EUKA
enabling the drone industry

Wireless Community
an imec initiative

FLANDERS MAKE
MANUFACTURING INNOVATION NETWORK

TECHNOLOGIES FOR IDENTIFICATION AND 3D LOCALISATION OF ASSETS AND PEOPLE

introduction at 13h15

Kris Hermus Innovation program manager Flanders, imec
Founder & Coordinator Wireless Community

Eli De Poorter Professor, imec-IDLab-UGent
Coordinator Smart Connectivity IN4.0 Proeftuin

AGENTSCHAP INNOVEREN & ONDERNEMEN

VLAANDEREN INDUSTRIE 4.0

WIRELESS COMMUNITY MEMBERS

INDUSTRY: > 60 LOCAL COMPANIES

ACADEMIA


ARTESIS PLANTIJN
HOGESCHOOL ANTWERPEN


erasmus
HOGESCHOOL BRUSSEL


FLANDERS
MAKE
MANUFACTURING INNOVATION NETWORK


howest
De Hogeschool West-Vlaanderen
Lid van de Associatie Universiteit Gent


imec


KAHO


KdG
Karel de Grote
Hogeschool


KATHOLIEKE UNIVERSITEIT
LEUVEN


TU/e


PXL


UC Leuven Limburg
MOVING MINDS


Universiteit
Antwerpen


UNIVERSITEIT
GENT


ULB


UMONS
Université de Mons


VUB
VRIJE
UNIVERSITEIT
BRUSSEL

INNOVATION ORGANIZATIONS

WORKSHOPS IN 2020

31TH WORKSHOP

IDEAL-IOT: INTELLIGENT, DENSE, AND LONG RANGE IOT NETWORKS

February/March 2020

32ND WORKSHOP

EXPERIMENTATION FACILITIES FOR WIRELESS CONNECTIVITY IN INDUSTRIAL IOT APPLICATIONS

June 30th (TBC) 2020 @ iGent Tower, Zwijnaarde

33RD WORKSHOP

WE WELCOME YOUR SUGGESTIONS FOR TOPICS...

Fall 2020

VLAIO PROEFTUIN PROJECT: SMART CONNECTIVITY

DEMONSTRATION DRIVEN INDUSTRY 4.0 INNOVATION

ELI DE POORTER

VLAIO proeftuinen

17 projects to “taste” new technology innovations

- Co-bots
- 3D printing
- Predictive maintenance
- **Smart connectivity**
- **…**

