



smartFactory^{KL}

Production Level 4

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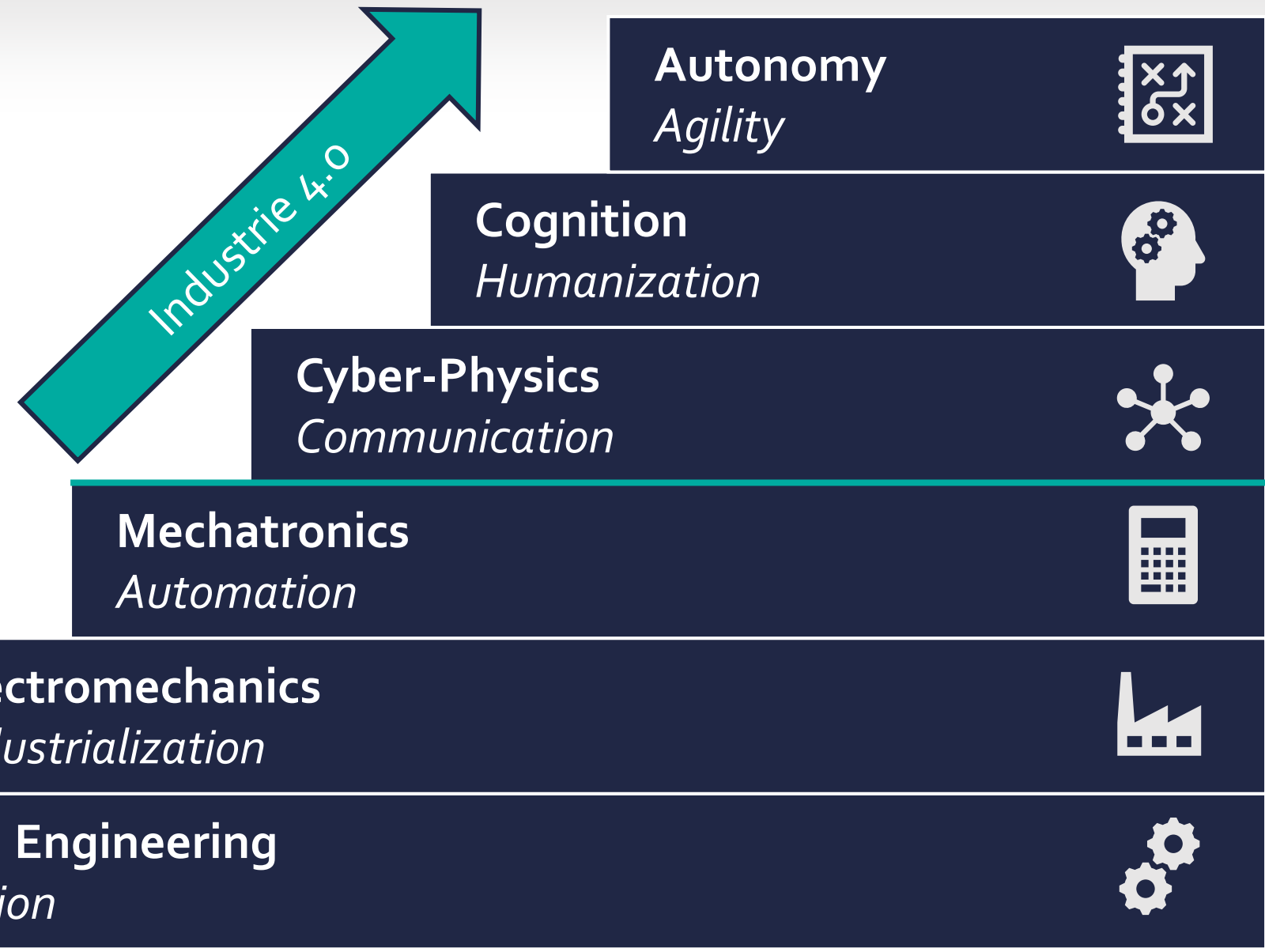
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Industrial Evolution



