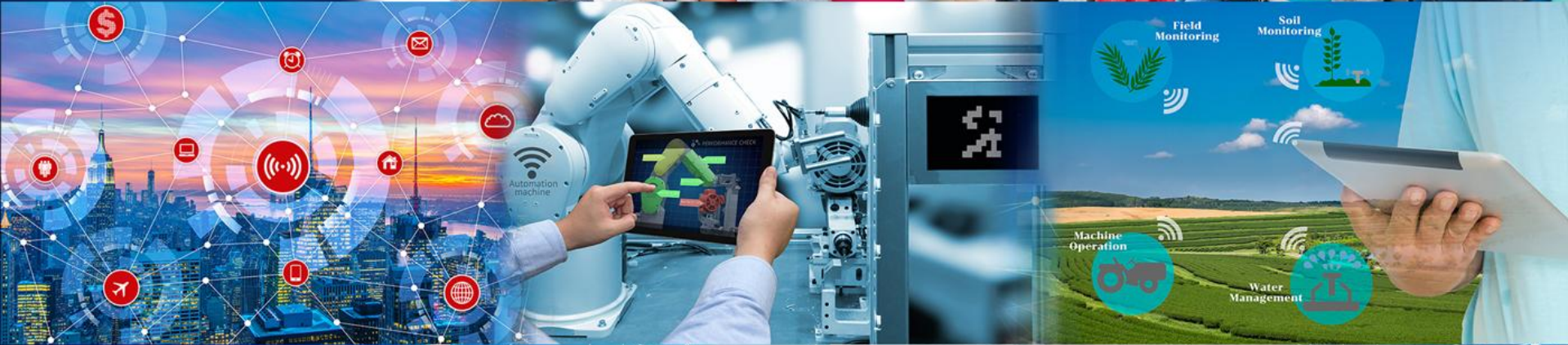


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Introduction to the Work Group Sessions

Mike Wale, Photonics21 Executive Board Member





Towards a Post Horizon 2020 Framework Programme

Facing Challenges....in a drastically changing Environment.....



Task Force towards a Photonics21 Future Strategy & Structure

Approach:

Define the Megatrends shaping the future world

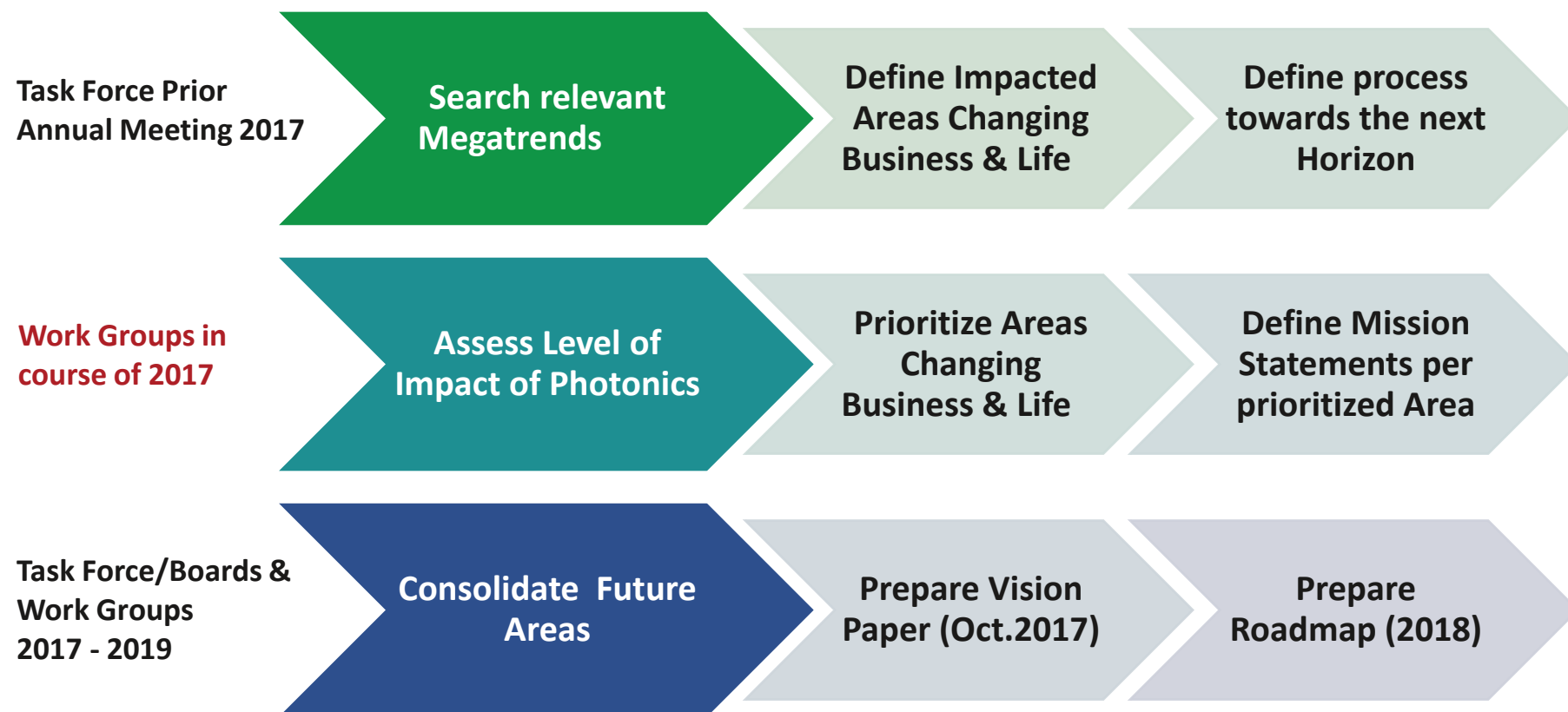
Outline the change in all areas of life and business along the
Megatrends

