OMILAB Day 2020
September 25, 2020
Berlin, Germany

INNOVATION THROUGH DIGITALISATION

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University of Vienna

- founded **1365** by Duke Rudolf IV
- the oldest university in the German-speaking area
- one of the biggest universities in Europe
- 19 faculties

650 JAHRE universität wien

…in 2015

University of Vienna in Numbers

Graduates
in the academic year 2017/18

9.979

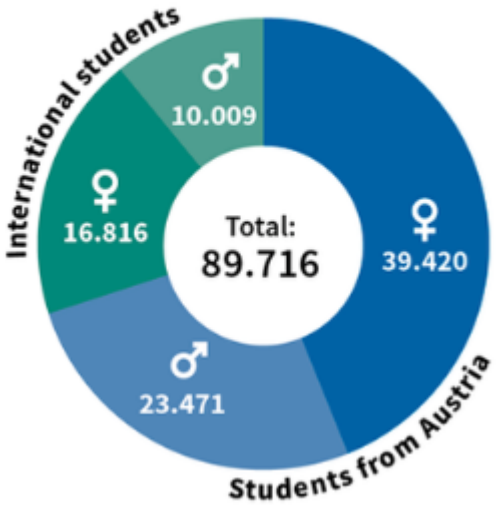
Academic staff
some on a part-time basis, as of 31. Dec. 2018

6.844

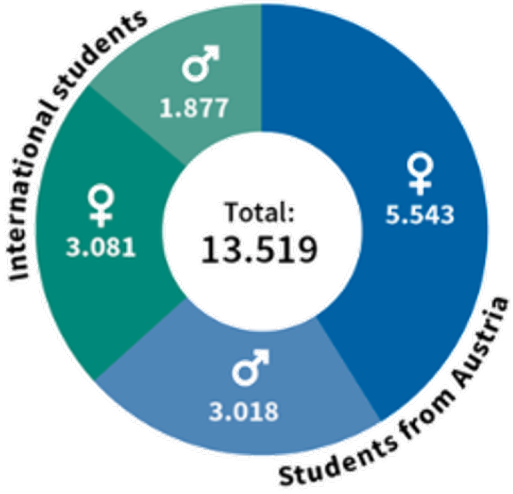
Degree programmes
winter semester 2018/19

178

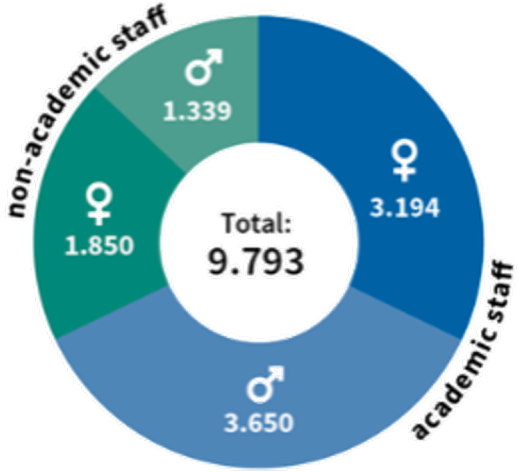
Students
winter semester 2018/19



New entrants
winter semester 2018/19



Employees
as of 31. Dec. 2018



Source: www.univie.ac.at

WE DO NOT PROGRAM DEVICES,

WE REALIZE BUSINESS MODELS IN A DIGITAL WORLD!

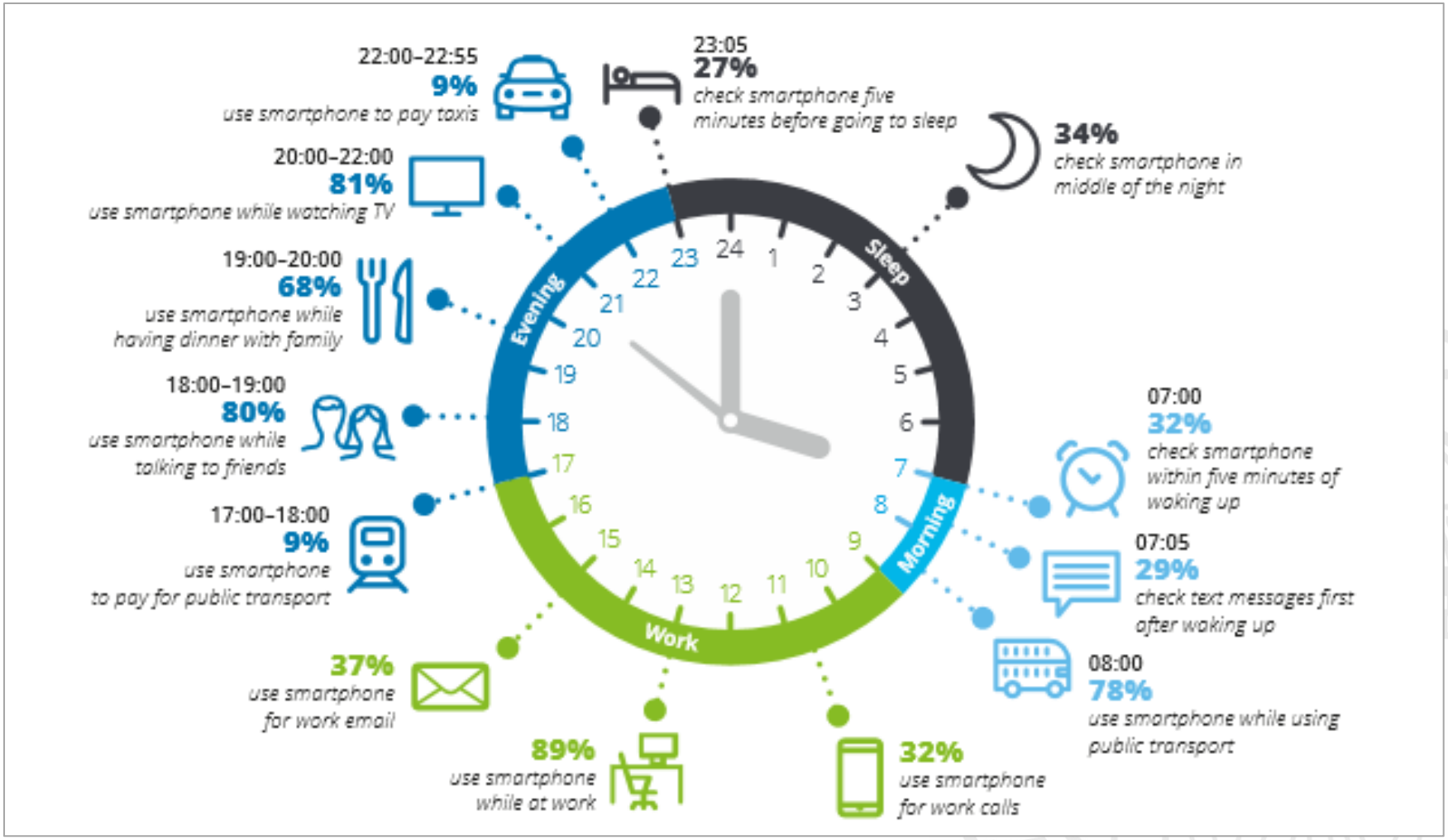
THE PRESENT…

- **Amazon found every 100ms of latency cost them 1% in sales.**
- **Google found an extra 0.5 seconds in search page generation time dropped traffic by 20%.**
- **A broker could lose $4 million in revenues per millisecond if their electronic trading platform is 5 milliseconds behind the competition.**

Source: https://blog.gigaspaces.com/amazon-found-every-100ms-of-latency-cost-them-1-in-sales/
http://www.linkedin.com

PRIVATE BEHAVIOR

A DAY IN THE LIFE OF A SMARTPHONE



Source: https://www2.deloitte.com/content/dam/Deloitte/uk/Documents/consumer-business/deloitte-uk-consumer-review-digital-predictions.pdf

SOCIAL BEHAVIOR

SOCIAL (MEDIA) ENGAGEMENT

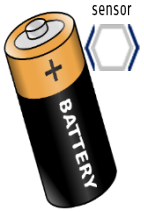
Source http://www.isabellakinkelaar.com/social-media-infographic/

The many faces of digitalization….