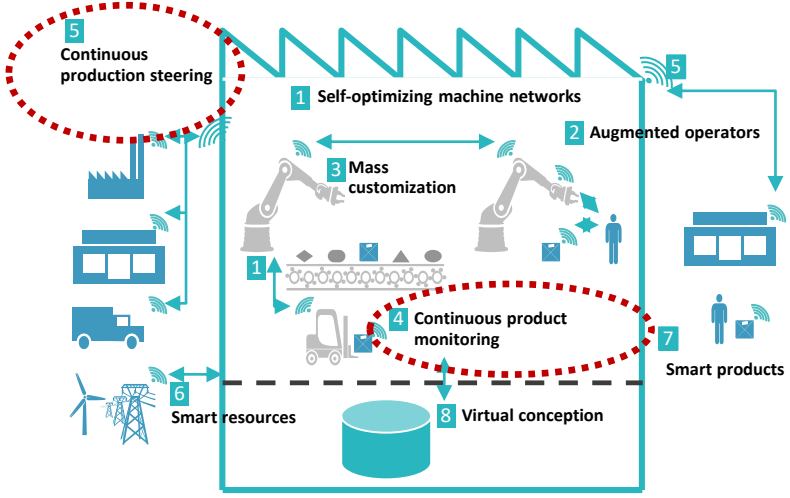
www.vlaio.be/industrie40

Vlaanderen
is ondernemen

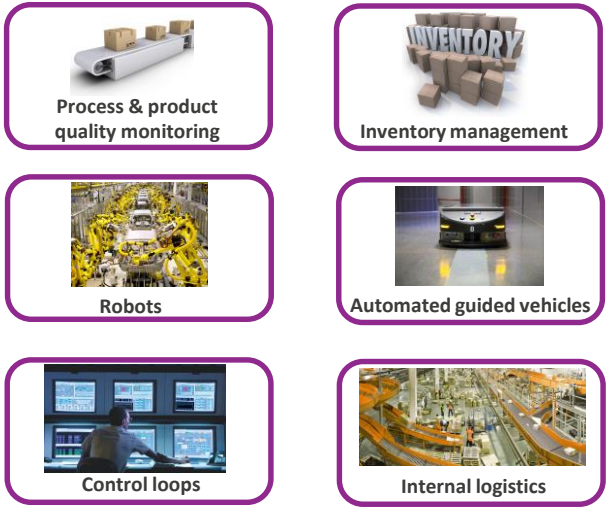
eli.depoorter@imec.be

VLAIO LIVING LAB: SMART CONNECTIVITY

Industry 4.0 requires interactions with (and trackability of) all products, machinery & personnel present in the production and distribution process.



Impact of continuous product steering on the operational processes



Example industry 4.0 use cases

eli.depoorter@imec.be

VLAIO LIVING LAB: SMART CONNECTIVITY

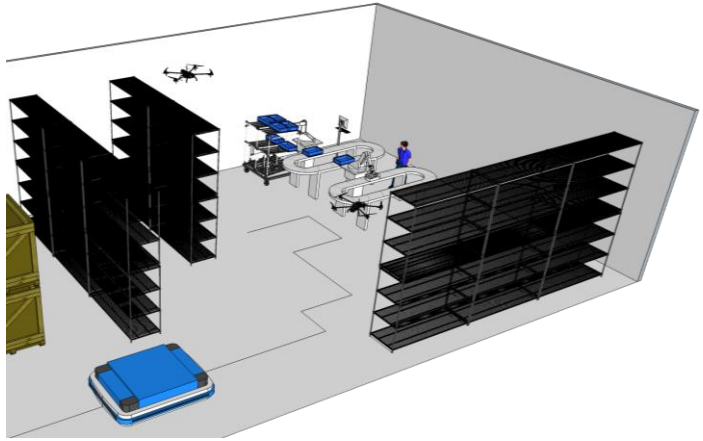
Industry 4.0 requires interactions with (and trackability of) all products, machinery & personnel present in the production and distribution process.

The living lab combines **ICT innovations** related to

- *Continuous wireless connectivity* with static and mobile items
- *Location awareness* of goods, objects & personnel
- *Video based object recognition*

Offering:

- Demonstration rooms (Ghent & Leuven)
- Local technology demonstrators (in-situ set-up in realistic conditions)
- Masterclasses (in-depth technology discussions)
- Feasibility studies (valorization & technology)
- Consultancy (design of custom solutions)
- Business plans & valorization studies



Demonstration room: autonomous drone for warehouse inventory management and production inspection

Example demo: warehouse inventory management with drones

eli.depoorter@imec.be

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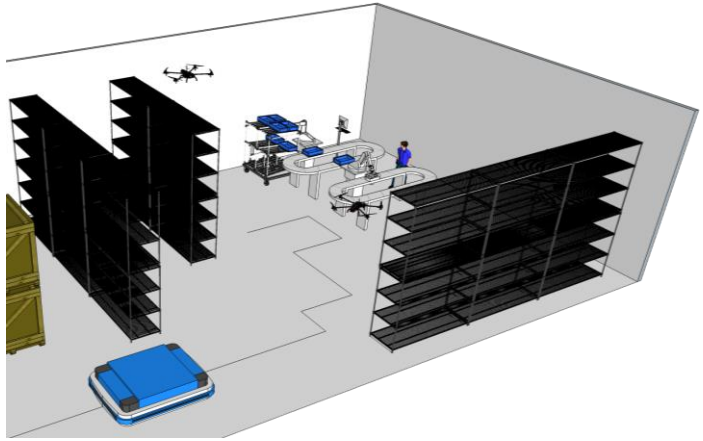


