



INNOVATION & EXPERIMENTATION

KOEN VERVOORT
USER INVOLVEMENT EVANGELIST
18/01/19
RIGA

KOEN VERVOORT



1994



2001



2004



2006



2009



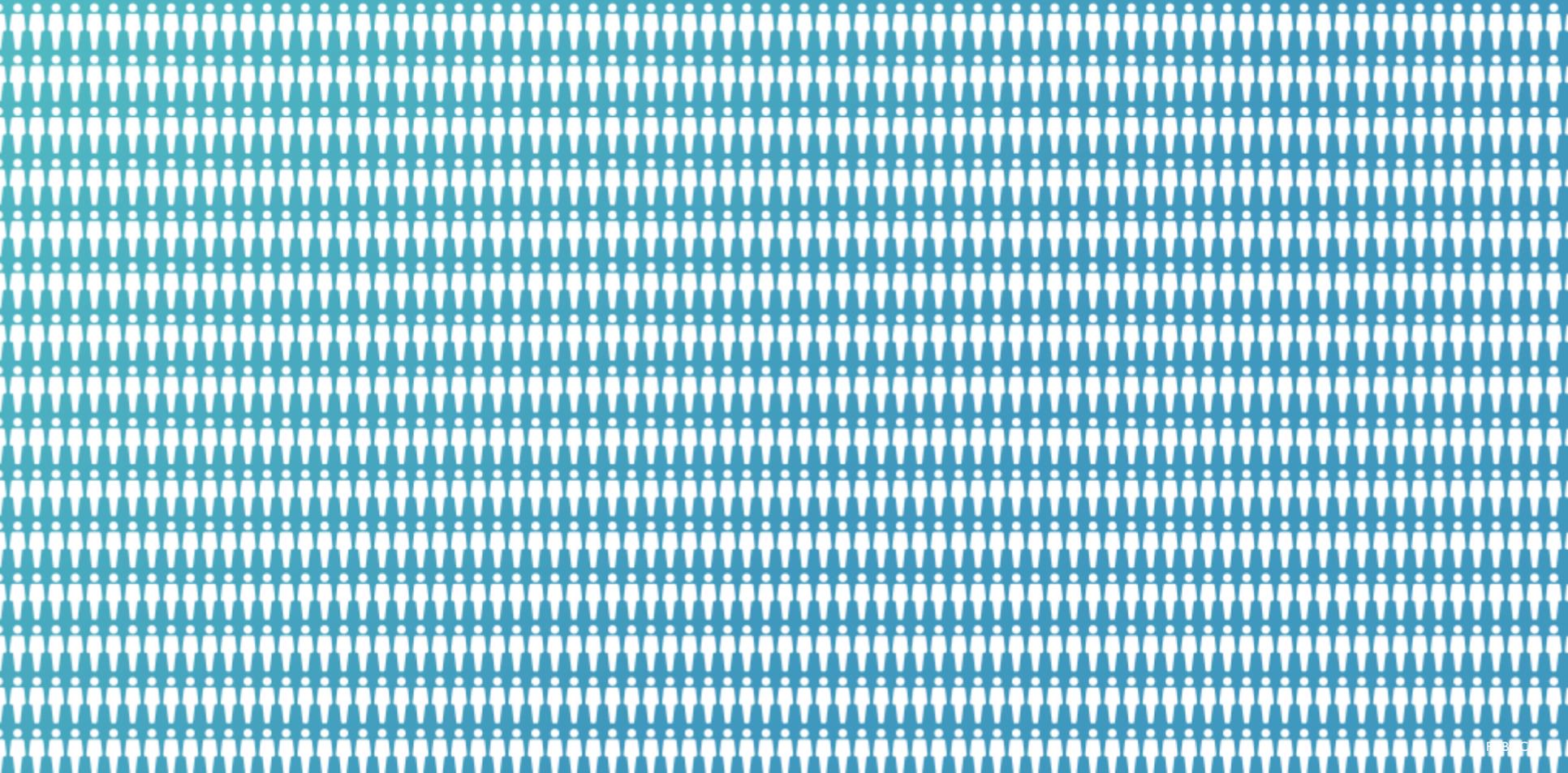
2016





imec is
the world-leading R&D and innovation hub
in **nanoelectronics** and **digital technology**.

