System innovation needed

REFLECTIONS ON IMPACT OF DIGITALIZATION

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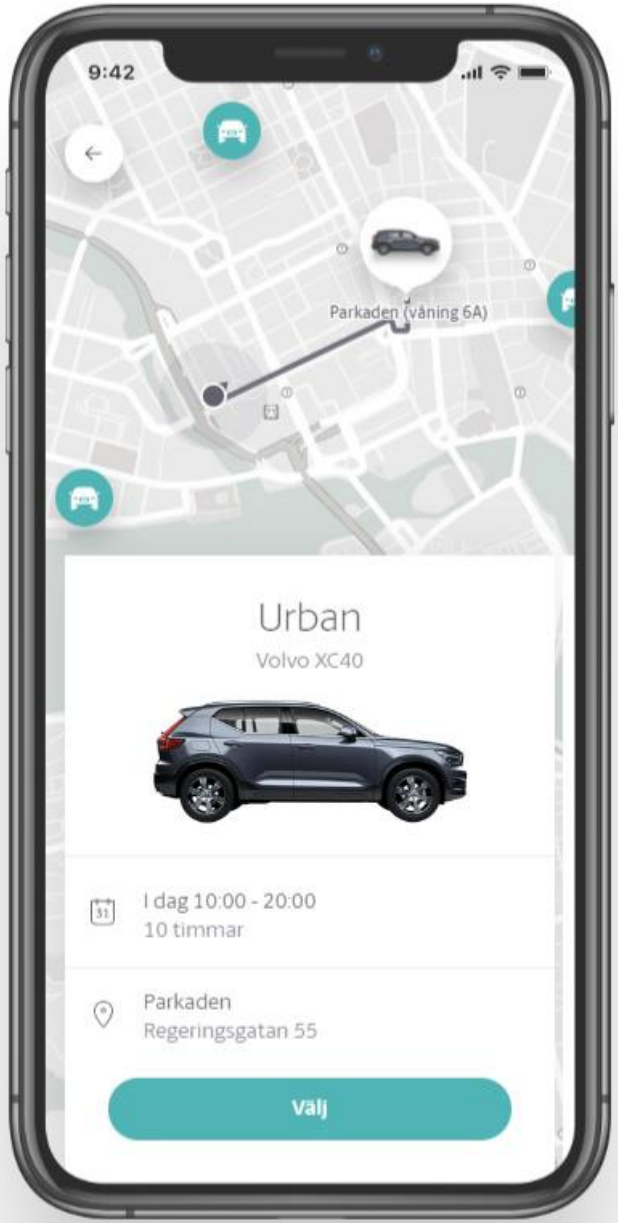
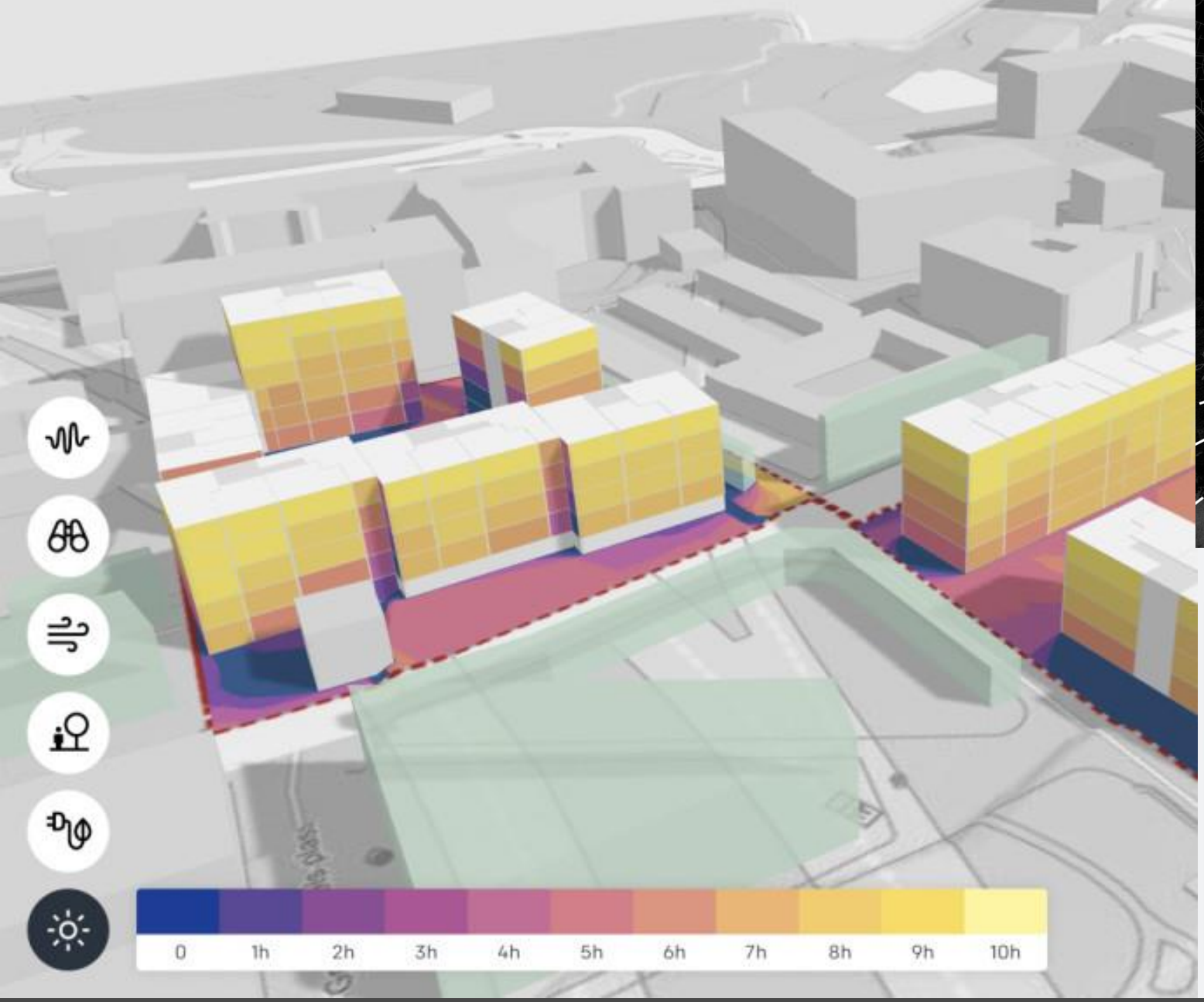
Sweden's Innovation Agency