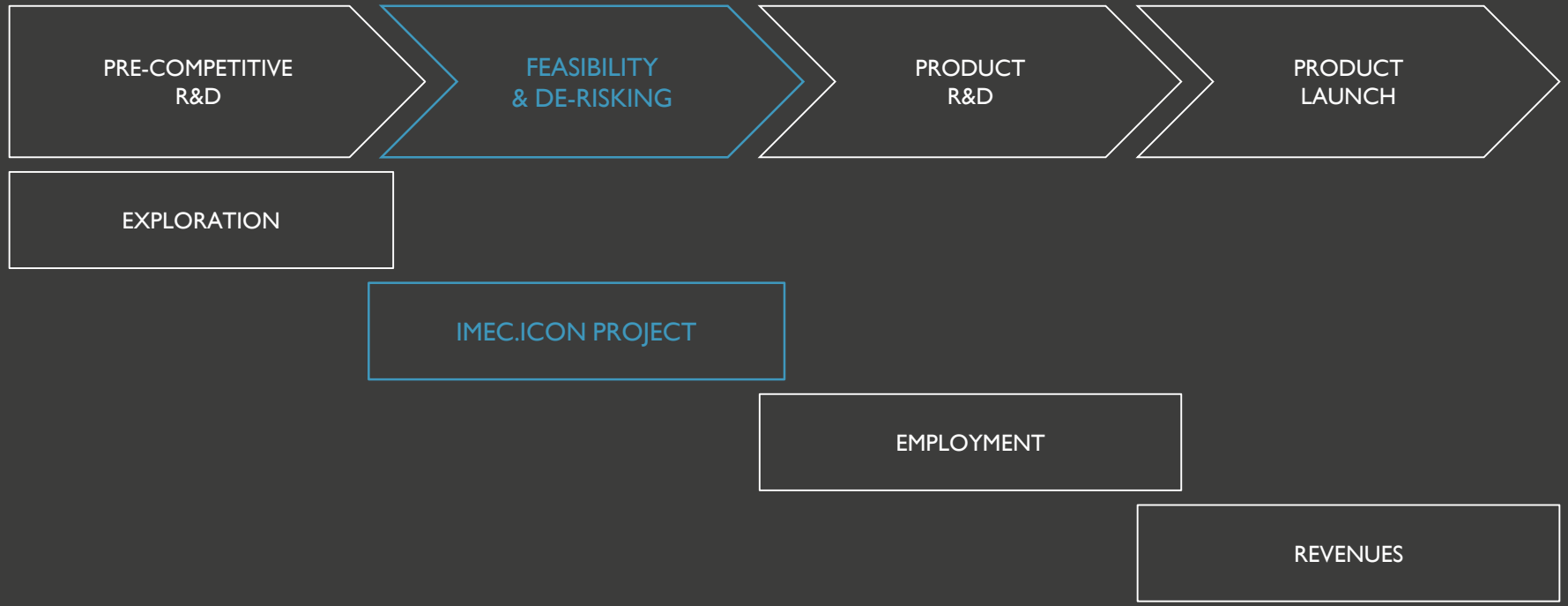
Demonstration room: autonomous drone for warehouse inventory management and production inspection

