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# Making Manufacturing Networks Ready for Disruption


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# Sooner or later, the plan breaks

Suppliers — Logistics — Production ! — Delivery — Customer

BIKE · PILOT LINES

## Supplier cannot deliver

A delivery fails or is late, at the supplier or in logistics.

AUTOMOTIVE · PILOT LINES

## Material shortage

Stock falls short of the plan , and orders cannot be made on time.

AUTOMOTIVE · PILOT LINES

## Production module breaks down

Unplanned equipment stoppage, or a bottleneck in intralogistics.

AUTOMOTIVE · BIKE

## Demand changes

Call-offs and orders move up or down against the long -term plan.

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# Flexibility alone is not enough

MANUFACTURING AS A SERVICE

## Access to manufacturing capacity

Companies find and use capacity across a network of manufacturers.

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## Finding alternatives when plans change

Assess the disruption, find alternatives, make informed decisions and adapt production.

**RAASCEMAN is about what happens when the manufacturing plan breaks, and how a MaaS network can help you find and execute the best way forward.**

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# From disruption to action

Turning unforeseen events into actionable responses that keep production resilient.




**From accessing manufacturing capacity to adapting the manufacturing network when plans change.**

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# What stands behind each step

UNDERSTAND

## Impact Prediction

Estimates impact of events

FIND ALTERNATIVES

## Supplier Search and Audit

Finds suppliers, scores trust

DECIDE

## Decision Support

Shows options and KPI trade-offs

MATCH CAPABILITIES

## Capabilities Matching

Checks what a factory can do

REPLAN

## Dynamic Planning and Scheduling

Adapts plans to objectives

ADAPT

## Dynamic Execution

Runs and decomposes skills of robots and humans

THE FOUNDATION

Digital Twins

Common model of services, capabilities and skills

Trusted data exchange

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# Three ways to put it to the test



## Automotive

**with AUMOVIO**
Short-term unforeseen events



## Bike industry

**with ÅSKA Bikes**
Medium -term unforeseen events



## Interconnected pilot lines

**four partner testbeds**
Integration and validation

Pilot lines test and integrate all modules before the industrial use cases.

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# Automotive: AUMOVIO

AUMOVIO

B2B · made -to -order · car dashboards

## Fast replanning, tested on a digital twin of the production

WHAT CAN GO WRONG

→ Changing call-off
→ Missing material
→ Stalled intralogistics

FOCUS IN THE RESPONSE CHAIN

| Change | Understand | Find alternatives | Decide | Match capabilities | Replan | Adapt |
|---|---|---|---|---|---|---|

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# Bike industry: ÅSKA Bikes

ÅSKA

B2C · pedelecs · medium -term events

## Find, quote and compare alternative suppliers in a network

WHAT CAN GO WRONG

→ Supplier failure
→ Single sourcing
→ Slow quotations

FOCUS IN THE RESPONSE CHAIN

| | | | | | | |
|---|---|---|---|---|---|---|
| Change | Understand | Find alternatives | Decide | Match capabilities | Replan | Adapt |

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# Interconnected pilot lines

dfki ai | FLANDERS MAKE | CTU CZECH TECHNICAL UNIVERSITY IN PRAGUE | RPTU

## Test all modules across four connected testbeds

WHAT CAN GO WRONG

→ Material shortage
→ Supplier cannot deliver
→ Module breakdown

FOCUS IN THE RESPONSE CHAIN

Change | Understand | Find alternatives | Decide | Match capabilities | Replan | Adapt

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# What it means for industry

1

## Faster reaction to change

Connecting suppliers, logistics and manufacturers can shorten the time needed to react to changed call-offs.

2

## Quicker access to alternatives

Alternative suppliers can be found, quoted and compared from a digital product description.

3

## Decisions based on evidence

Alternatives come with KPI trade-offs and trust scores, and data stays under the owner's control.

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# See it at our booth

INTERACTIVE DEMO · AUTOMOTIVE USE CASE

## From capability matching to machine action

The Production Capabilities Matching Tool checks inside the plant whether a task is feasible and passes the matched capability to the machine.

**Try it yourself! Guide the robot through the maze.**

**raasceman.eu**

LinkedIn @raasceman

**9** partners

**6** countries

**3** use cases

**€4.6M** budget

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# Thank you for your attention!


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RPTU

netcompany
intrasoft

ÁSKA

AUMOVIO