THE ENVIRONMENT IS DIGITAL, ACCESIBLE & CONNECTED

THE DIGITAL FUTURE
Two Principles

A.



Physical

Digital Functionality: Connectivity

Information

B.

Physical

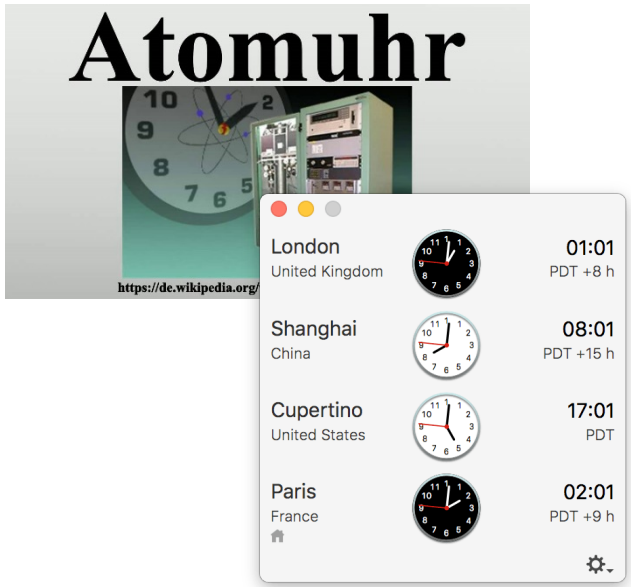
Digital Functionality: Replacement

Information

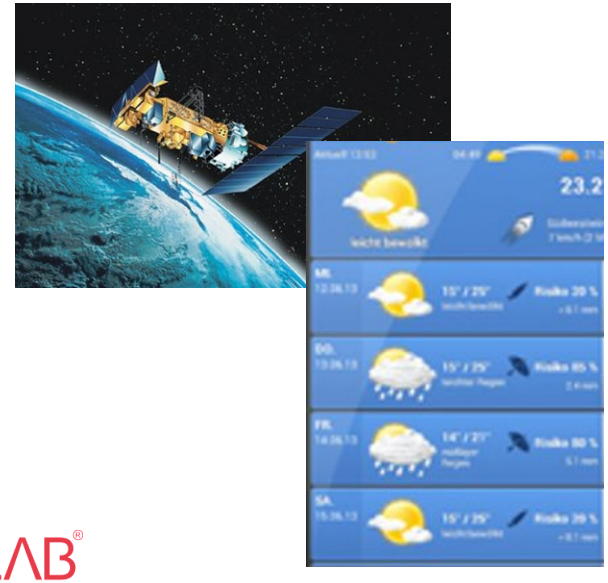
Source https://www.dreamstime.com/stock-illustration-online-shop-icon-flat-sale-buy-buying-internet-selecting-product-smartphone-payment-money-image69788011

ACCESS: TWO CASES

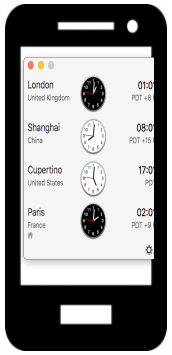
C.



D.



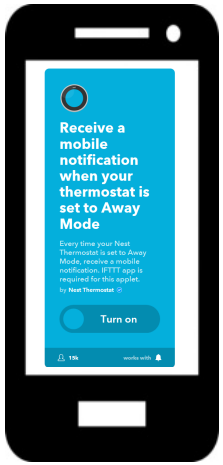
Access:
Enables Time
&
Location
Independence



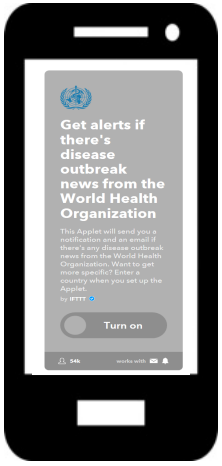
Source https://www.dreamstime.com/stock-illustration-online-shop-icon-flat-sale-buy-buying-internet-selecting-product-smartphone-payment-money-image69788011

CONNECTIVITY: TWO CASES

E.



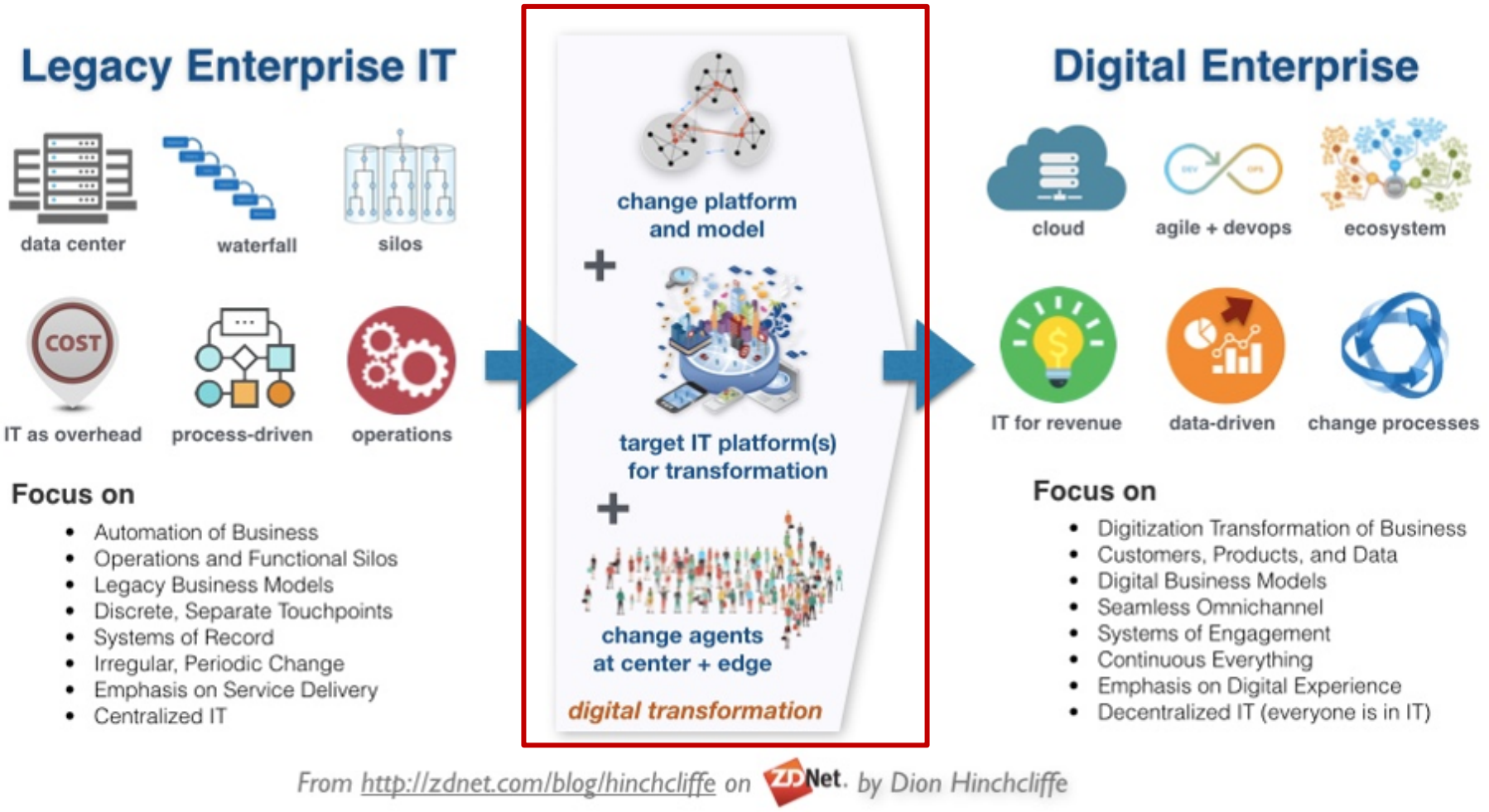
F.