CLOSE TO 3,700 HIGHLY SKILLED RESEARCHERS & PRACTITIONERS







USA
SAN FRANCISCO

USA
ORLANDO

BELGIUM
LEUVEN HQ - GHENT



THE NETHERLANDS
EINDHOVEN

INDIA
BANGALORE

CHINA
SHANGHAI



TAIWAN
HSINCHU

JAPAN
OSAKA



JAPAN
TOKYO





R&D



Monitoring



Living Labs





smart health



diagnostics and healthcare
within everybody's reach



smart mobility



comfortable & safe
transportation



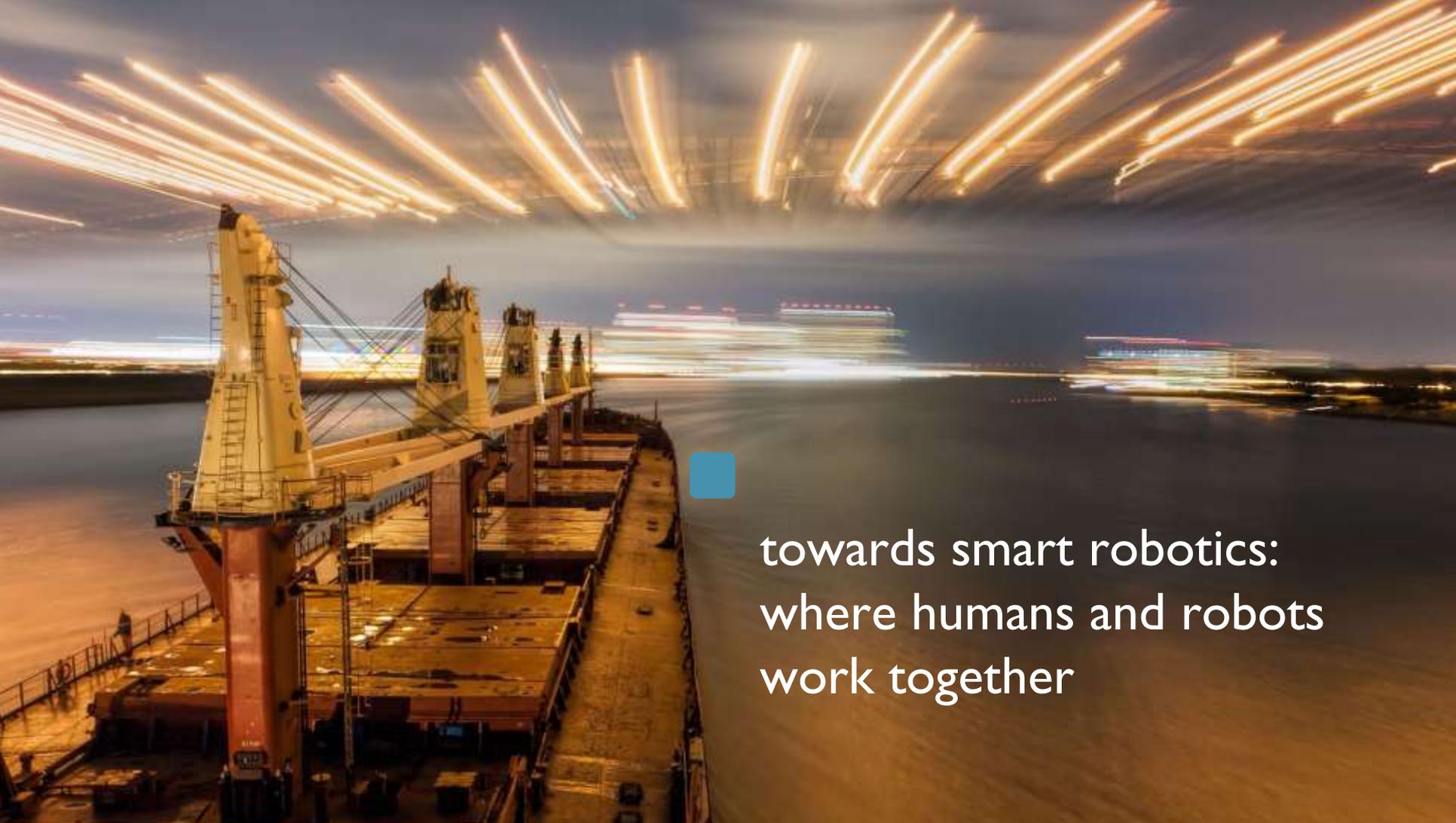
increasing quality of life in smart cities