IMEC.ICON

COLLABORATIVE RESEARCH PROJECTS

“ICON” PROJECT CALL – MARCH 12, 2020

THE POSITION OF IMEC.ICON IN THE R&D LIFE CYCLE



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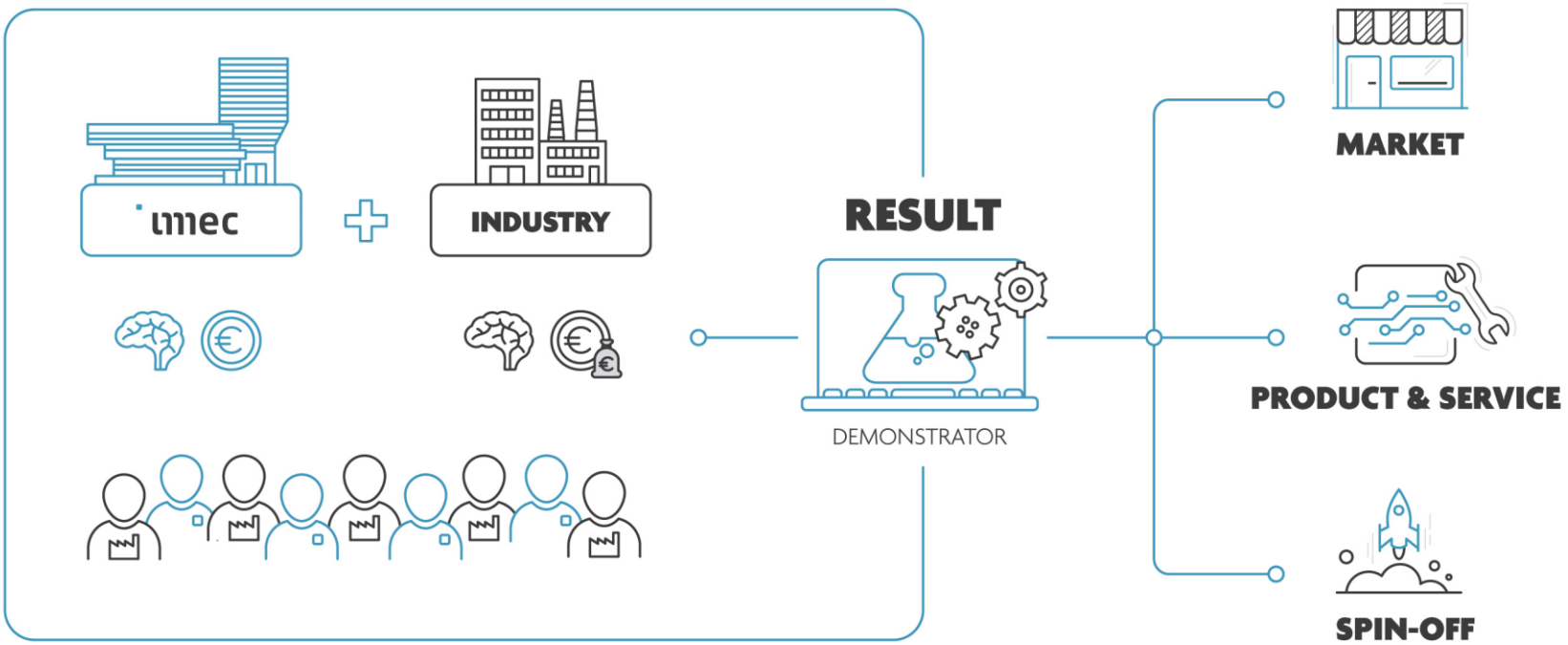
INTERDISCIPLINARY COOPERATIVE RESEARCH

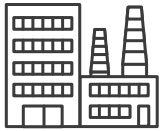
VALORIZATION



IMEC.ICON CHARACTERISTICS

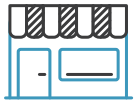
ICT and nanoelectronics-related digital products, services and business models

Balanced consortium balanced contribution of industry and research partners



Demand-driven relating to a real need in industry or society

Interdisciplinary approach tackling technological, legal and social challenges, new business models, etc.



Cooperative research with a focus on valorization for all industry partners involved

2-year duration

IMEC.ICON CONSORTIUM

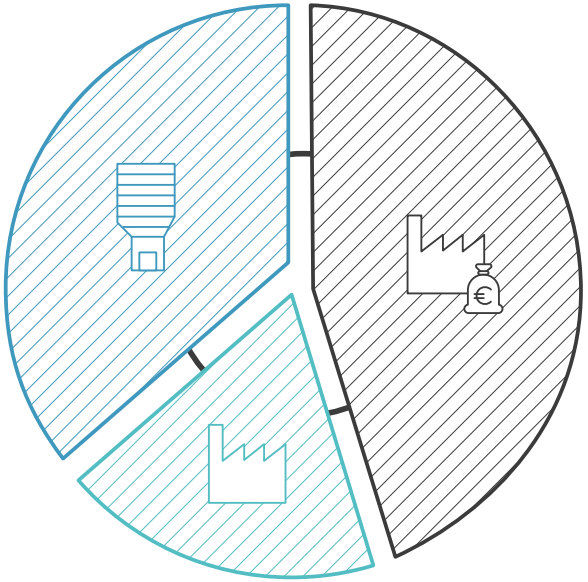
RESEARCH GROUPS

MIN. 2 GROUPS

- imec (min. 1)
- Flemish universities
- Other

FUNDED RESEARCH GROUPS

- **imec dotation:** imec & Flemish universities
- **Own budget:** other research groups