Connectivity:
Enables Location Independence &
Real-time Information

Source http://www.dailymail.co.uk/news/article-2299456/Eerie-photos-imagine-world-cast-darkness--just-single-source-light-left-pierce-gloom.html
https://ifttt.com/applets/HTak4X5f-turn-your-lights-on-automatically-as-you-arrive-home?s=eqa2

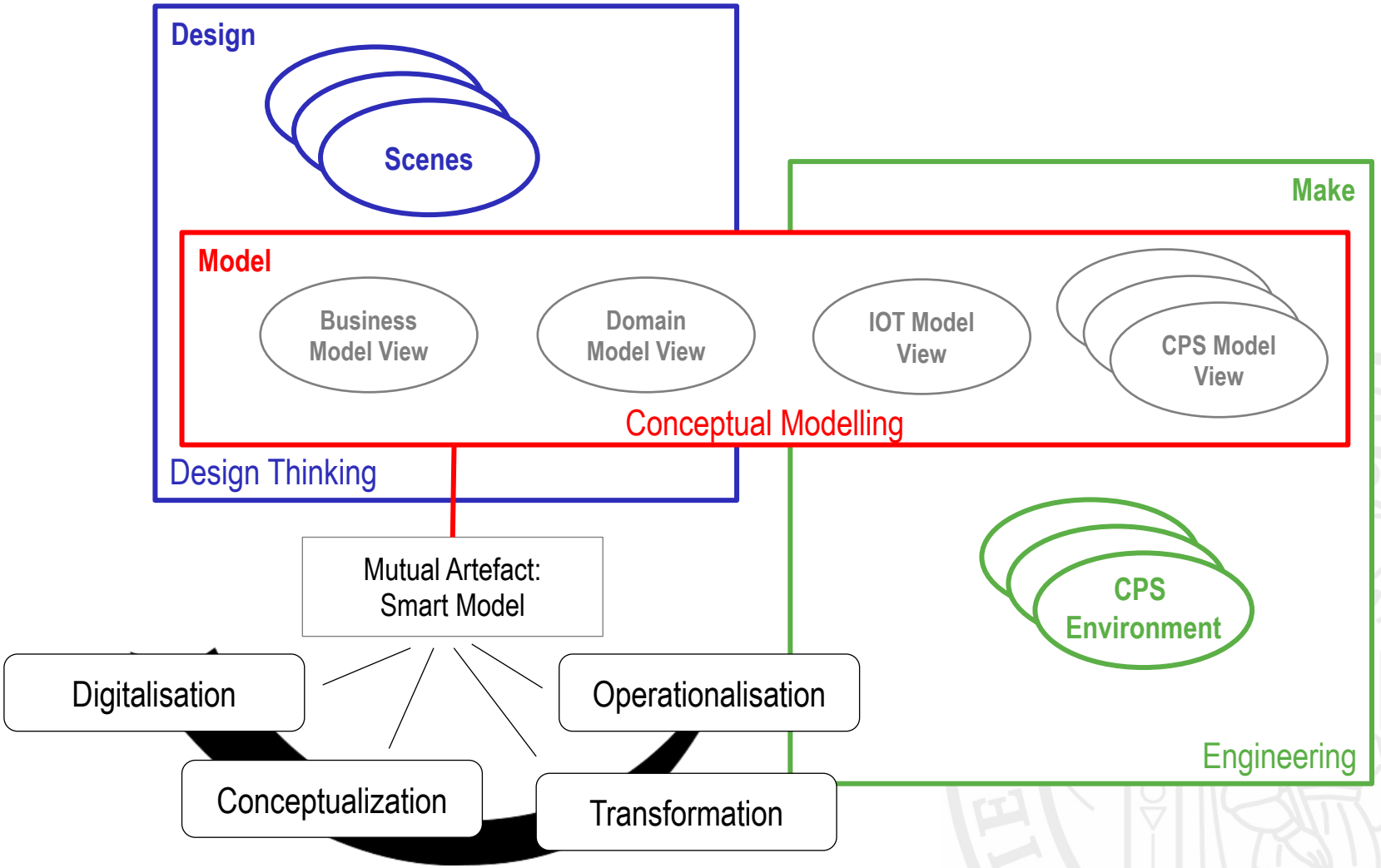
DIGITAL TRANSFORMATION ON FOUNDATIONAL PLATFORMS



From http://zdnet.com/blog/hinchcliffe on ZDNet. by Dion Hinchcliffe