City of Things
Europe's largest smart city lab



smart logistics and manufacturing



towards smart robotics:
where humans and robots
work together



smart food & agriculture



smart energy

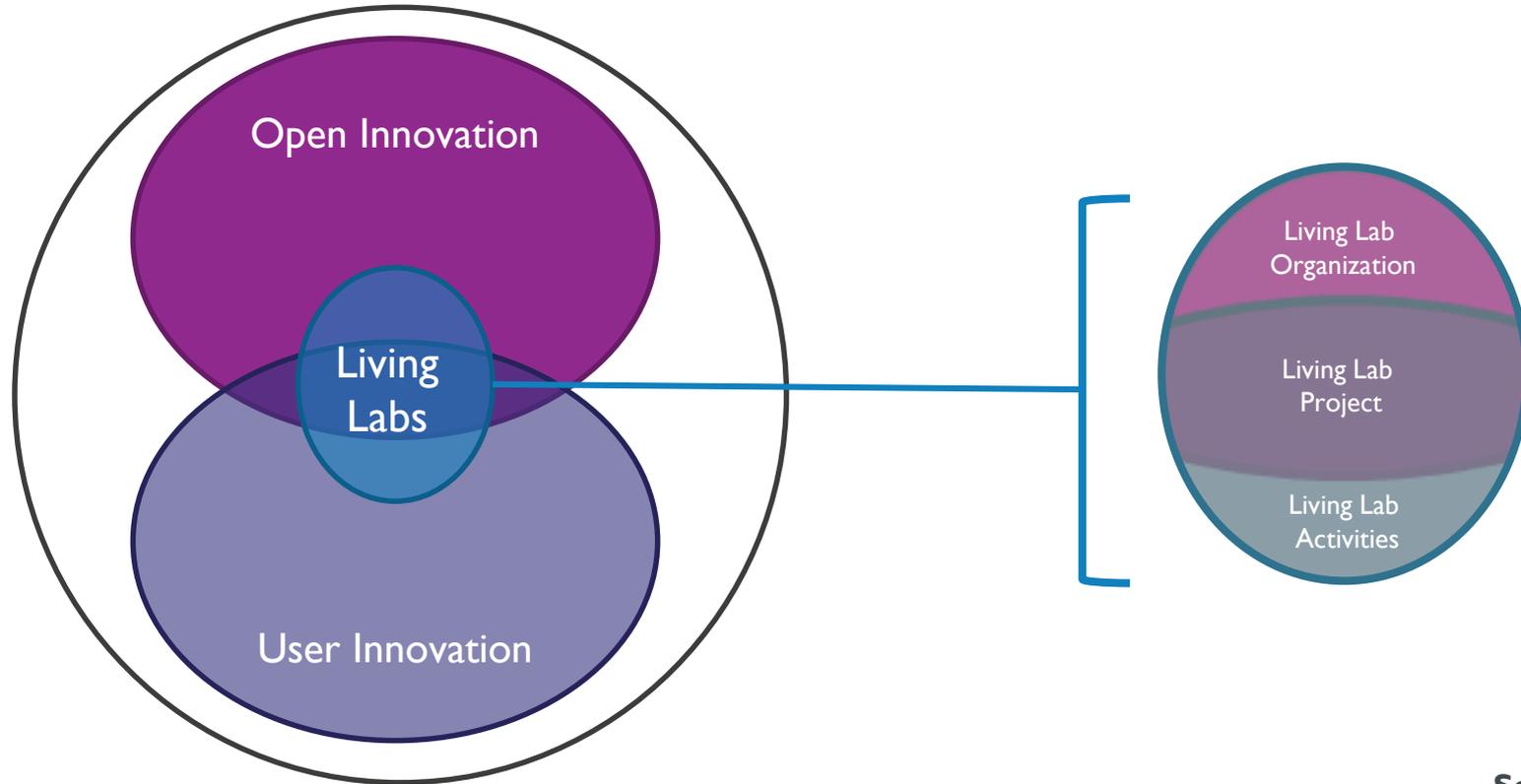


towards a smart energy system

LIVING LABS @ IMEC

LIVING LABS AS FACILITATOR

Distributed Innovation Processes



Schuurman, 2015

<https://biblio.ugent.be/publication/5931264/file/5931265.pdf>

EMPOWERING
USERS TO
IMPACT THE
INNOVATION
PROCESS

**IMPROVE DIGITAL INNOVATIONS BY ACTIVELY INVOLVING USERS &
STAKEHOLDERS THROUGH CO-CREATION & REAL-LIFE
EXPERIMENTATION**