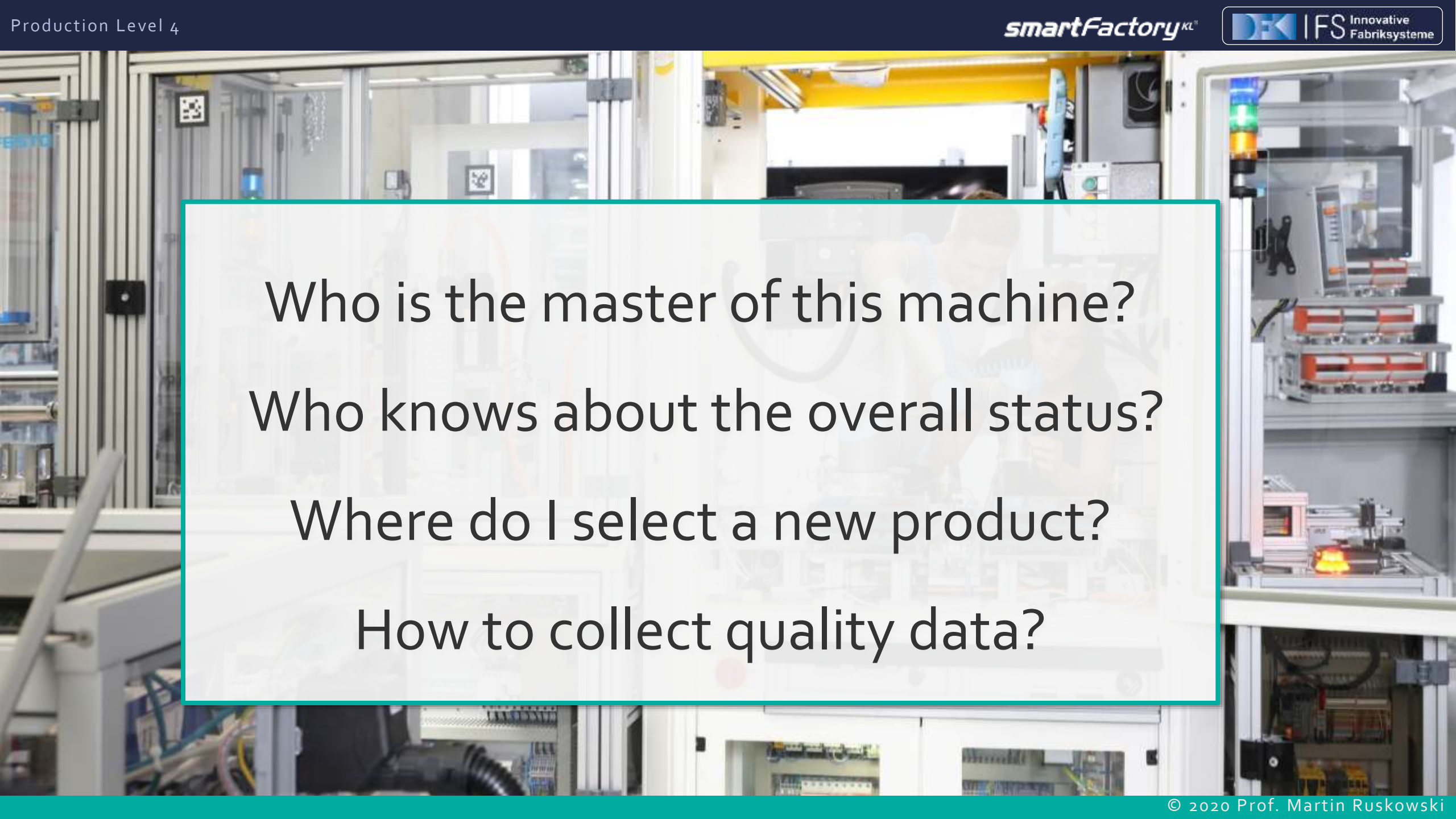
Autonomy?

Autonomy is a state of independence or self-governance.

It denotes a relatively **high level of discretion** granted to an employee in his or her work.