Source: https://www.zdnet.com/blog/hinchcliffe/

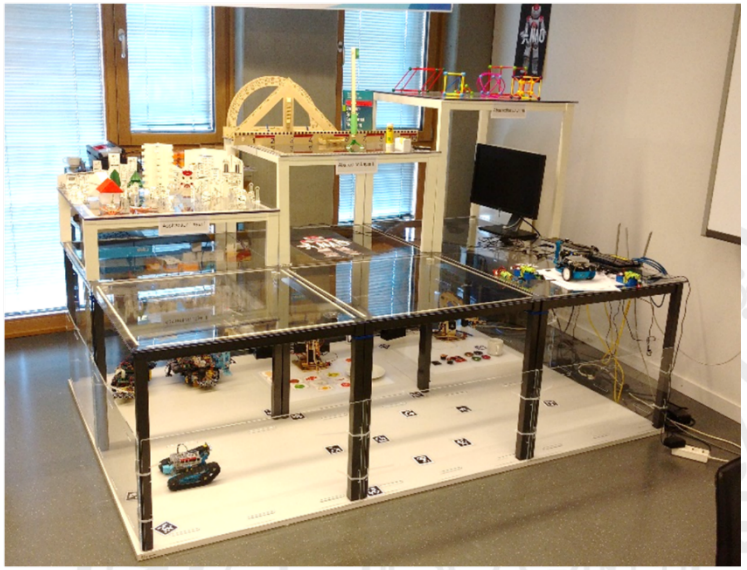
OMiLAB Approach: DESIGN – MODEL – MAKE



OMiLAB: The Vienna Node

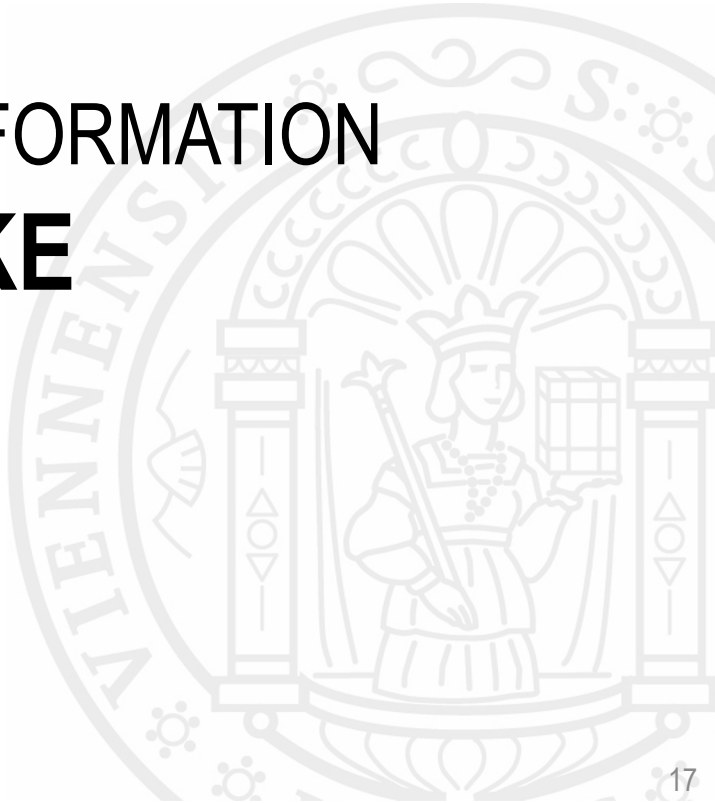
Modelling Method Development

Digital Product Lab

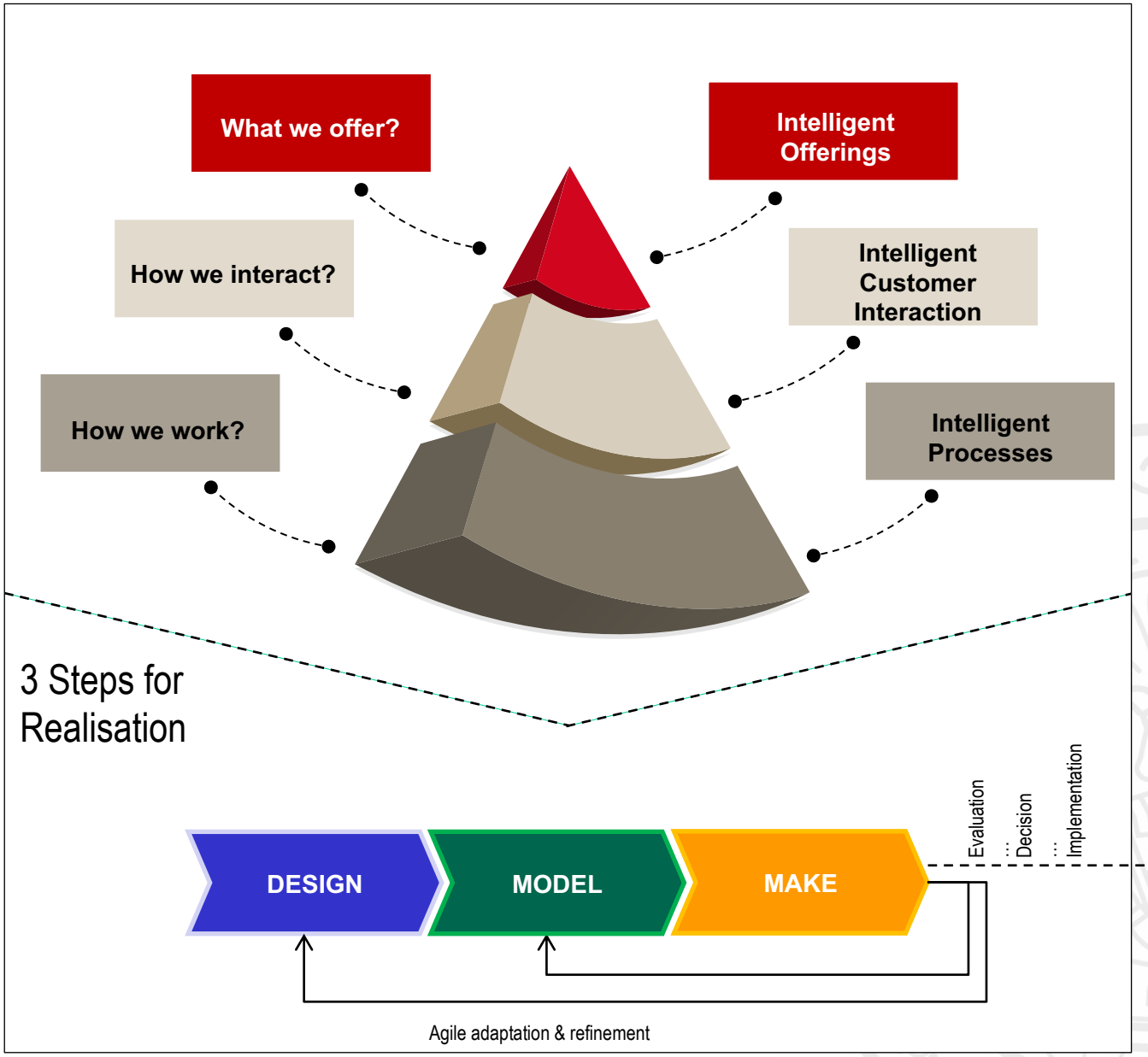


3 STEPS FOR DIGITAL TRANSFORMATION

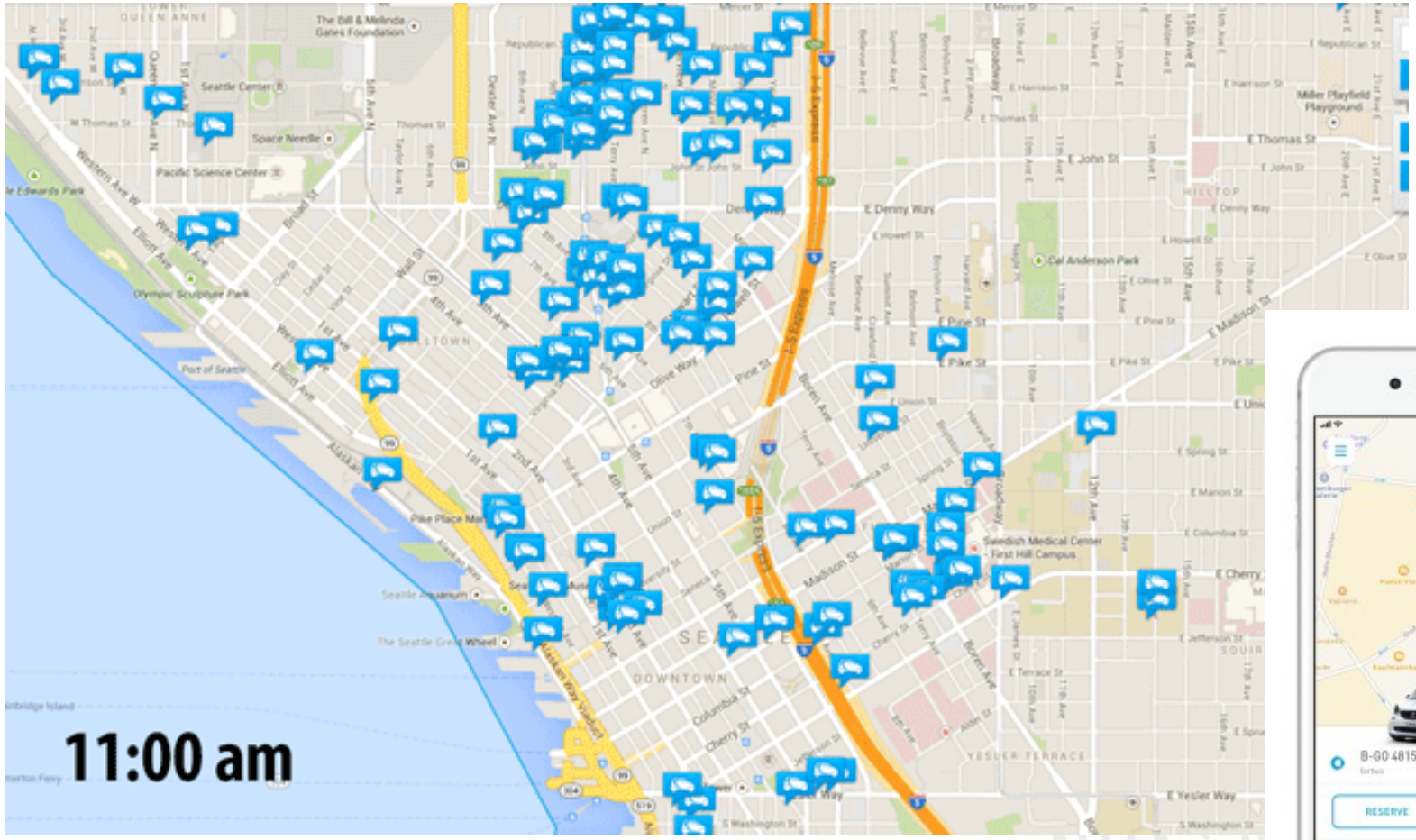
DESIGN – MODEL – MAKE



Intelligent Offering/Customer Interaction/Processes



ON-DEMAND MOBILITY: INTELLIGENT OFFERING?