MULTI-
STAKEHOLDER

ITERATIONS OF
DESIGN CYCLES

OUTSIDE OF
CONTROLLED
LAB

THE THREE LEVELS OF A LIVING LAB

LIVING LAB
PLATFORM

PUBLIC

PRIVATE

PEOPLE

ACADEMIA

INFRA-
STRUCTURE

DATA

INNOVATION
MANAGEMENT
PROCESS

INNOVATRIX
UPDATE

EXPLORE &
CO-CREATE

INNOVATRIX
UPDATE

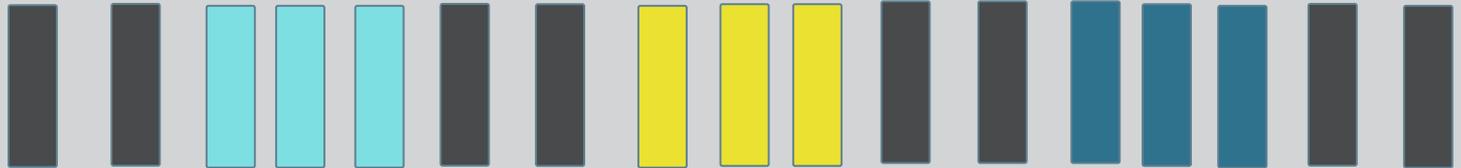
DESIGN &
PROTOTYPE

INNOVATRIX
UPDATE

TEST
& VALIDATE

INNOVATRIX
UPDATE

LIVING LAB
RESEARCH
ACTIVITIES



Schuurman, 2015

<https://biblio.ugent.be/publication/5931264/file/5931265.pdf>

AT IMEC.LIVINGLABS, WE MAP, DESIGN & TEST USER EXPERIENCES & BUSINESS MODELS



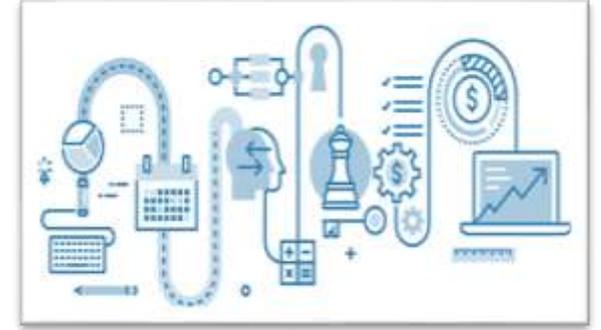
1. EXPLORE AND CO-CREATE WITH USERS

DEEP UNDERSTANDING OF CUSTOMER & MARKET NEEDS & BEHAVIOR
(CAUSALITY VS CORRELATION)



2. DESIGN & PROTOTYPING

EXPLICIT DESIGN CHOICES, TECHNOLOGY SCOUTING & RAPID PROTOTYPING



3. TEST & VALIDATION

AS REAL-LIFE AS POSSIBLE SMART SPACES & TOOLS USER ENGAGEMENT





I. EXPLORE AND CO-CREATE WITH USERS

DEEP UNDERSTANDING OF CUSTOMER &
MARKET NEEDS & BEHAVIOR
(CAUSALITY VS CORRELATION)



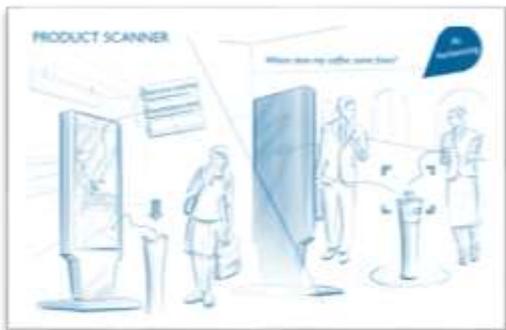
PROBING & CO-CREATION

Uncover tacit & latent user needs through
creative & projective techniques



CONTEXTUAL INQUIRY

Map frustrations, delights & contextual use to
identify market gaps as opportunities for
innovation



2. DESIGN & PROTOTYPING

EXPLICIT DESIGN CHOICES, TECHNOLOGY
SCOUTING &
RAPID PROTOTYPING



PROTOTYPING

Bridging the gap between technology & market by
increasing the TRL of innovation concepts



TOOLS FOR PROTOTYPING SUPPORT

Building innovative tools & products for
advanced user research & prototyping



3. TEST & VALIDATION

AS REAL-LIFE AS POSSIBLE
SMART SPACES & TOOLS
USER ENGAGEMENT



SMART SPACE EXPERIMENTATION

Testing innovation options & design in a real-life context through monitoring of user experience, behavior, motivation & attitude



EXPERIENCE KIT

Allow the capturing of user data in real-life and in real-time.
While the experience is taking place, instead of ex-post.