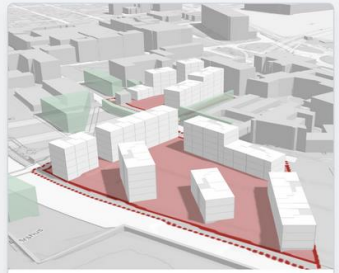
ABB
ABB
ABB


9:42
Parkaden (våning 6A)
Urban
Volvo XC40
I dag 10:00 - 20:00
10 timmar
Parkaden
Regeringsgatan 55
Välj

RAW MATERIALS
DESIGN
PRODUCTION/ REMANUFACTURING
DISTRIBUTION
USE & REUSE
COLLECTION
RECYCLING
RESIDUAL WASTE

Design better cities with artificial intelligence

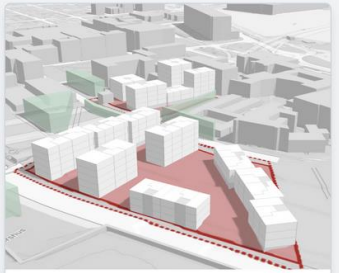




Lamellas #1

12 AUG · 7:31

Area	19 720 m²
Sun	7.8 h
View distance	202 m
Noise	7.3 %



Lamellas #2

12 AUG · 7:33

Area	19 788 m²
Sun	7.5 h
View distance	191 m
Noise	3.4 %

Lamellas #3

12 AUG · 7:35

Area	20 68
Sun	
View distance	
Noise	

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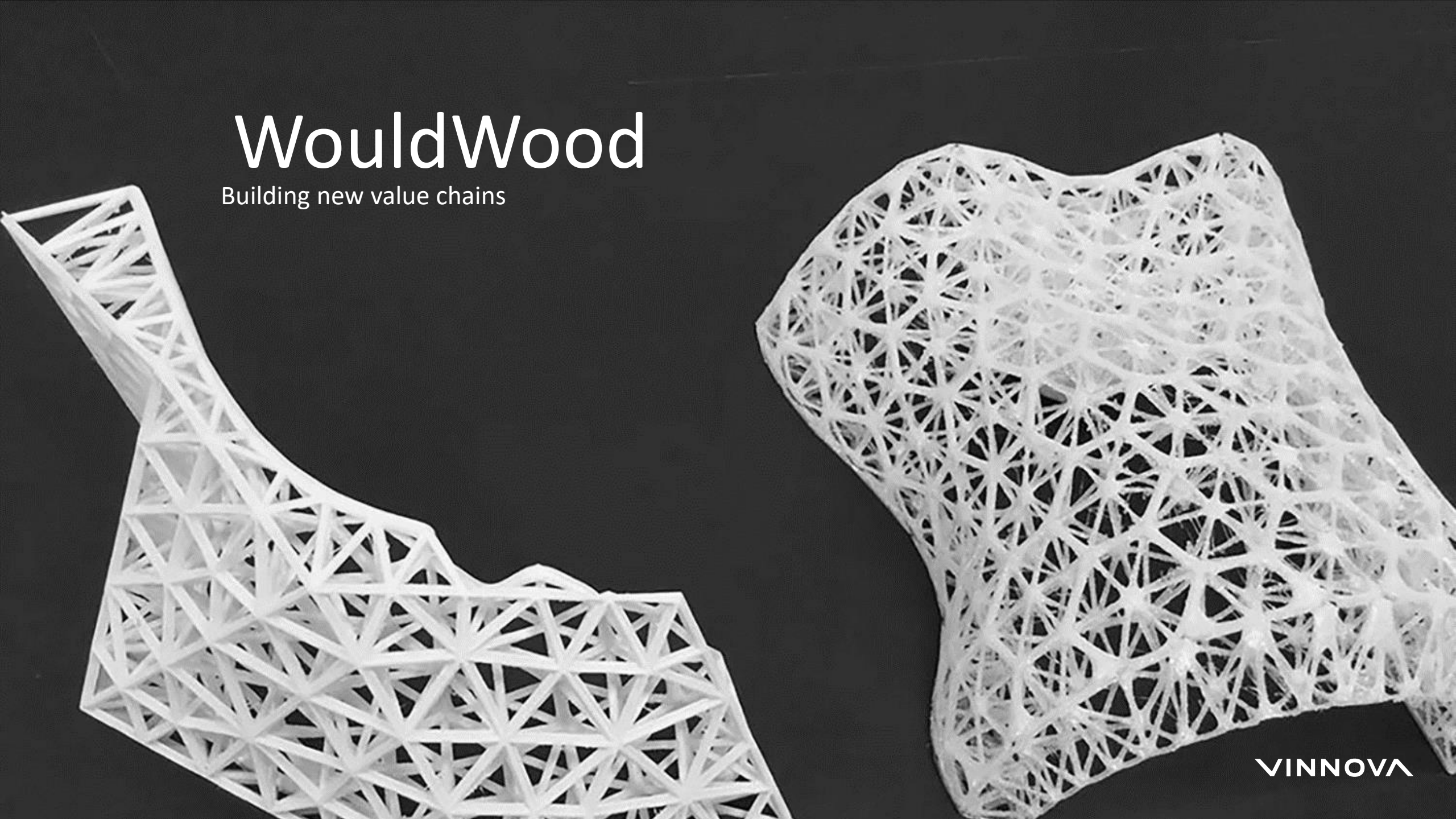
WouldWood

Building new value chains



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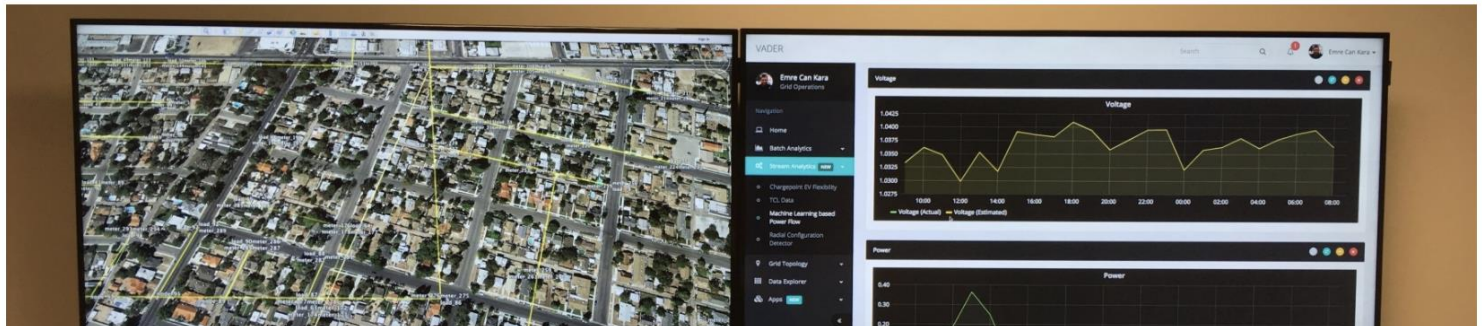
National Lab Uses Artificial Intelligence to Optimize Solar and Other Distributed Energy Resources

JANUARY 12, 2018



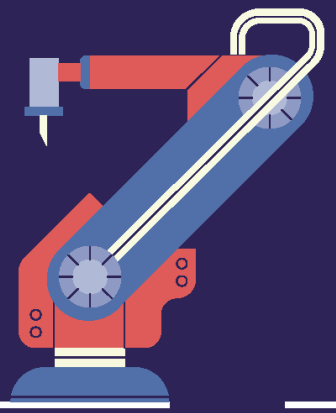
northvolt

DFDS
DFDS
VINNOVA

```
else if (1==2)
 {
      var atpos=inputs[i].indexOf("@");
      var dotpos=inputs[i].lastIndexOf(".");
      if (atpos<1 || dotpos<atpos+2 ||
                    etElementById('errEmail')
```