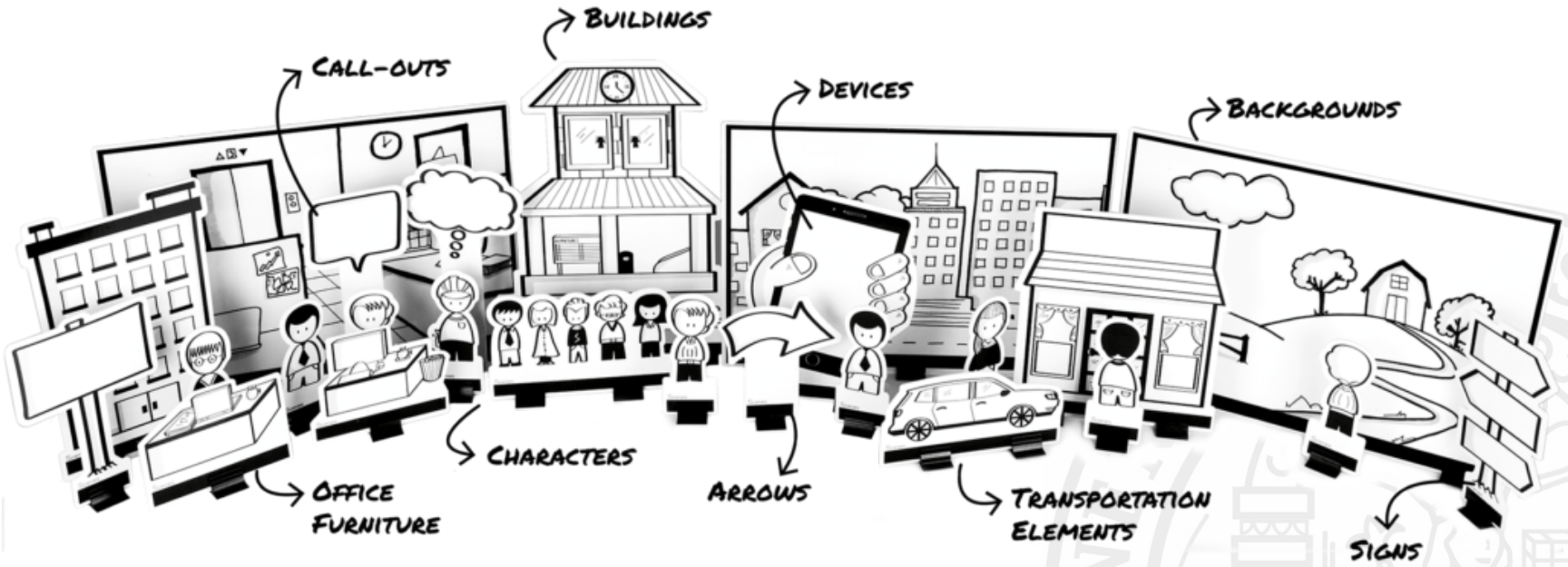
Source: http://www.landscapeandurbanism.com/2014/09/15/catch-while-catch-can-car2go/
https://www.car2go.com/AT/en/alexa/

DESIGN: SAP Scenes

Source: SAP Design Services (2018): Every great experience starts with a great story. URL: www.experience.sap.com/designservices/approach/scenes [05.12.2018].
K Detken, M. Langholz, J. Austermeier, H. Lee & T. Biedermann (2016): Design Education Initiative Award. URL: https://designawards.core77.com/Design-Education-Initiative/49601/Scenes [05.12.2018].

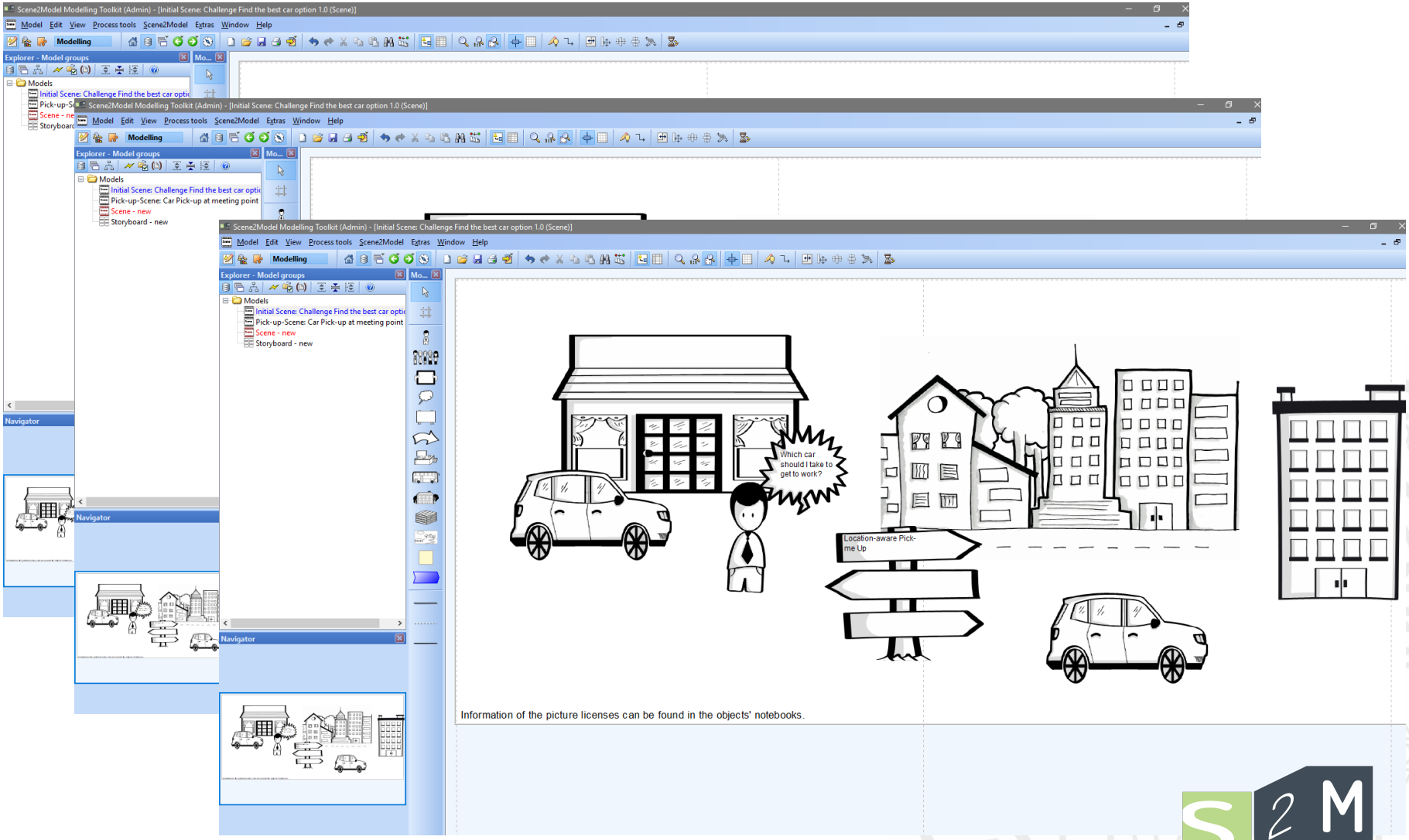
DESIGN THE CASE

Scenes includes a set of pre-defined illustrations that can be physically or digitally combined in scenes to create a visual story. These Scenes building blocks are grouped in the following categories:



Source: SAP Design Services (2018): Every great experience starts with a great story. URL: www.experience.sap.com/designservices/approach/scenes [05.12.2018].
K Detken, M. Langholz, J. Austermeier, H. Lee & T. Biedermann (2016): Design Education Initiative Award. URL: https://designawards.core77.com/Design-Education-Initiative/49601/Scenes [05.12.2018].