INDUSTRY PARTNERS

MIN. 3 FLEMISH COMPANIES

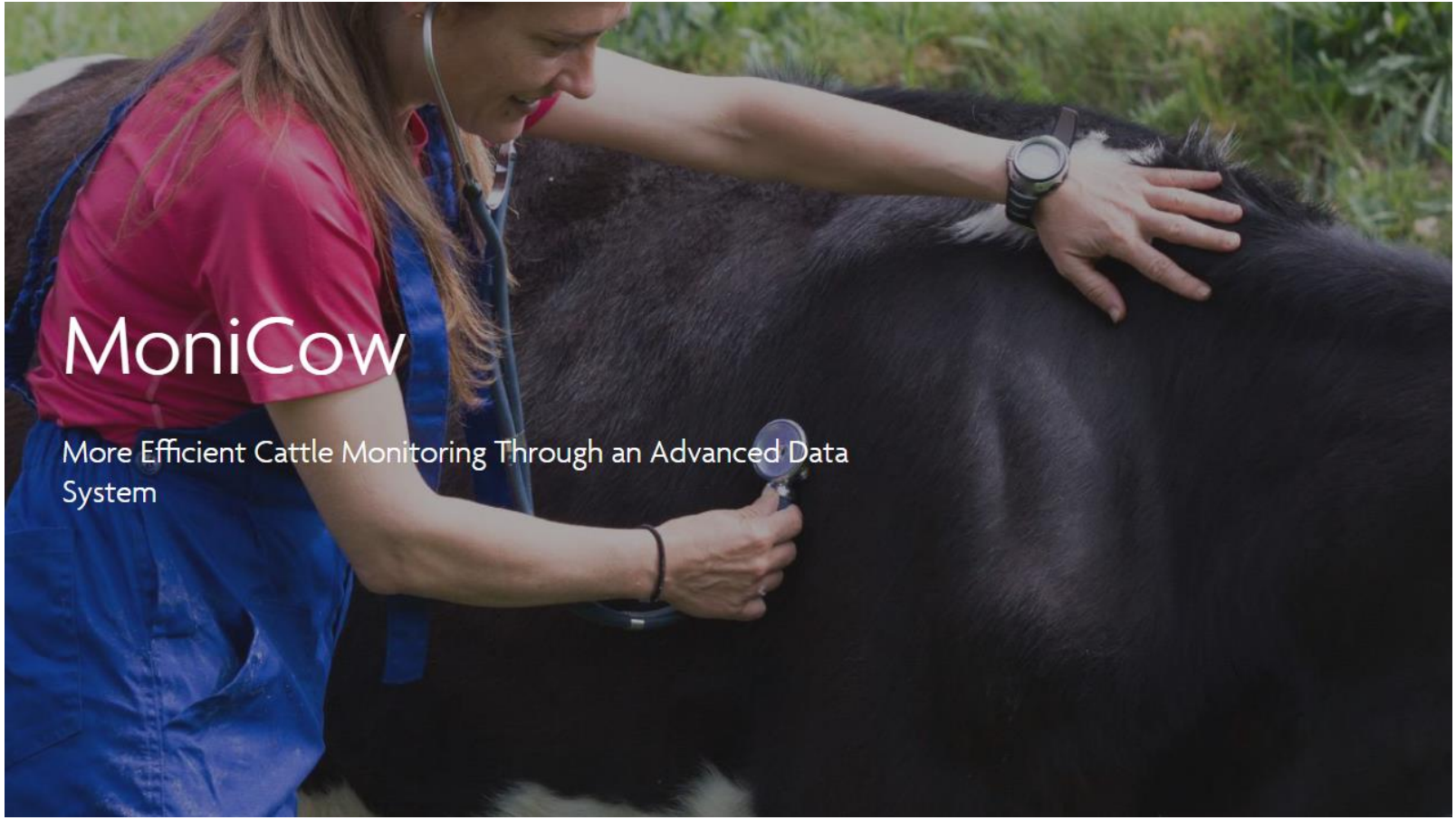
(+ Brussels region, Belgium, international)