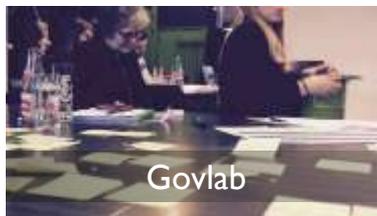
EXAMPLE PROJECTS OF IMEC.LIVINGLABS

STARTUPS & SMEs



MIX&MATCH

PUBLIC



CORPORATES



proximus



CASE STUDY START-UP: SPOTT (2015)

ADDED VALUE OF REAL-LIFE TESTING

PARTNERS O&O:

MEDIALAAN

BBDO

IDLAB

EXTRA OPEN FIELD

TRIAL:

VRT

PROXIMUS



SOTA
STUDY

CO-CREATION
SESSIONS

USABILITY
TEST

CLOSED
FIELD TRIAL

PSAP
SURVEY

OPEN
FIELD TRIAL

JUL 15
4 IMEC EXPERTS

AUG 15
9 POTENTIAL USERS

SEP 15
12 TEST USERS

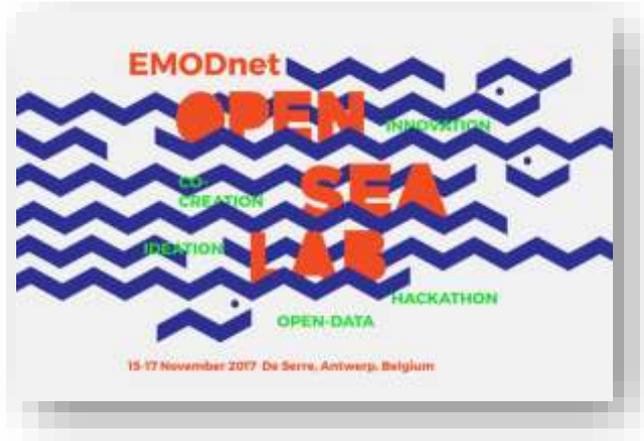
NOV-DEC 15
254 TEST USERS

FEB 16
307 RESPONDENTS

JUN-JULI 16
OVER 20K TEST USERS

CASE STUDY PUBLIC ORGANIZATION: OPEN SEA LAB (2017)

FROM IDEA TO PROTOTYPE



OPEN SEA LAB HACKATHON

Three-day hackathon on marine open data

A la carte workshops on ideation, user testing, design & data visualization

New edition in 2019



CASE STUDY CORPORATE: ZAHA HADID(2017)

ADDED VALUE MULTI-DISCIPLINARY APPROACH



ZAHA HADID



CONTEXTUAL INQUIRY



DESIGN OF WAYFINDING

PROJECT LEVEL:

THE INNOVATRIX IS A PROCESS-STRUCTURING INNOVATION FRAMEWORK TO VALIDATE ASSUMPTIONS THROUGH CONTINUOUS & ITERATIVE TESTING

**INNOVATION
MANAGEMENT
PROCESS**



INNOVATRIX		imec.livinglabs ASSUMPTION & VALIDATION MATRIX			imec
CUSTOMER SEGMENT					
VALUE					
CHANNELS & PARTNERS					
VALUE PROPOSITION					
RELATIONS					
SUBSIDIARIES					
VALUE CAPTURE					
KEY RESOURCES					