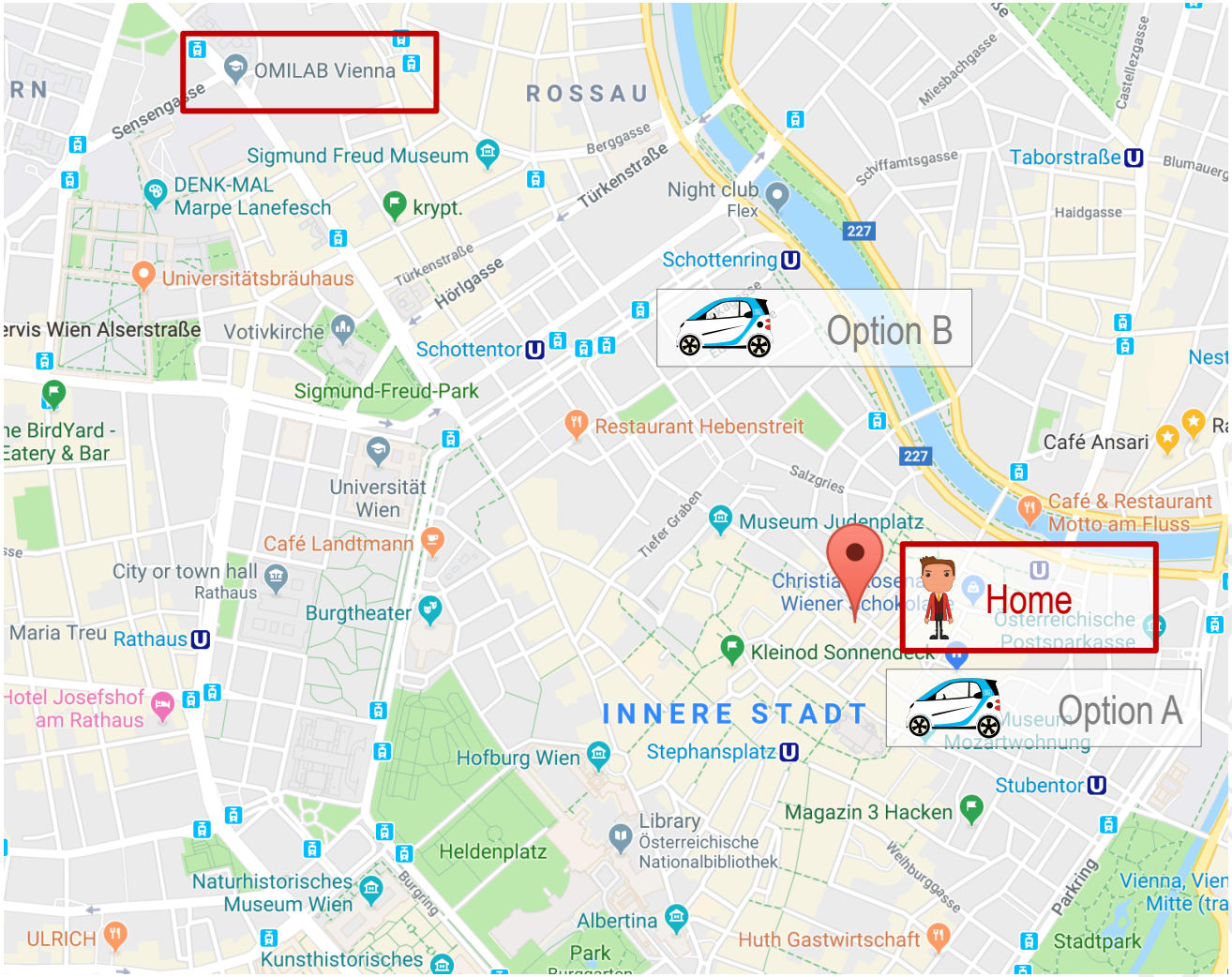
DIGITALISATION: BUSINESS MODEL VIEW



Scene2Model

CASE: Pick-Me-Up: Intelligent Car Rides 1/3

Intelligent Human Decision



Challenge:
Find car in close proximity that optimizes the routing (time, distance) in a location sensitive manner.

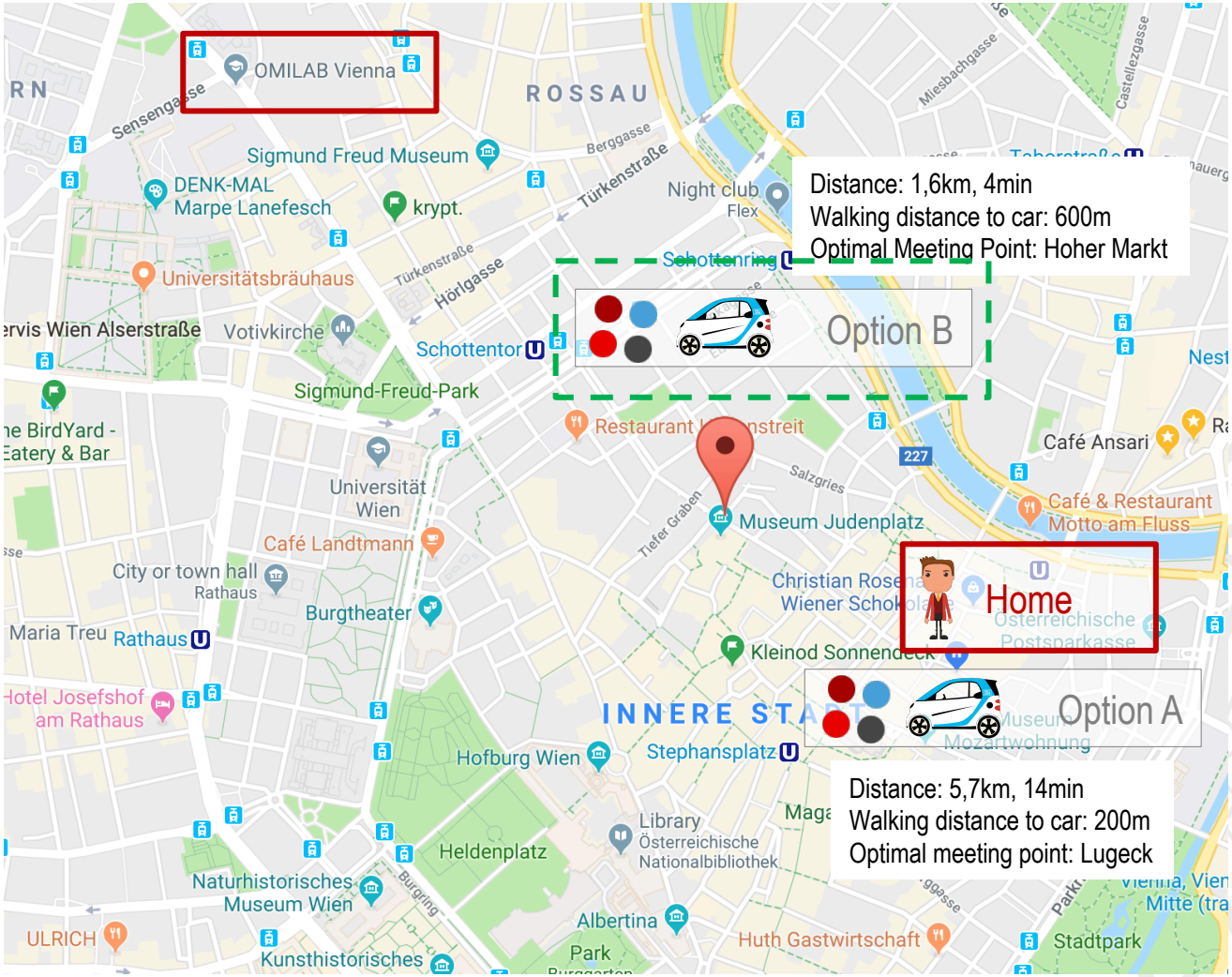
Option A:
+ Direct access (close proximity)
- Long ride/distance due to road logic in first district of Vienna