FUNDED INDUSTRY PARTNERS

- VLAIO (Flanders)
- Innoviris (Brussels region)

INDUSTRY PARTNERS WITH OWN FUNDING

- Allowed
- Don't count for the 50/50



Click on the image for the video

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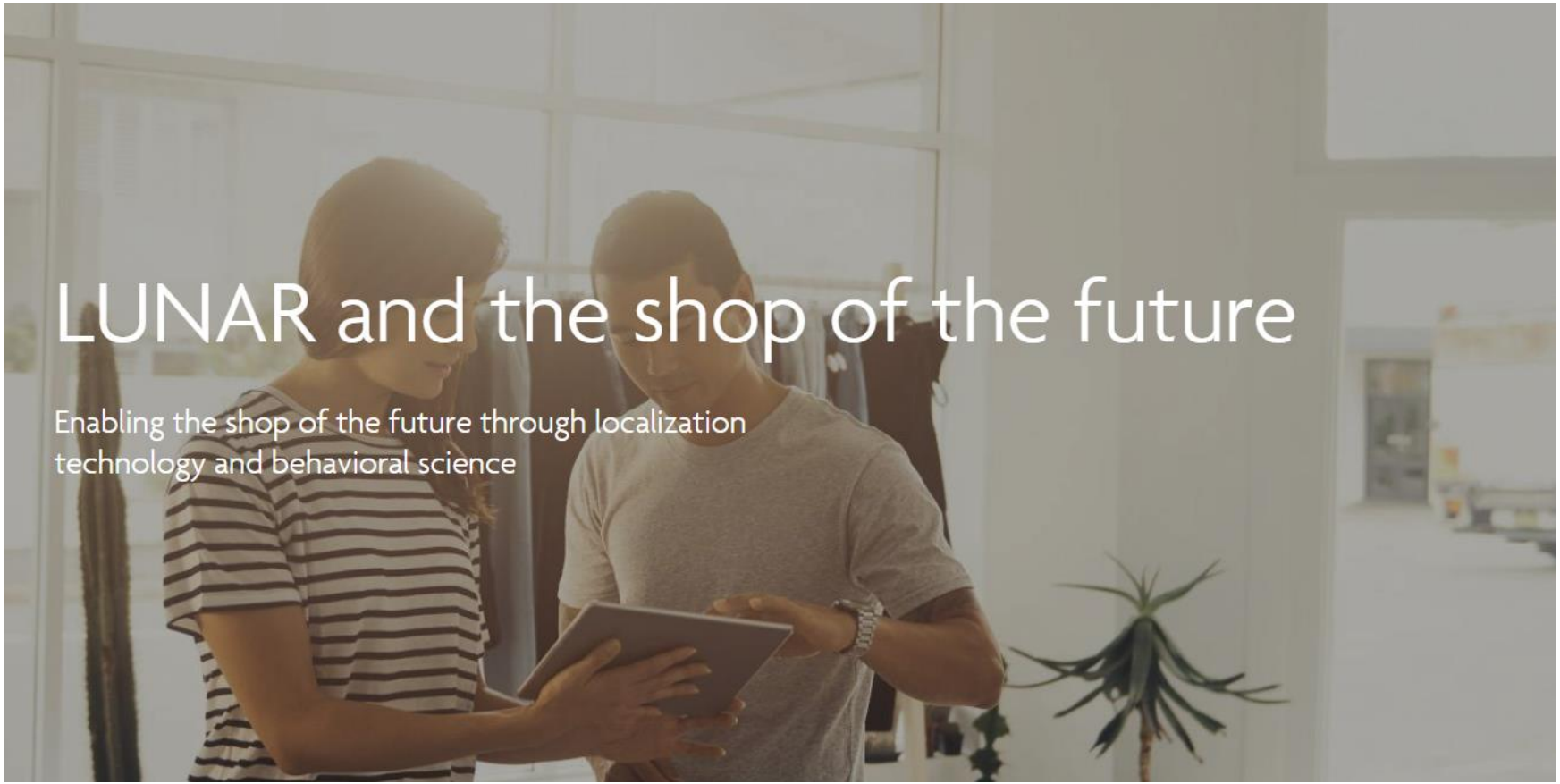