Highlight markets in which Photonics is a key technology facilitating
the change

Photonics Focus Areas addressing Future Changes



Key Dates and Deliverables of post H2020 Programme Preparation



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Before Annual Meeting

Task Force: Define the Megatrends shaping the Future World

Urbanization

- Emerging megacities
- Growing population
- GDP of countries in one city
- Trend towards east and south

Technological change

- Ubiquity of change
- Convergence
- Miniaturization
- Speed of change

Aging

- Longer lifespan
- Health orientation
- New role interpretation

Global connection

- Trade and production
- People
- Data

Resource scarcity and climate change

- Scarce materials (e.g. rare metals)
- Water scarcity
- Climate change



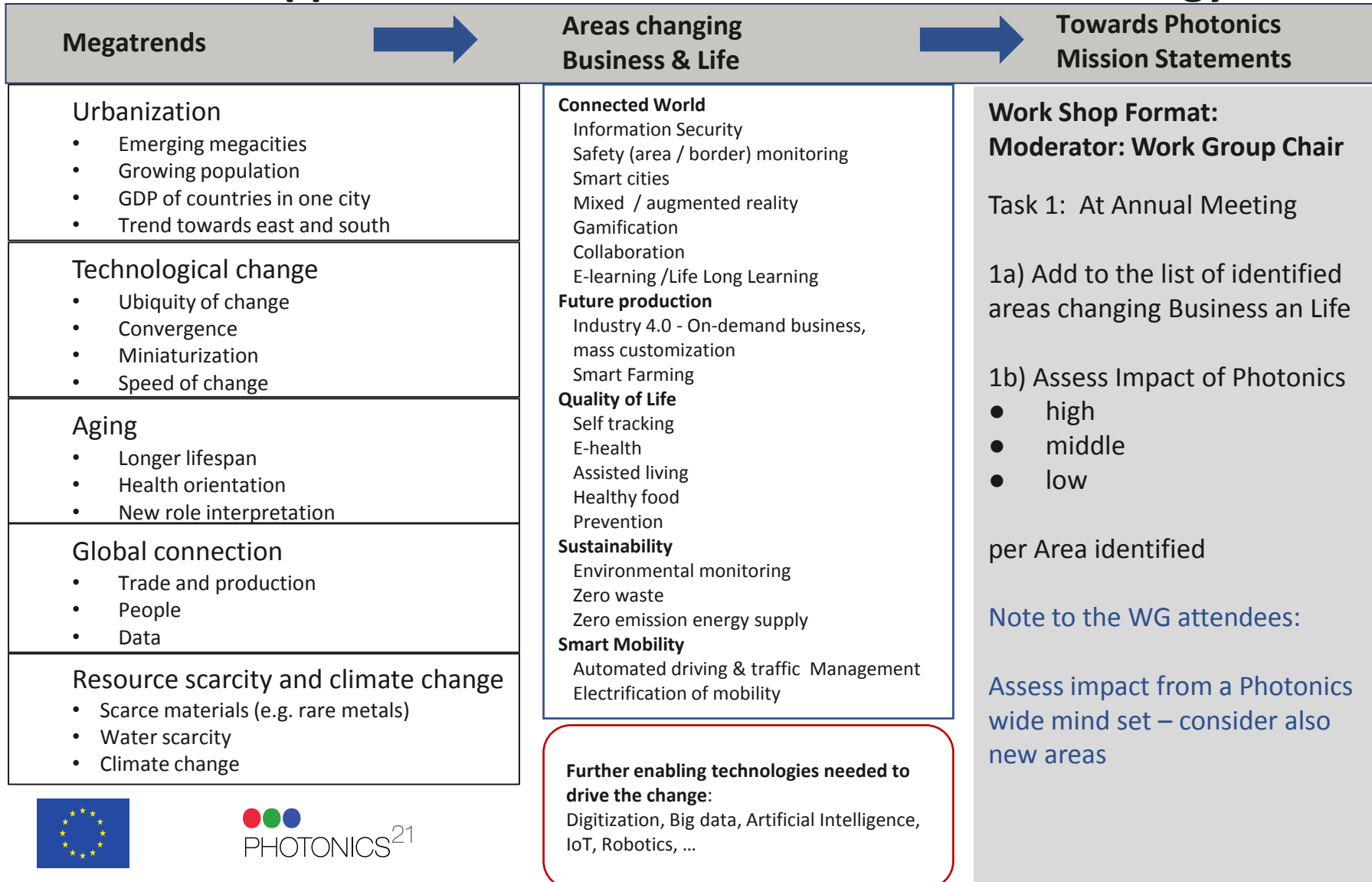
Source: ZukunftsInstitut, <https://www.zukunftsinstitut.de/>



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Before Annual Meeting

Task Force Approach to define Photonics21 Future Strategy



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At Annual Meeting

Task 1: Add to the Area List and Assess & Prioritize Impact

Task 1: Prioritize Impact of Photonics on Future Areas				
Areas / Markets	High	Middle	Low	Total
Connected World				
Information Security				
Safety (area / border) monitoring				
Smart cities				
Mixed / augmented reality				
Gamification				
Collaboration				
E-learning /Life Long Learning				
Future production				
Industry 4.0 - On-demand business, mass customization				
Smart Farming				
Quality of Life				
Self tracking				
E-health				
Assisted living				
Healthy food				
Prevention				
Sustainability				
Environmental monitoring				
Zero waste				
Zero emission energy supply				
Smart Mobility				
Automated driving & traffic Management				
Electrification of mobility				
Others				

1a)

Add to the list of identified areas changing Business & Life

“Other”

1b)

Assess on which Areas Photonics will have the largest Impact

Prioritize Impact (per WG member) on

- High = 9
- Middle = 3
- Low = 1

Prioritize / Sort by Results



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At Annual Meeting

Task 2: Specify Arguments for your Choice of prioritized Areas

Areas changing Business & Life

Connected World

Information Security
Safety (area / border) monitoring
Smart cities
Mixed / augmented reality
Gamification
Collaboration
E-learning /Life Long Learning