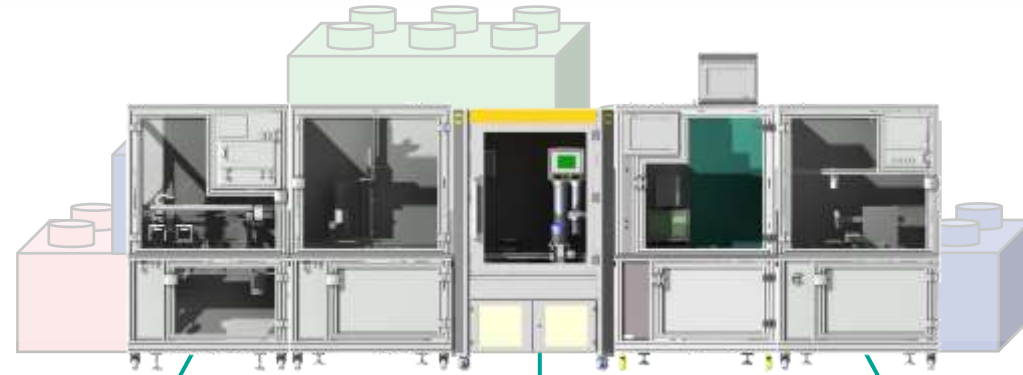
Its opposite is **Heteronomy**.

(Greek αὐτονομία *autonomía*, "give oneself one's own law" – from αὐτός *autós* "self" and νόμος *nómos* "law")

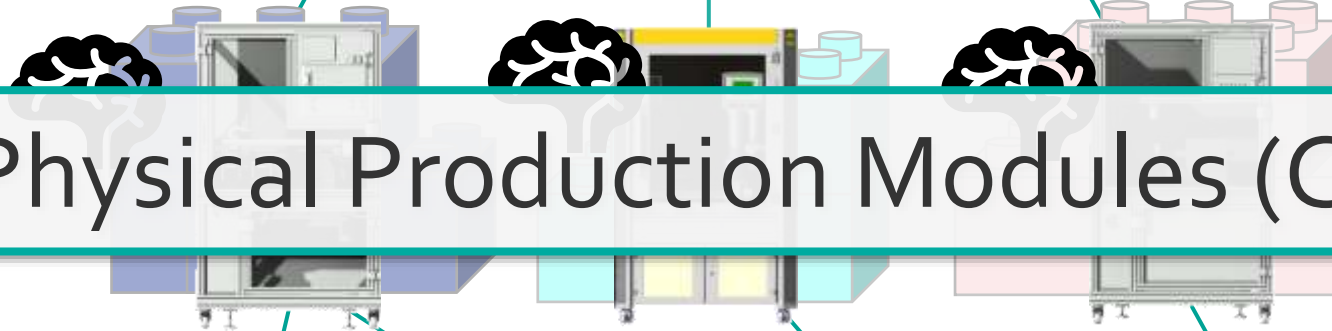


Who is the master of this machine?
Who knows about the overall status?
Where do I select a new product?
How to collect quality data?