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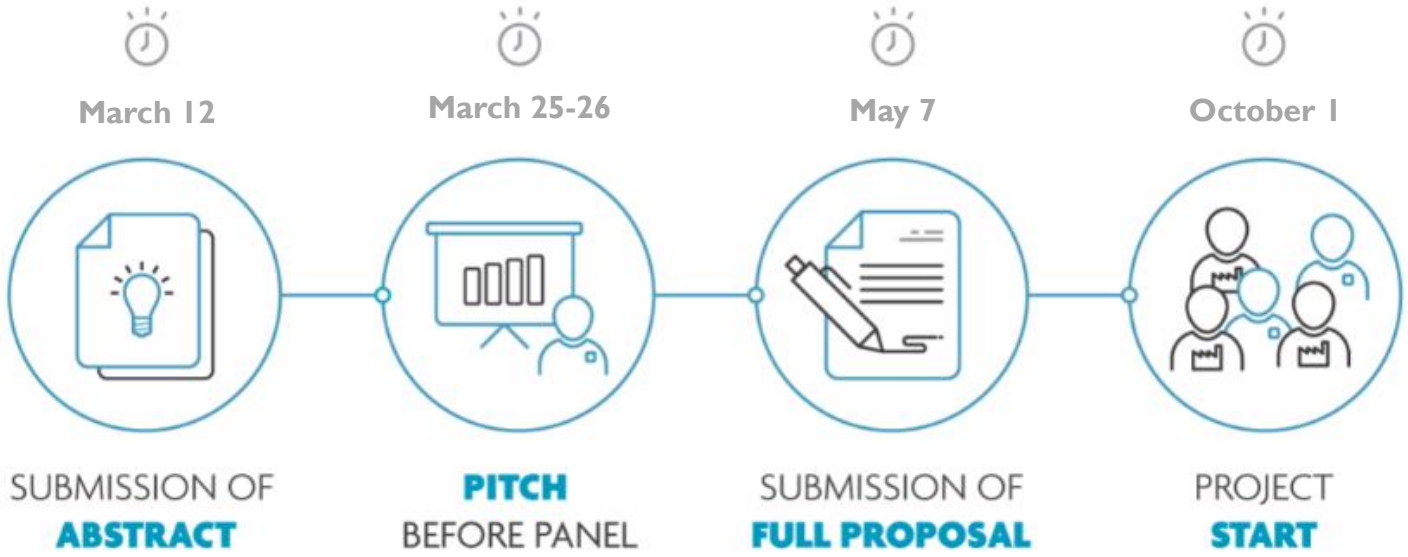
IMEC.ICON CALL 2020-1

TIMING AND SUBMISSIONS



https://www.imec-int.com/en/icon

icon@imec.be

A FEW IDEAS...

- combination of big crowd track & trace and reliable emergency communication
- sports analytics based on smart sportswear
- data driven fire management
- smart EV-charging
- AR/VR education/training / low-latency AR video
- high-resolution ranging and localisation
- activity classification based on radar sensing

PROGRAMME FOR TODAY

PROGRAMME - PART I

AUDITORIUM

- **13:30** **VSLAM is ready:**
  performant and affordable asset localization using vision
  Dominick Vanthienen

- **14:05** **Multi-modal localization for battery powered IoT applications**
  Michiel Aernouts

- **14:30** **Sensor-fusion for accurate in-door 3D localisation**
  Jia Wan

COFFEE BREAK
ENTRANCE HALL

- **Demo** **Indoor positioning, navigation, and timing (iPoint) system**
  Hafeez M. Chaudhary

PROGRAMME - PART 2

AUDITORIUM

- **15:30** **Indoor positioning, navigation, and timing (iPoint) system**
  Hafeez M. Chaudhary

- **16:00** **Visible Light Positioning: What, why and how?**
  Nobby Stevens

KU LEUVEN

Kris.Hermus@imec.be

www.wirelesscommunity.be

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