IMEC INNOVATRIX

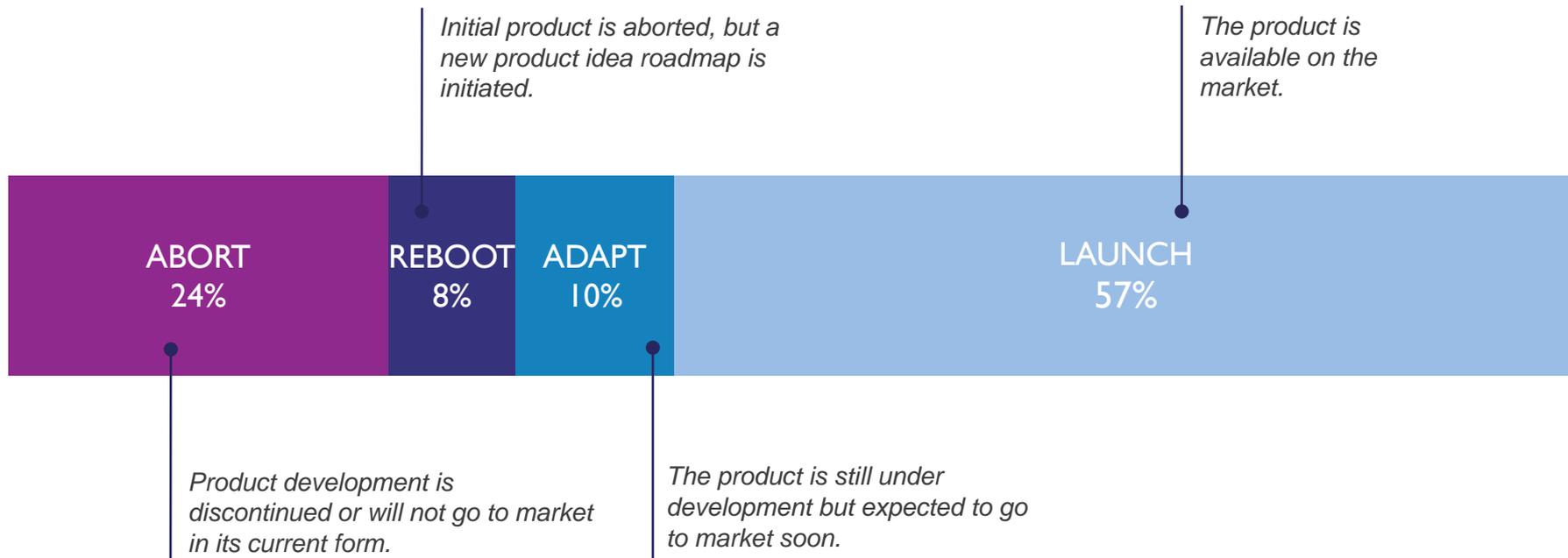
Map user experience & business model status

Identify & prioritize (key) assumptions

Focused on iterative trial & learning



LIVING LAB INSIGHTS* HAVE BEEN USED TO



OFFLINE USERS: 1 – 742

ONLINE USERS: 3 – 20.000

DURATION: 2 – 18 MONTHS (AVG. 8 MONTHS)