Smart Factories

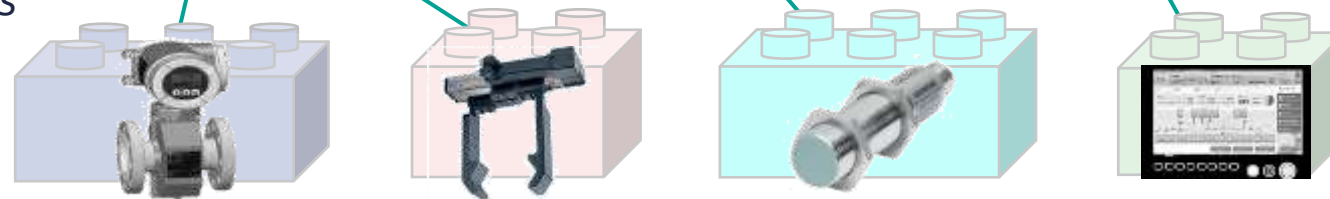


Smart Machines

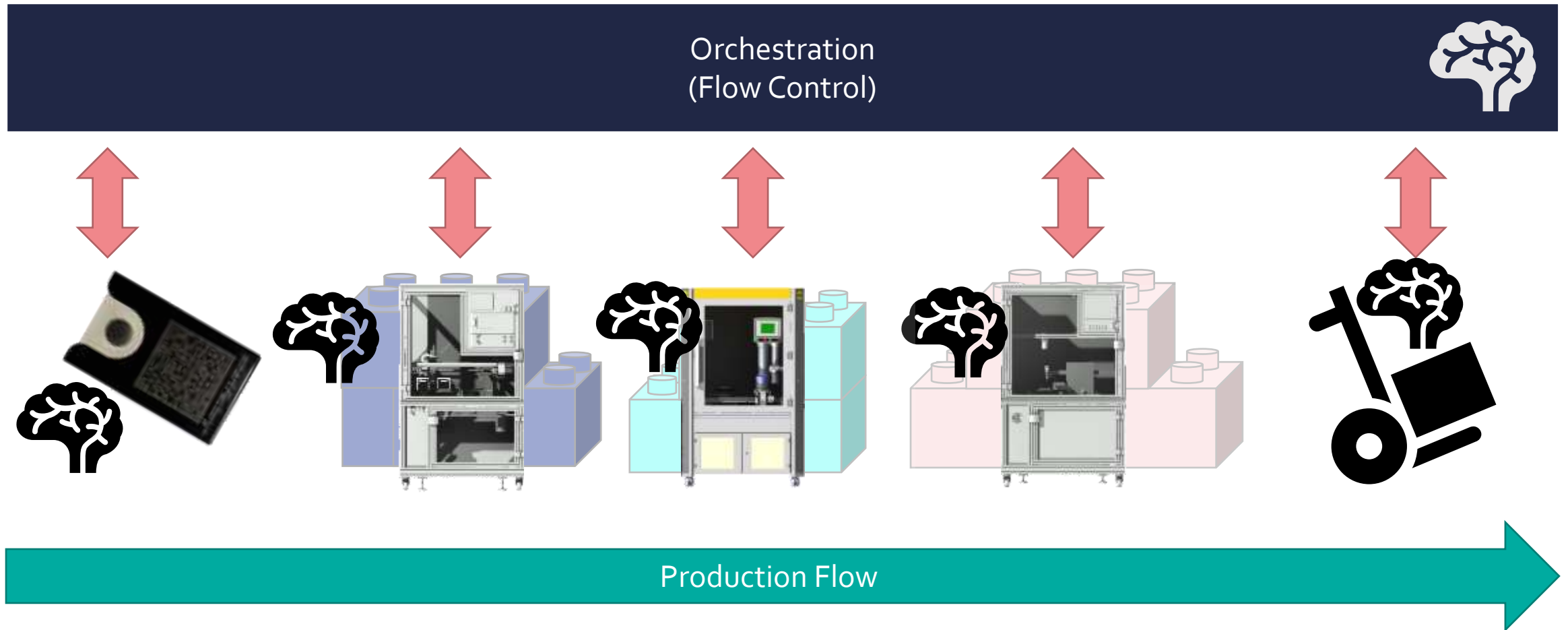


Cyber-Physical Production Modules (CPPM)