AGE OF AUTOMATION

THE OUTLOOK FOR MANUFACTURING JOBS AND AUTOMATION IN SEVEN CHARTS

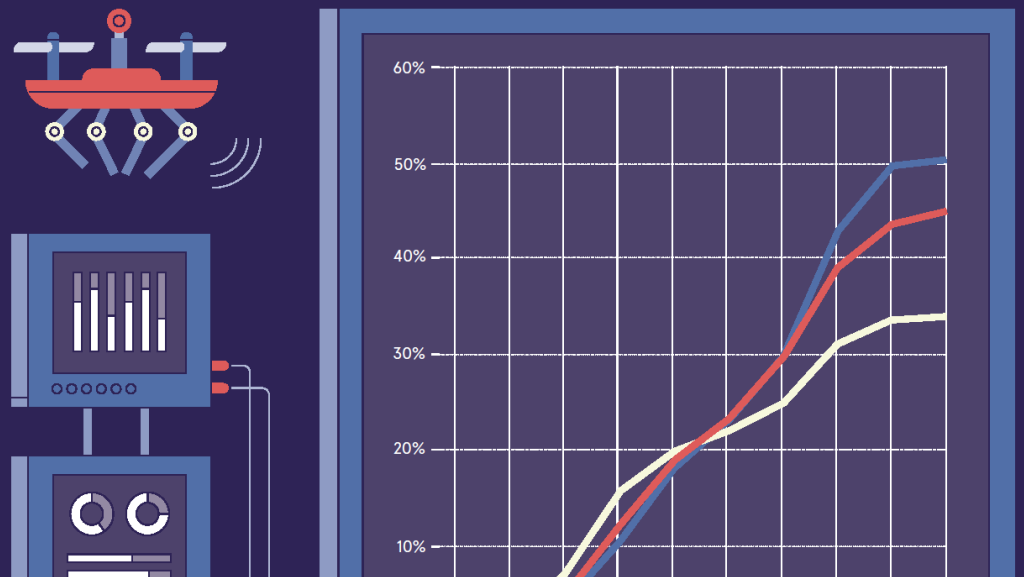


Advances in artificial intelligence and remote communication will arguably impact manufacturing more than any other sector, given that half of all roles within the industry involve manual and routine work. And yet, despite a large portion of jobs being at high risk of automation, job losses may not be as severe as feared as manufacturers upskill workers to adapt for a new technological future

01 AUTOMATION'S IMPACT ON THE JOBS MARKET WILL START TO BE FELT FROM THE MID-2020S

Share of jobs with a high potential of automation

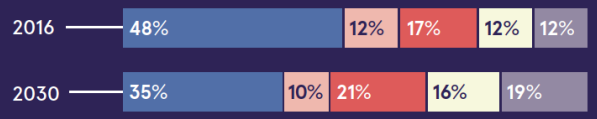
Transportation and storage · Manufacturing · Wholesale and retail trade



02 UPSKILLING NEEDED AS ROUTINE AND MANUAL JOBS MAKE UP HALF OF WORKFORCE

Composition of current skills needed for current and future manufacturing jobs

Physical and manual · Social and emotional · Basic cognitive · Technological · Higher cognitive



McKinsey 2018

03 AUTOMATION ADOPTION VARIES WITH COMPANY SIZE

Percentage of manufacturers investing to automate processes by number of employees

All of the processes · Most of our processes · Some of our processes · None of our processes