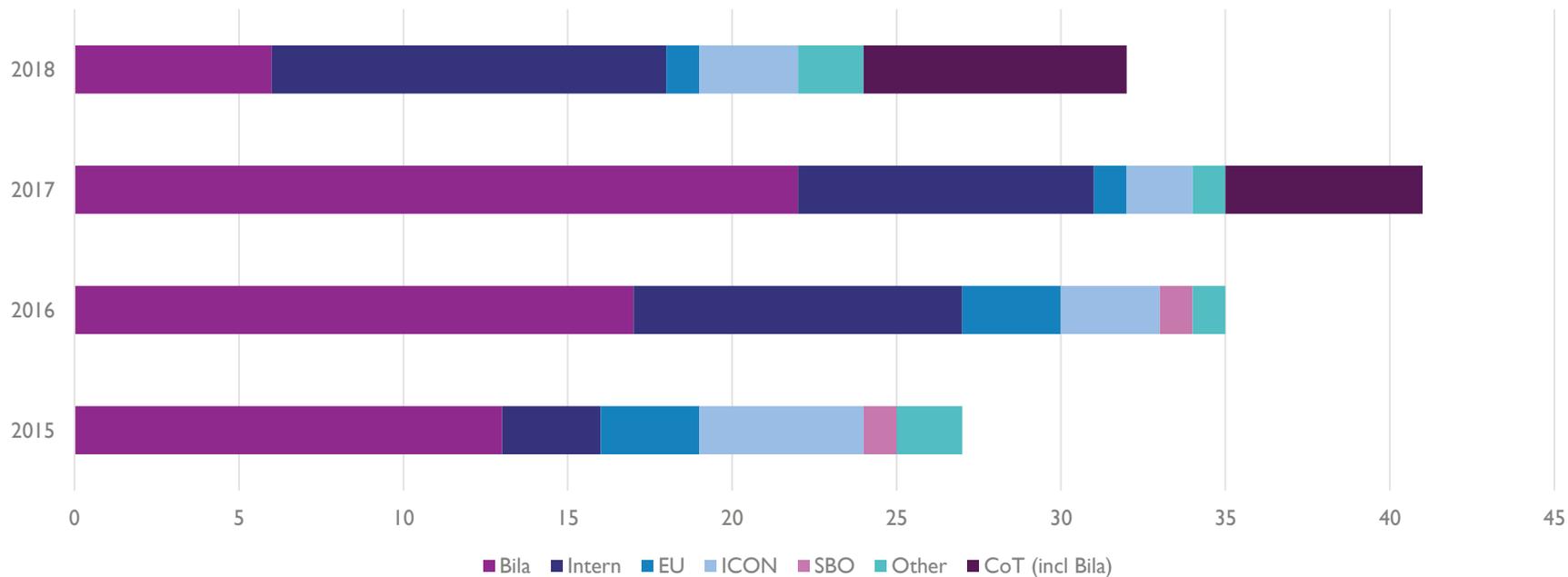
*N=86

Last updated May 2018

USER INVOLVEMENT @ IMEC

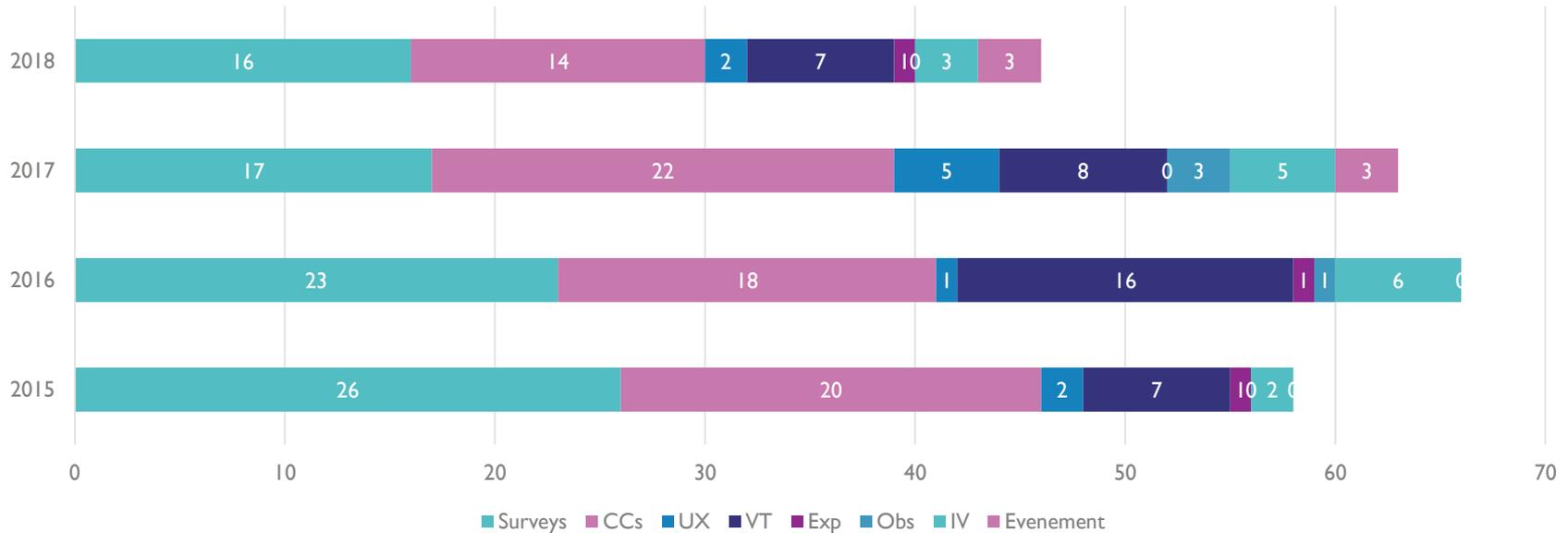
2018 – figures

Different kind of projects

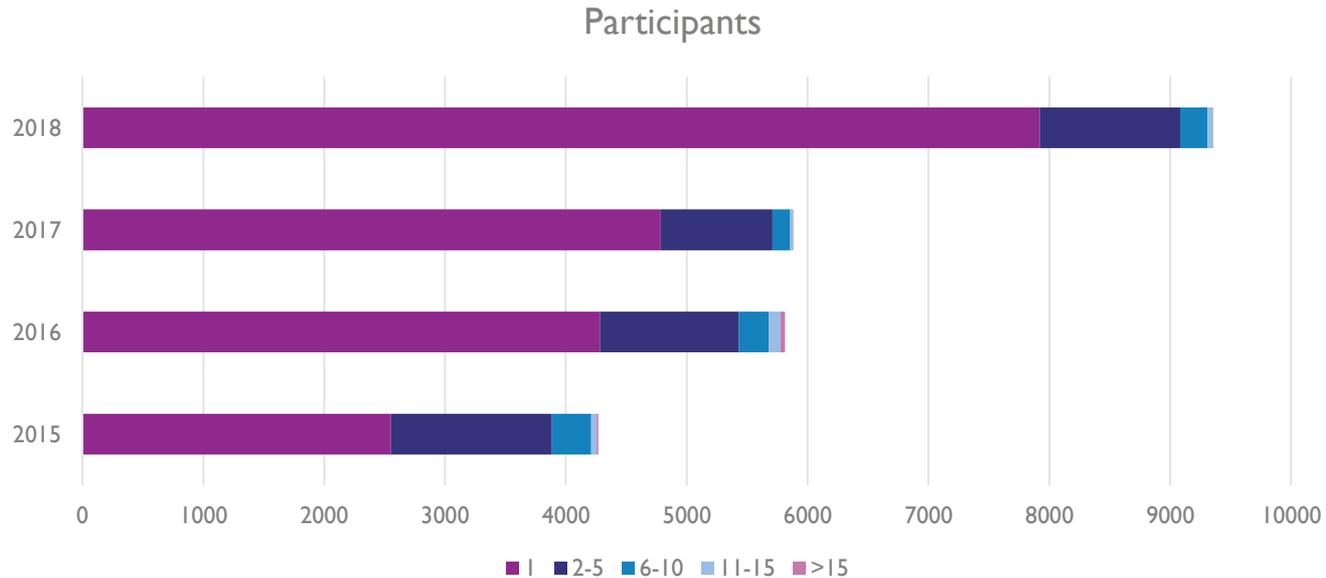


2018 – figures

Research steps