Future production

Industry 4.0 - On-demand business,
mass customization
Smart Farming

Quality of Life

Self tracking
E-health
Assisted living
Healthy food
Prevention

Sustainability

Environmental monitoring
Zero waste
Zero emission energy supply

Smart Mobility

Automated driving & traffic Management
Electrification of mobility

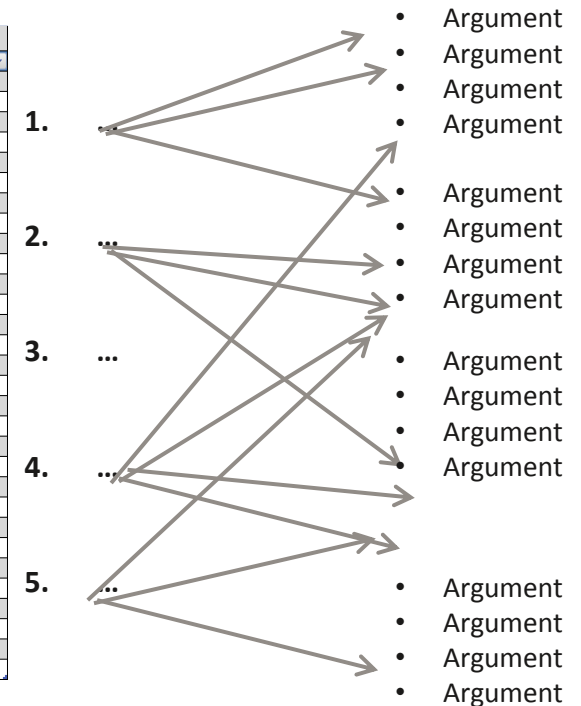
Prioritize Impact of Photonics on individual Areas (per Work Group)

Task 1

Task 1: Prioritize Impact of Photonics on Future Areas				
Areas / Markets	High	Middle	Low	Total
Connected World				
Information Security				
Safety (area / border) monitoring				
Smart cities				
Mixed / augmented reality				
Gamification				
Collaboration				
E-learning /Life Long Learning				
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Sustainability				
Environmental monitoring				
Zero waste				
Zero emission energy supply				
Smart Mobility				
Automated driving & traffic Management				
Electrification of mobility				
Others				

Specify Arguments for prioritized Areas (per Work Group)

Task 2



At Annual Meeting

Task 2: Example for specifying arguments

Smart Farming

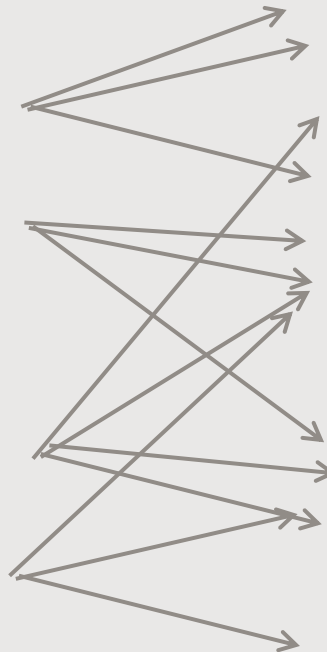
Future Area 2

Future Area 3

Future Area 4

Future Area 5

.....