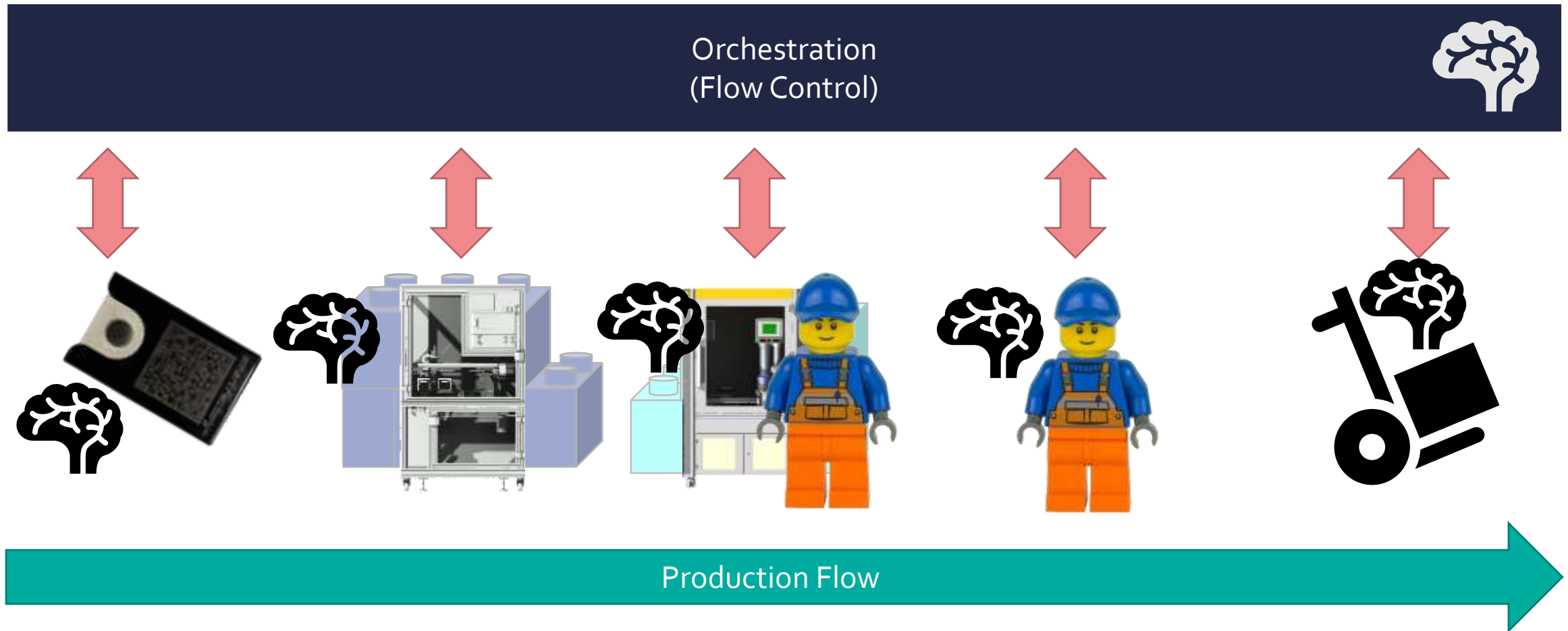
Smart Objects



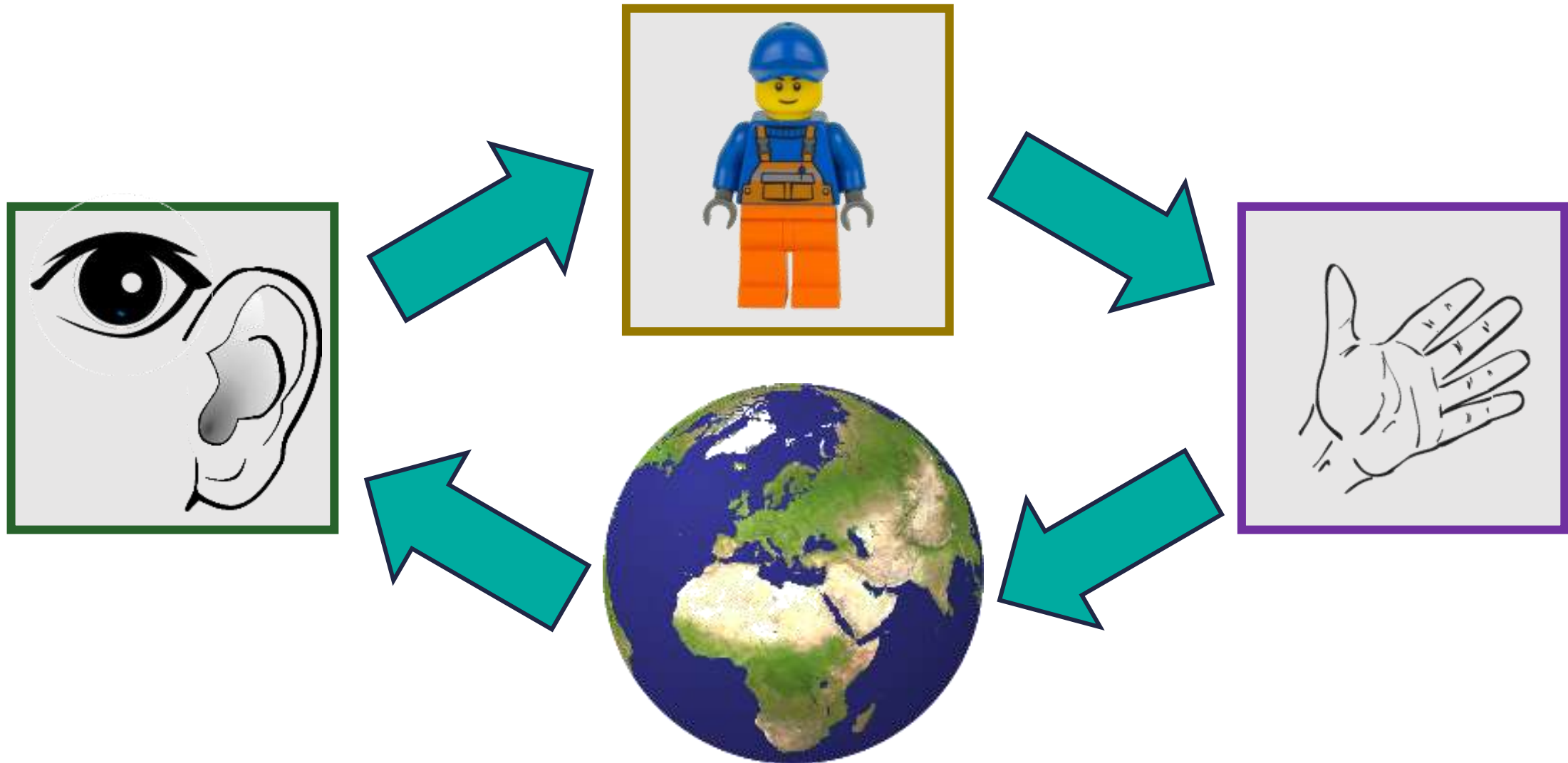
Autonomous Production



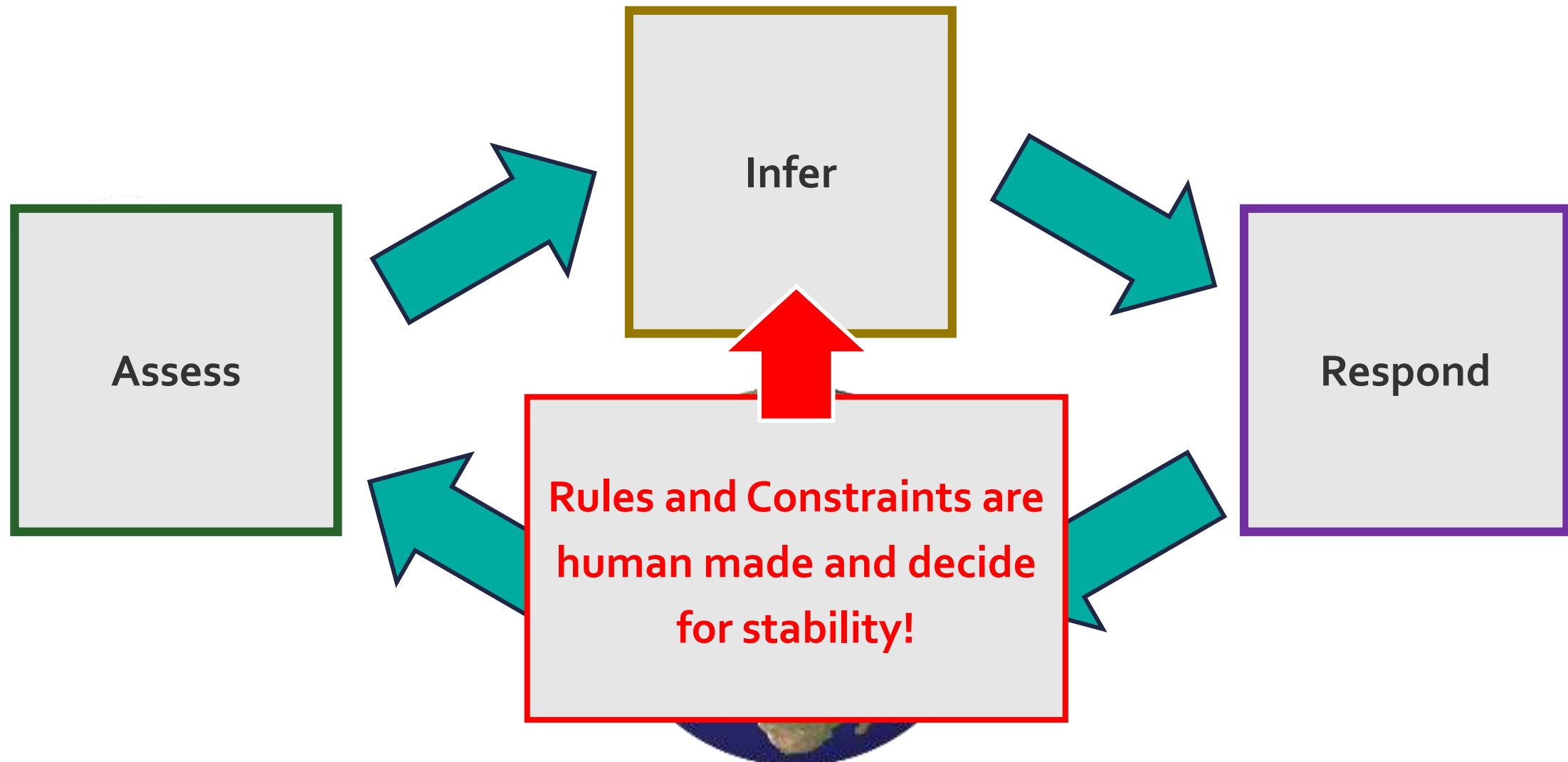