https://www.raconteur.net/infographics/age-of-automation

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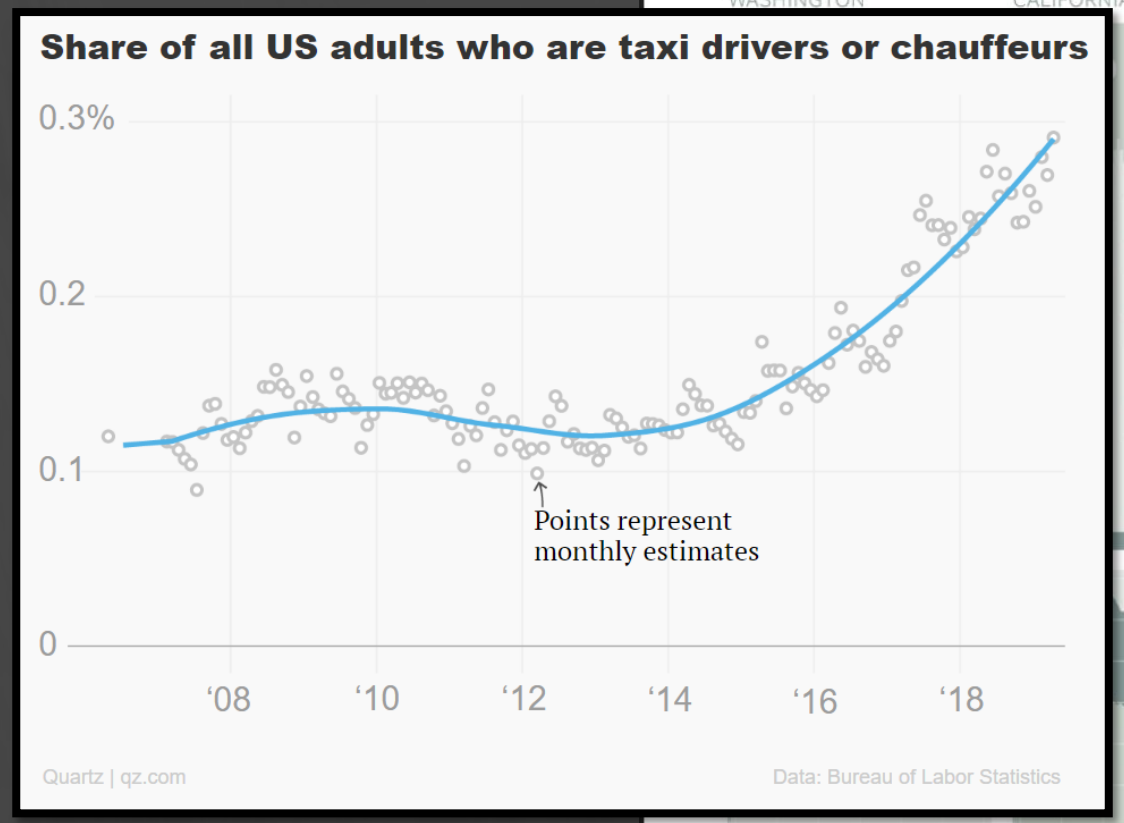
4DLVQ, LV Mass, 4D Strain
Vivid E95
John Washecheck

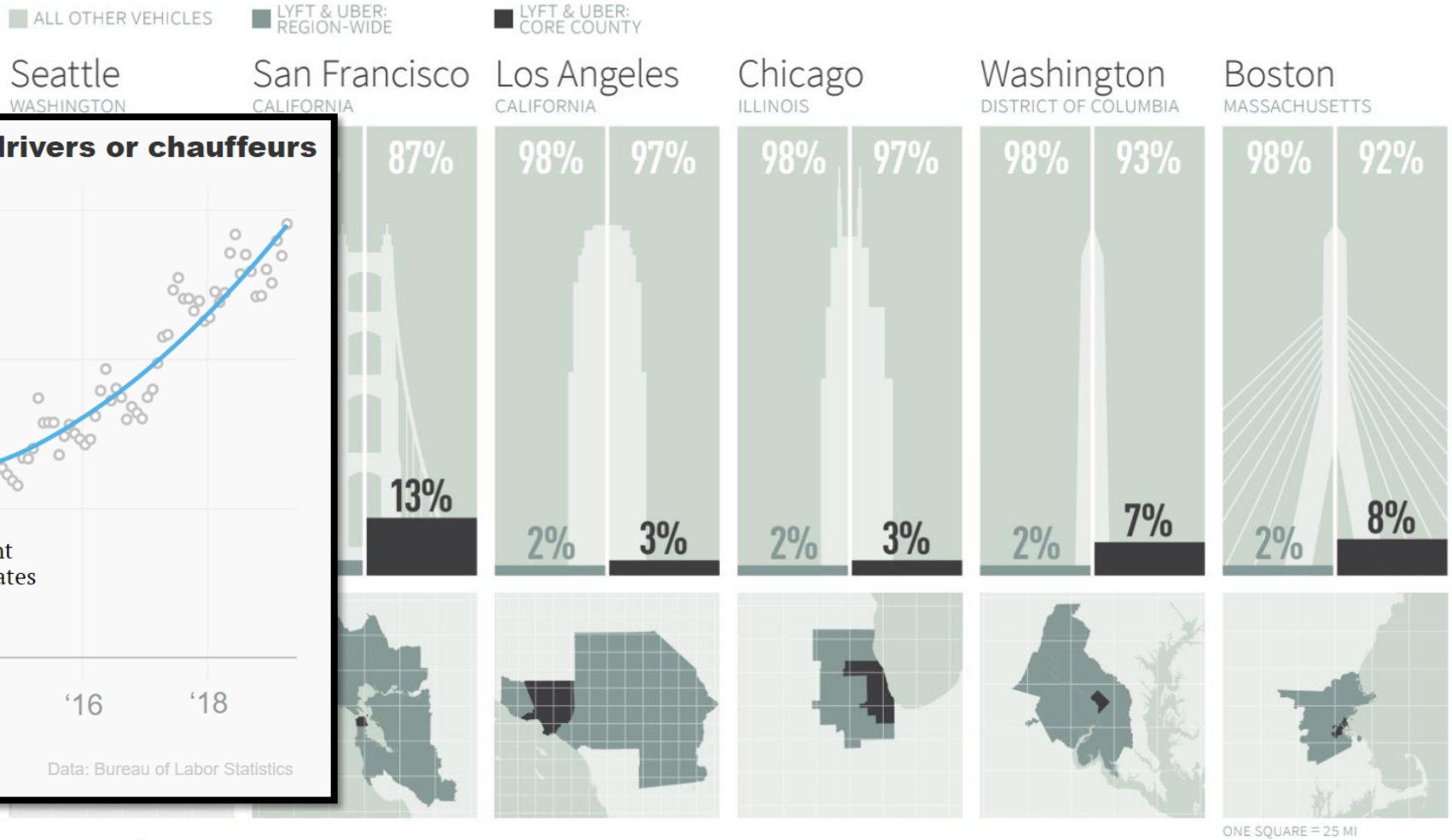
WE HAVE TO LOWER THE COSTS TO MAKE MANUFACTURING FUN AGAIN!
SMART·LEAN·GREEN
WE HAVE TO BE fast!
EDUCATION
IS NOT A SECOND CHANCE!
JOB
TECHNICAL
TRAINING
TEMPORARY
PRACTICAL
ANTICIPATE TRAINING TO BE PREPARED!
WMF ·2·0·1·9·
POLICY
STRATEGY
INVESTMENT
COLLABORATION COOPERATION
PROGRESS
LONG-TIME VISION
THROUGH DIFFERENT GOVERNMENTS
WE HAVE TO DEAL WITH THESE!
SKILL GAPS and GLOBAL EDUCATION SYSTEM ACROSS VARIOUS MANUFACTURING INDUSTRIES
IS THE KEY!
PREPARE now RE-LEARN
IDENTIFY the SKILLS OF THE FUTURE
WOMEN IN MANUFACTURING INDUSTRIES
SWITCH MENTALITY
NEW STUDENTS
WE HAVE TO RECONSIDER THE RELATION BETWEEN
ACADEMIA
INDUSTRY
FUTURE