- Argument
- Argument
- Argument
- Argument

- Argument
- Argument
- Argument
- Argument

- Argument
- Argument
- Argument
- Argument

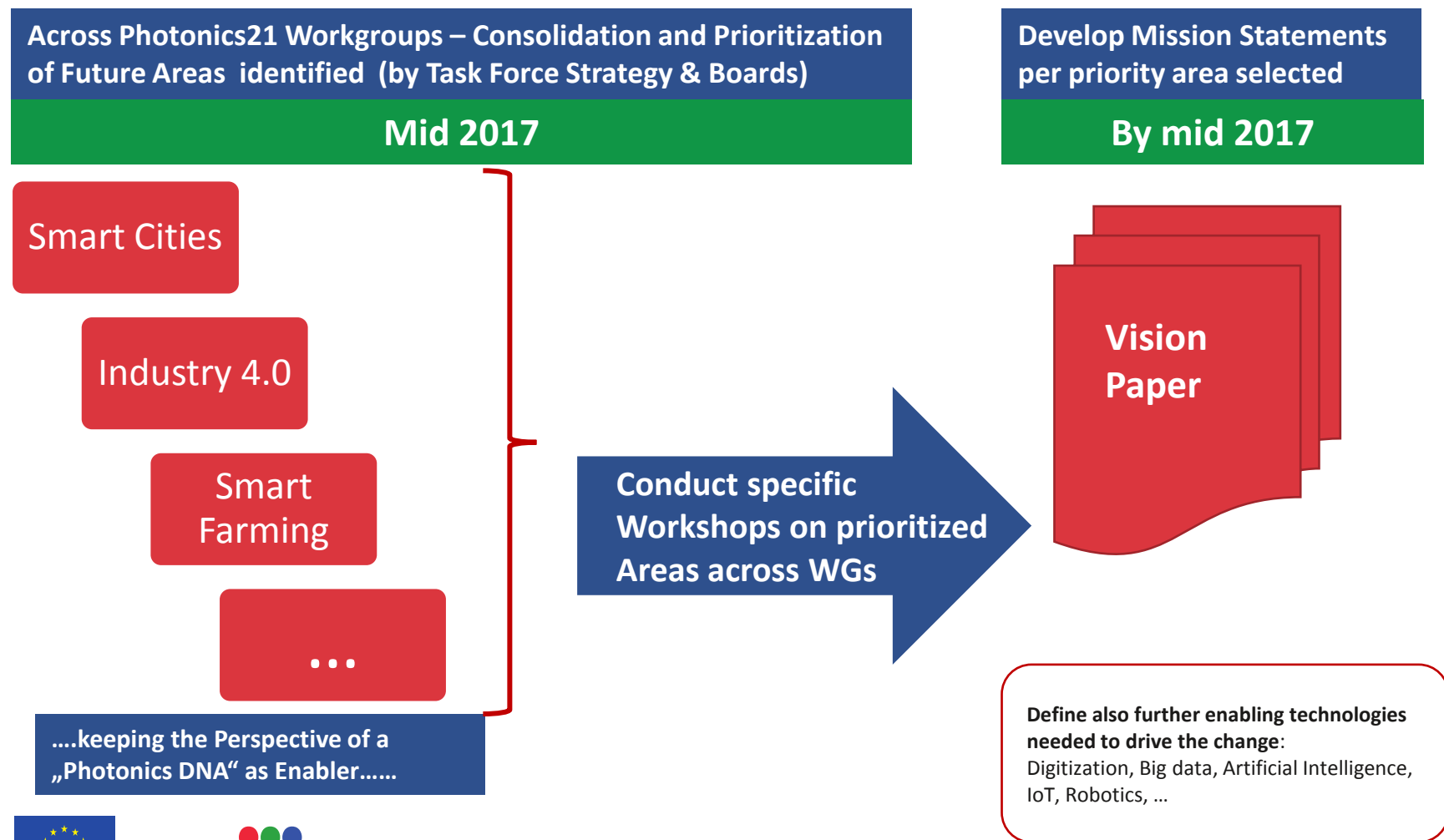
- Argument
- Argument
- Argument
- Argument

Type of arguments (examples)

- „farmer would be enabled to monitor health status of crop and crattle - anytime and anywhere“
- „Deliver fertilizer, nutrition (and light) to crop at the exact amount needed - no waste.“
- „Strong agricultural end-user marekts in Europe – strong value chains“
- „growth rate would be far above world GDP“
- „Europe has a large photonics technology advantage in this area“
-

After Annual Meeting

Consolidation of areas & Development of Mission Statements



Our Way towards a new Horizon

Key Dates and Deliverables of post H2020 Programme Preparation

Deliverable	Date	Occasion
Photonics21 Position Paper „Future of Photonics in the post H2020 programme“	End of June 2017	Photonics21 Executive Board Meeting with EU Commissioner & @Public Consultation
Photonics21 Vision Document „Future of Photonics in the post H2020“	October 2017 !!!!	Hand over to the EU Commissioner
Photonics21 Strategic Research and Innovation Agenda for the post H2020 programme	March 2019	Hand over to the EU Commissioner @Photonics PPP Annual Meeting 2019