Autonomous Production



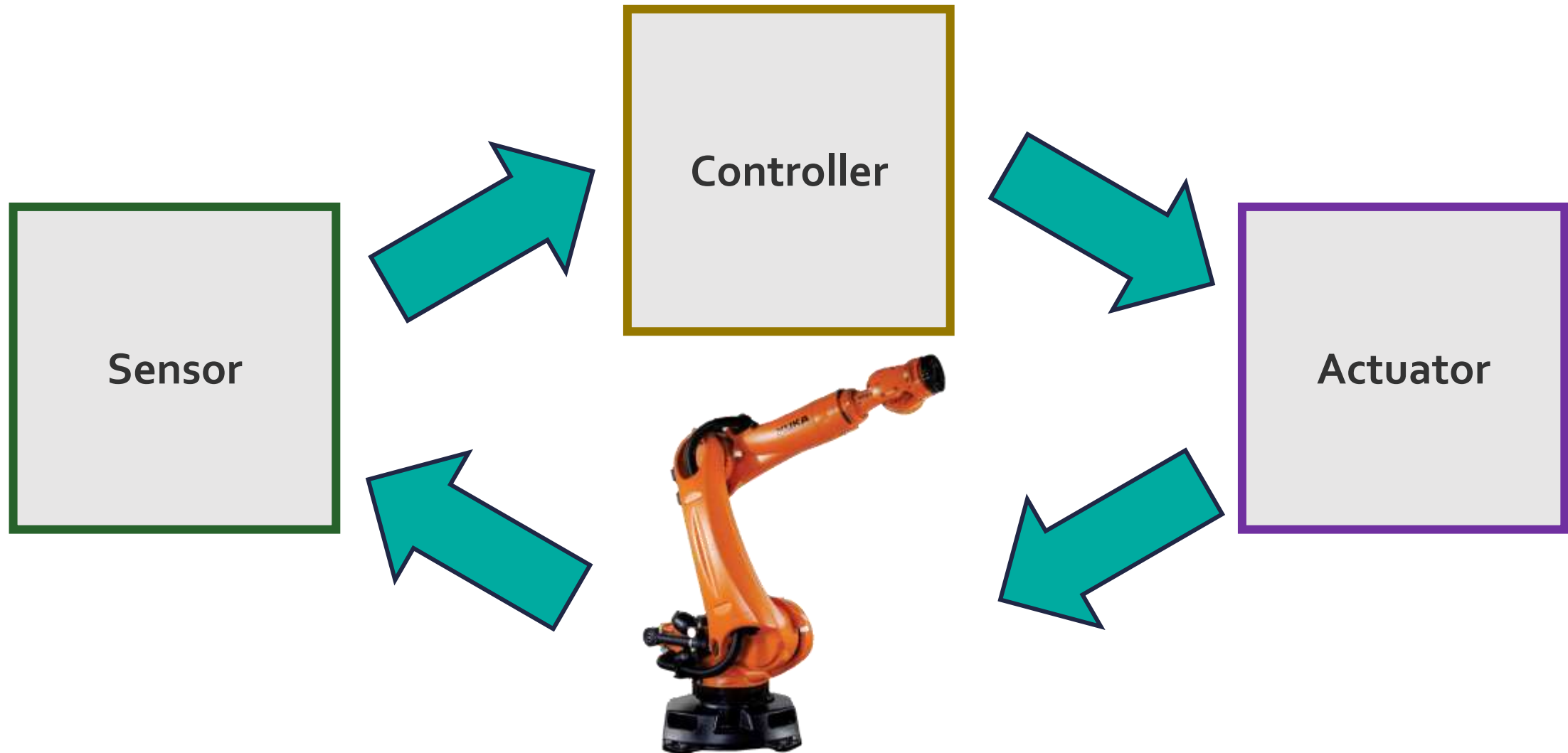
Human Feedback



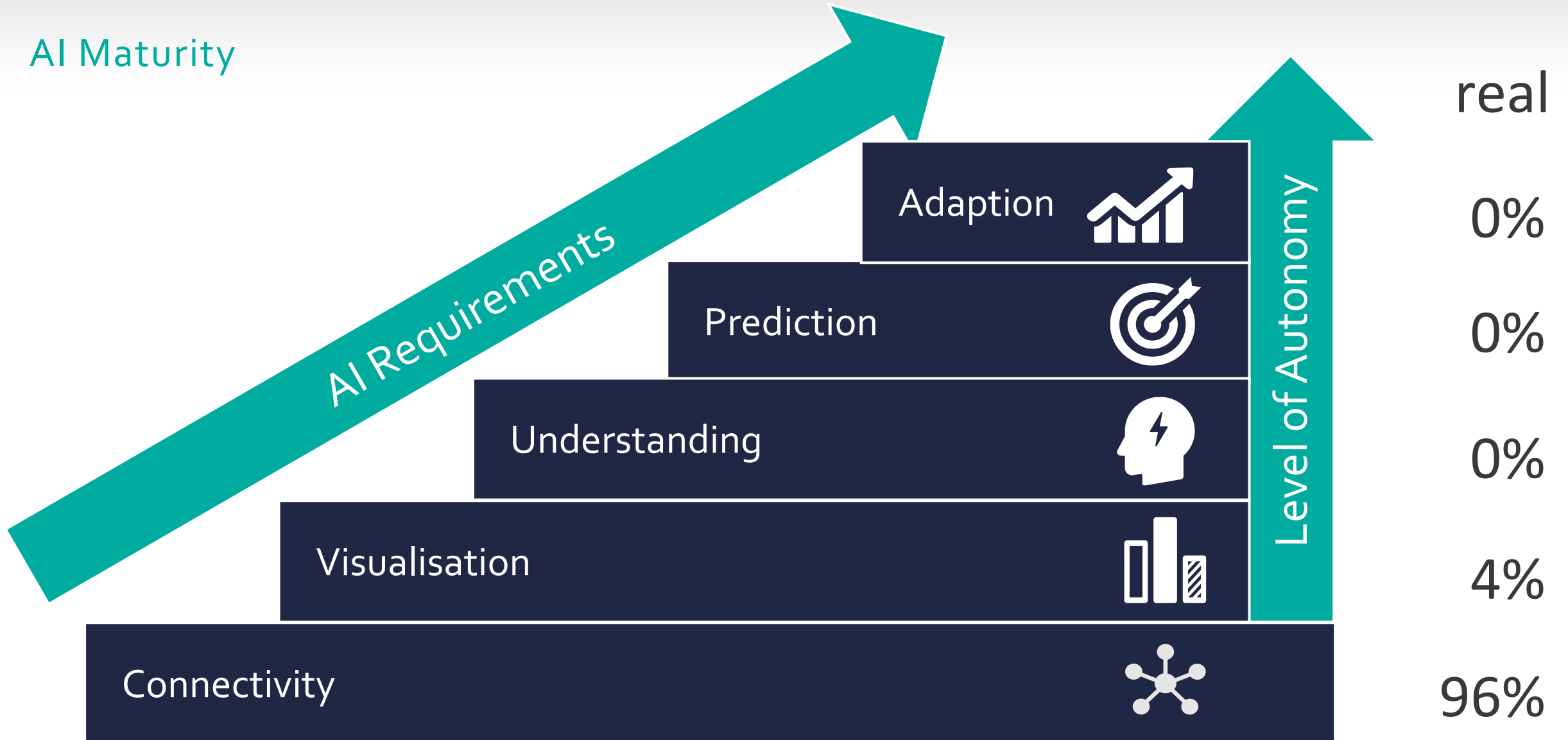
Human Feedback



Analogy to the Feedback Control Loop



AI Maturity




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 **YouTube**
[SmartFactoryKL](https://www.youtube.com/SmartFactoryKL)



Also in future times Humans and not Machines are at the core of production

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