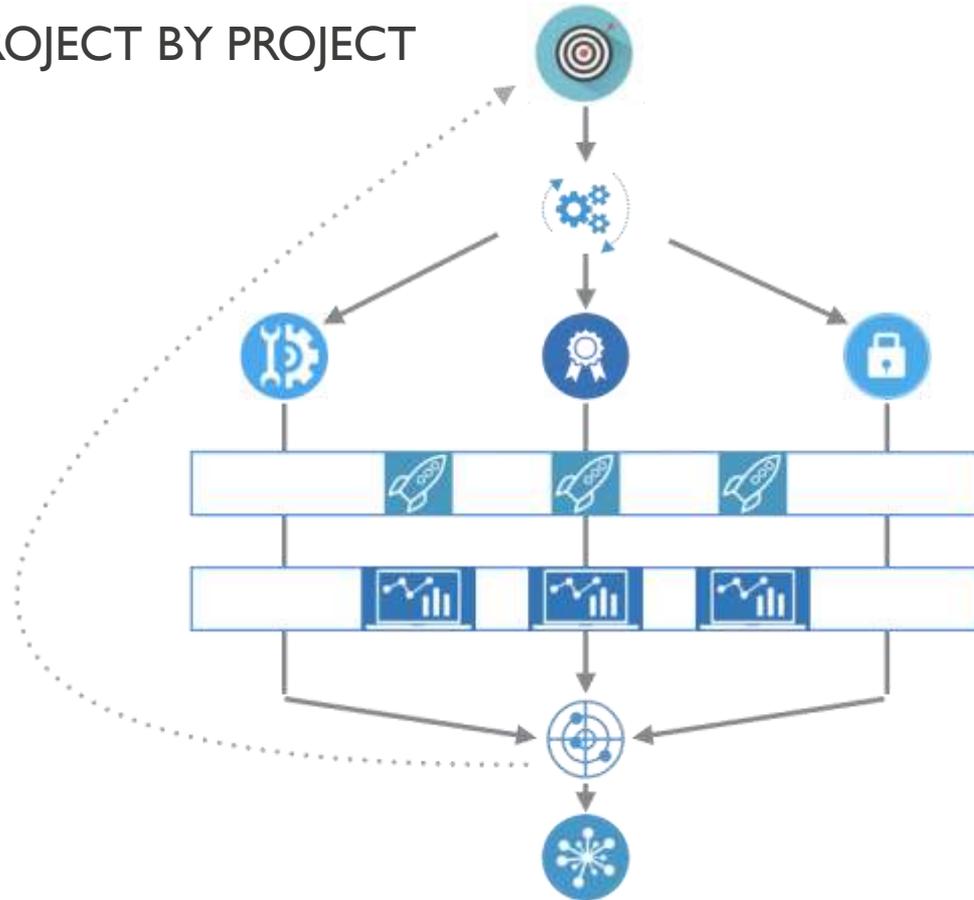


2018 – figures



A GENERAL FLOW

OVERALL PANEL & PROJECT BY PROJECT





embracing a better life

Koen Vervoort
User Involvement Evangelist

Koen.vervoort@imec.be

+32 496 70 46 46

[@Koen_Vervoort](https://www.linkedin.com/in/Koen_Vervoort)