”We can’t be selfish anymore, we need to educate for the ecosystem.”
- Peter Voser, 2018
VINNOVA



Estimated Percent of Total Driving by Lyft and Uber

In Six Major US Regions, September 2018



FEHR PEERS

LIVING

Inside the hellish workday of an Amazon warehouse employee

By Eric Spitznagel

July 13, 2019 | 9:57am | Updated

The labor can be so grueling at Amazon that one worker in Kentucky said she needs four pain meds just to get through the workday.

REUTERS

It took just three days of working full time at an

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Share

City Talks

Five reflections on 'the revenge of places that don't matter'

In our latest podcast, Professor Andres Rodriguez-Pose claims spatial inequality is the root cause of rising populism

Blog post published on 5 July 2018 by Lucy Charlewood

One of the dominant narratives around the rise of populism is that it amounts to a backlash by globalisation's 'losers' – individuals, communities and social groups that have felt the more malign effects of global free trade, such as job losses, depressed wages and insecure future prospects.

But what if actual *places* – and people's ties to them – have shaped voting patterns far more than demographic or social factors? Should populist electoral reactions be understood as a form of collective, place-based 'revenge' by lagging-behind regions?

This is the argument put forward by Professor Andres Rodriguez-Pose of the London School of

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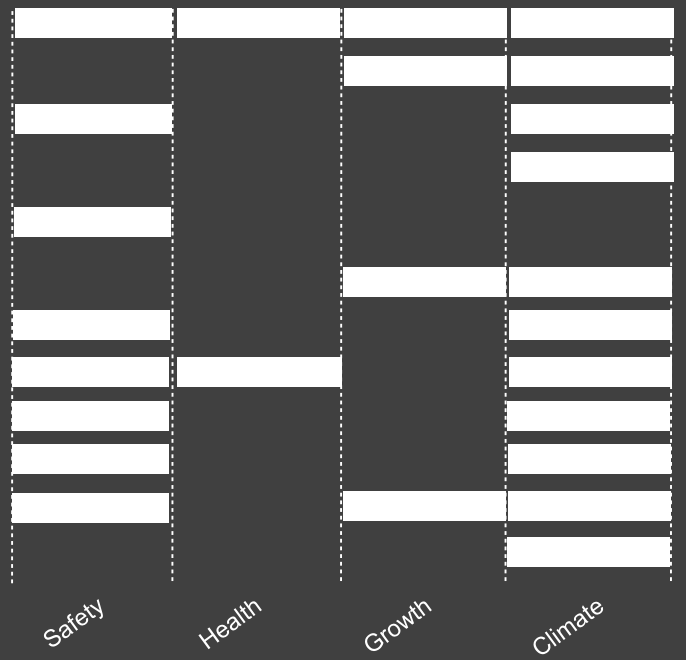
1 ”Airgaps”