Option B:
+ Short distance
- Long commute -> search and find car

Source: https://fromstonetoscreen.wordpress.com/tag/car2go/
http://www.clker.com/clipart-map-pin-red--1.html, Google Maps

CASE: Pick-Me-Up: Intelligent Car Rides 2/3

Intelligent Car Decision (Proposal)



Intelligent Offering:
Processing and preparation of decision proposal at each car available at close proximity

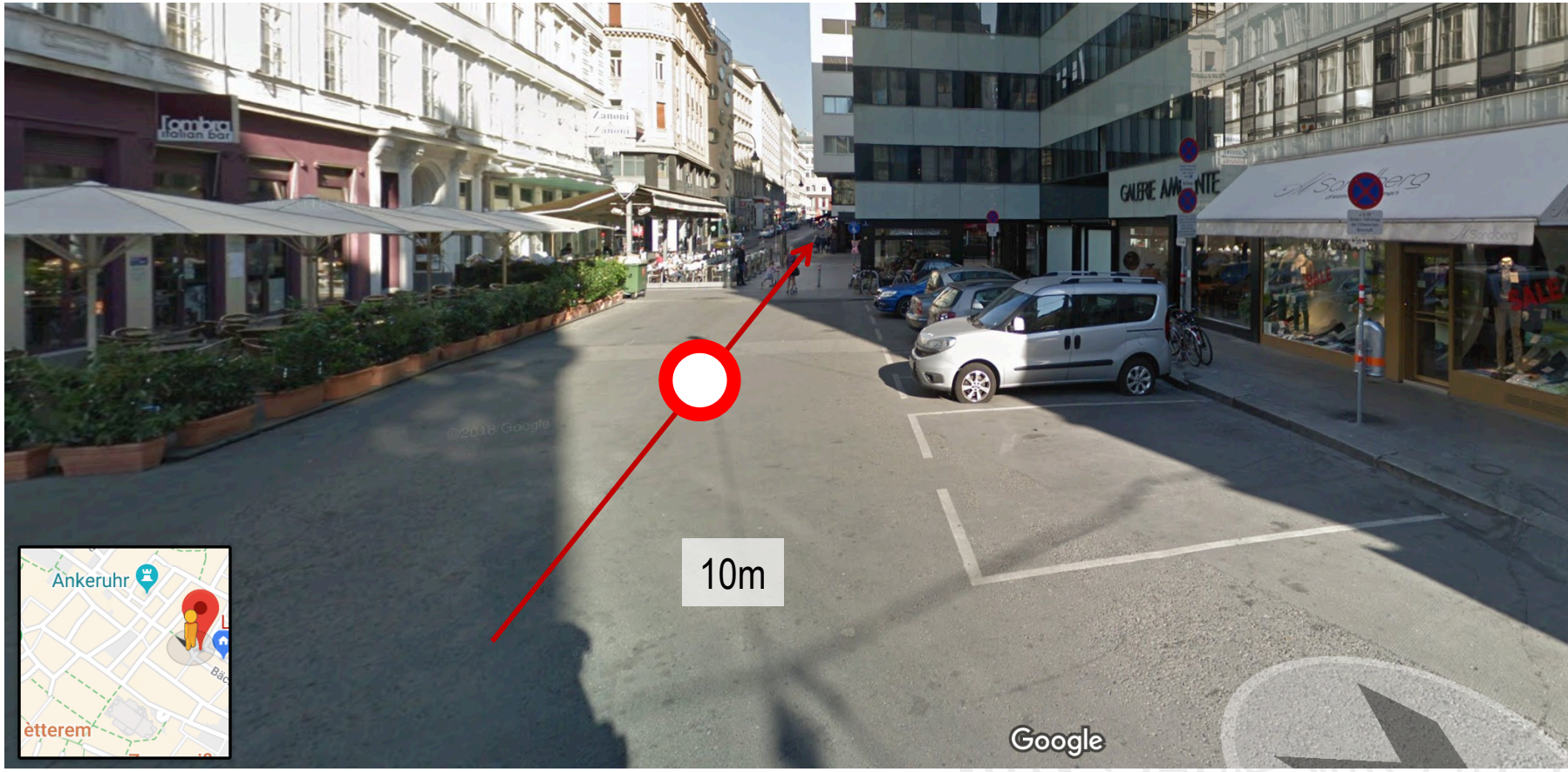
Intelligent Customer Interaction:
Select based on personal preference (experience, knowledge, environment conditions)

Intelligent Process:
Independent of technology and capabilities of car (taxi, car sharing, autonomous)

Source: https://fromstonetoscreen.wordpress.com/tag/car2go/
http://www.clker.com/clipart-map-pin-red--1.html, Google Maps

CASE: Pick-Me-Up: Intelligent Car Rides 3/3

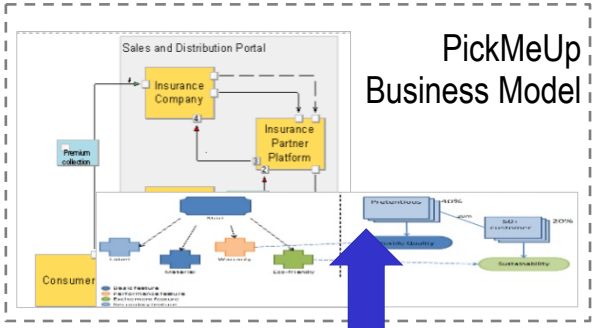
Reality



Source: Google Maps

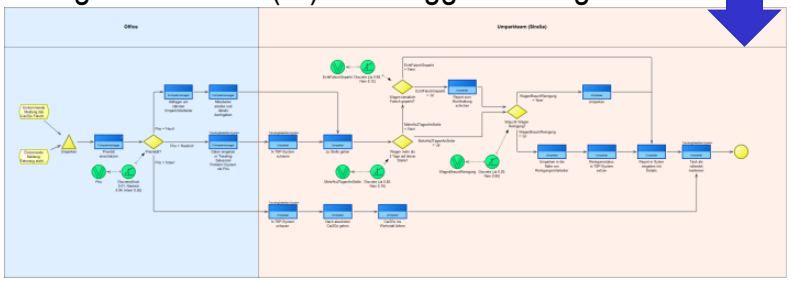
MODEL THE CASE

PickMeUp Business Model

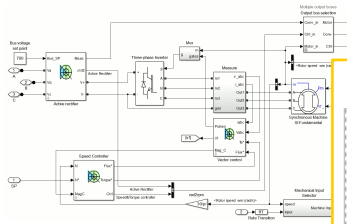


Intelligent Offering: PickMeUp

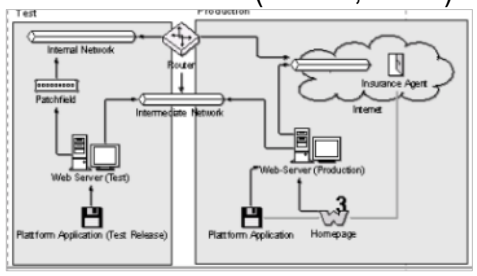
Intelligent Process: (AI) Car Suggestion Algorithm