National

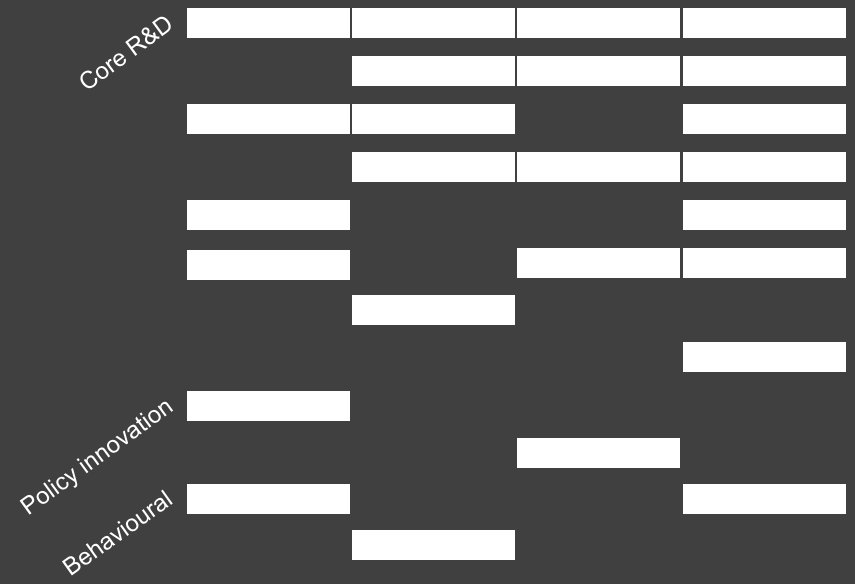
Regional

Municipal

2 / Research and innovation in silos



3 / Bias away from implementation



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Source: Stockholm Resilience Center

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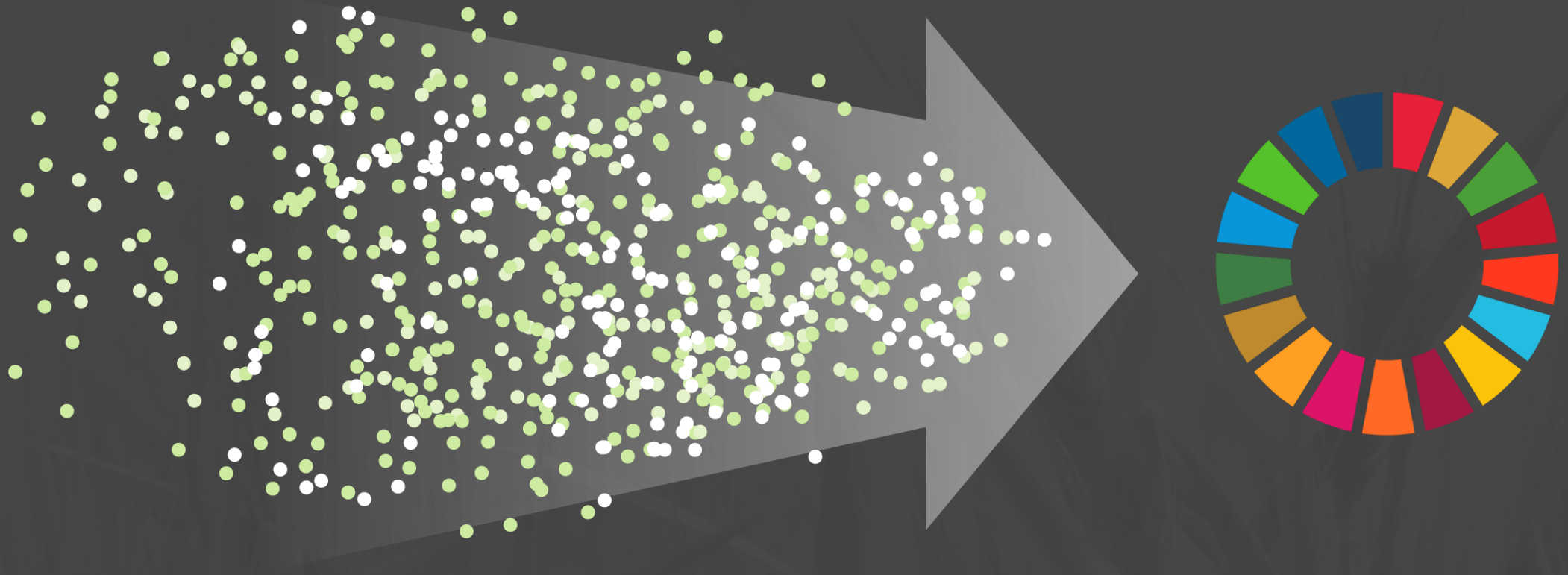
Missions

- Mobilising action for achieving the SDG’s



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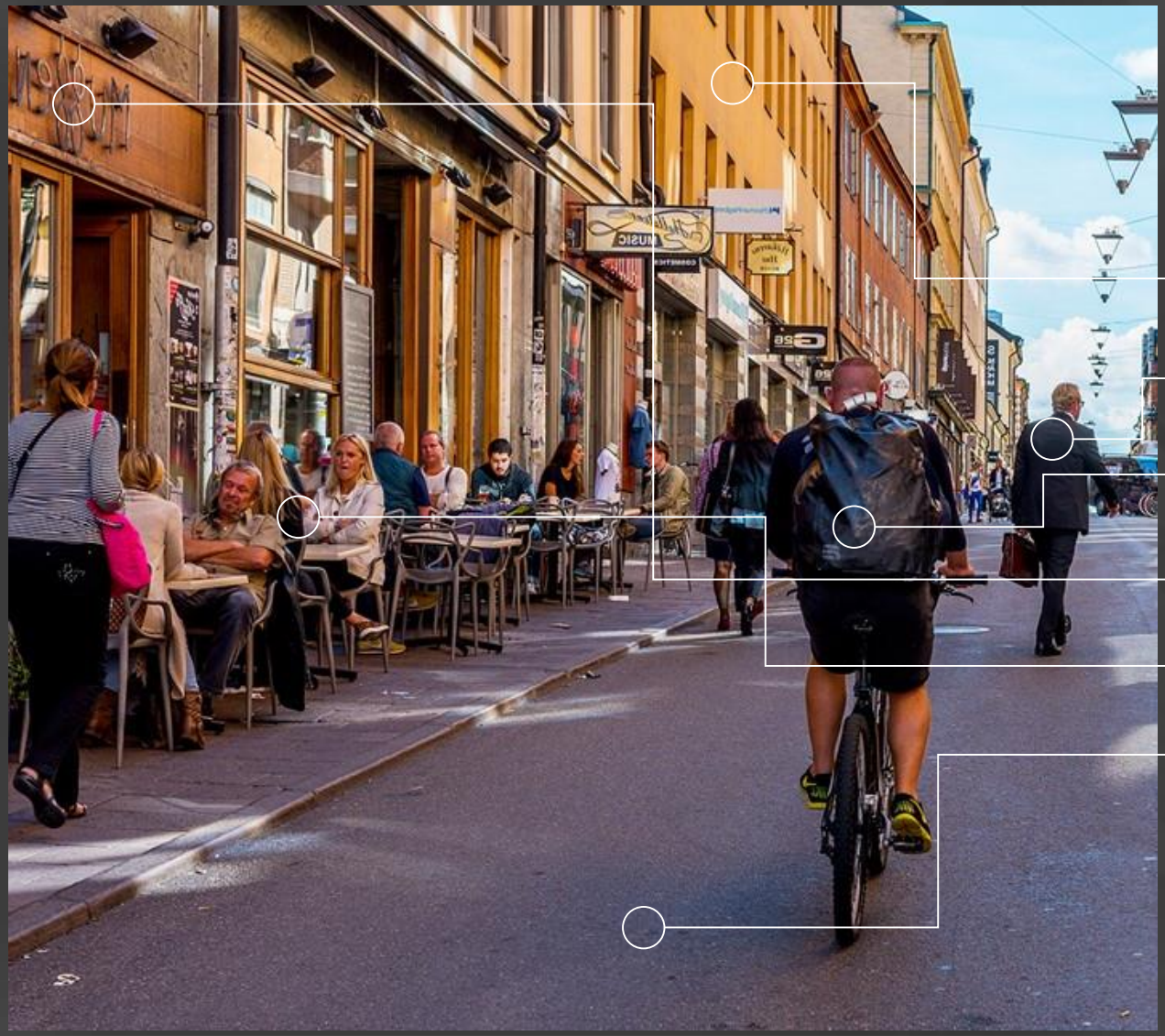

Innovations with system perspective

- Technology
- Ethics
- Business model
- Behavior
- Procurement
- Policy

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TACK!

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Sveriges innovationsmyndighet

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