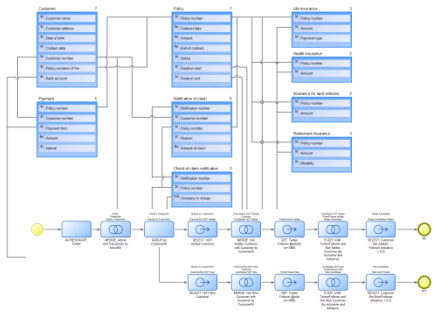
Car Infrastructure



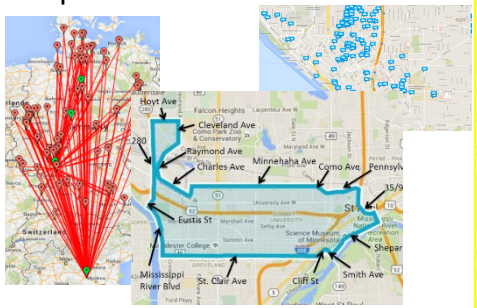
ICT infrastructure (mobile, cloud)



Member/contract/usage/billing data management

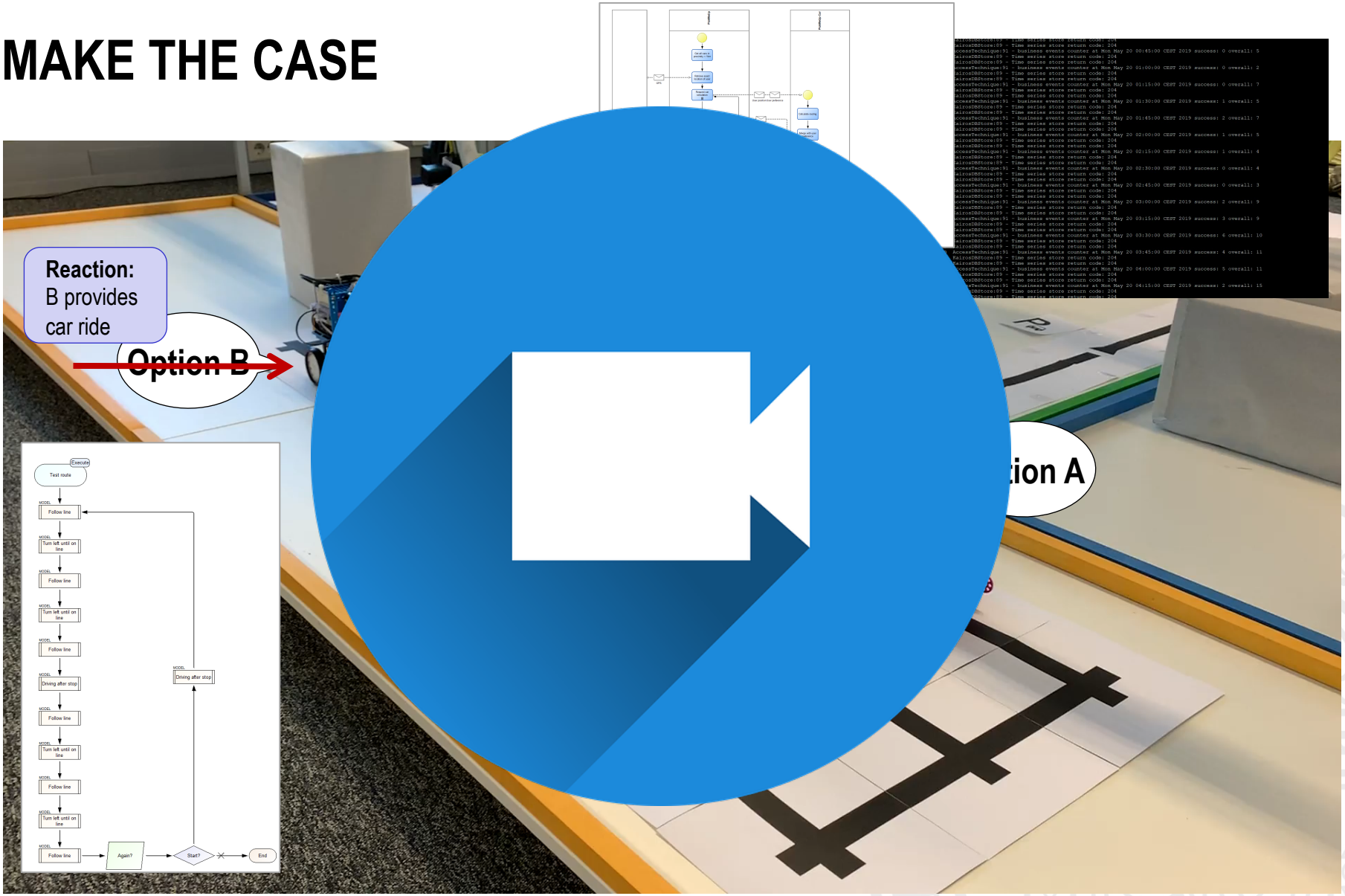


Business district
Car positions and status



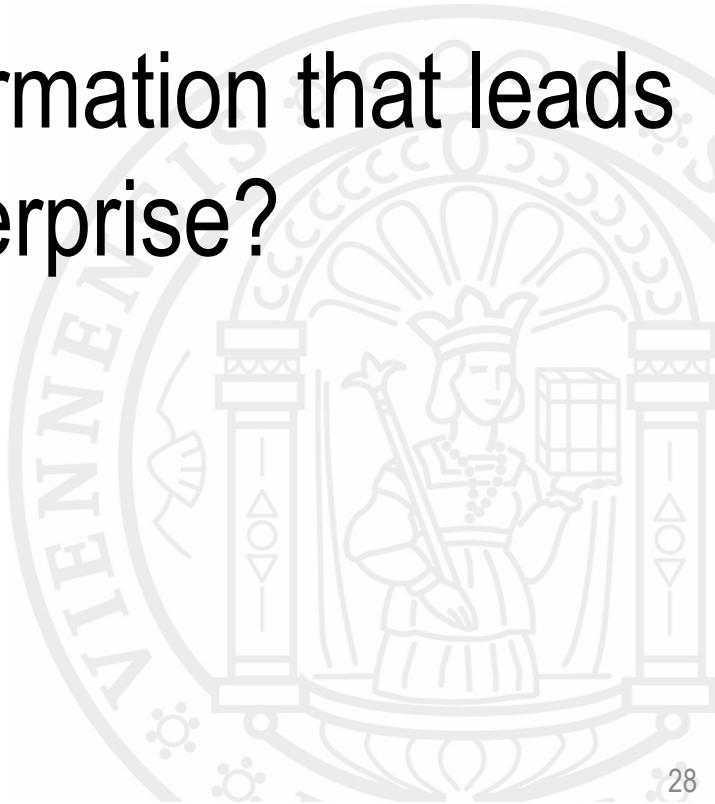
Source: h

MAKE THE CASE



WrapUp & Conclusion: Intelligent Enterprise

Which capabilities must
HUMANS and ORGANIZATIONS
have, to enable digital transformation that leads to an intelligent enterprise?



THANK YOU FOR YOUR ATTENTION!

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universität wien