



Software Engineering in der industriellen Praxis (SEIP)

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HI Minimize HARDWARE Idleness

Minimize the idleness and maximize the utilization of existing hardware resources.

Rationale: Unused or under-utilized hardware are an unnecessary waste of already available resources.

Keywords: Virtualization, Utilization.



DE Minimize DESIGN Excessiveness

Minimize the excessiveness and maximize the adequacy of solution designs.

Rationale: Non-adequate designs cause unnecessary complexity and waste resources.

Keywords: Reduced Libraries, Immutability.



HE Minimize HUMAN Effort

Minimize the efforts of humans and maximize the efforts of machines in all production and operation processes.

Rationale: Delegating tasks to machines gives humans the possibility to concentrate on more important tasks.

Keywords: Computer, Robot, Automation.



SI Minimize SOFTWARE Inefficiency

Minimize the inefficiency and maximize the efficiency of software applications and their development processes.

Rationale: Efficient software and development processes consume less resources.

Keywords: Caching, Monolith.



SE Minimize SOLUTION Ephemerality

Minimize the ephemerality and maximize the life-span of any type of solutions.

Rationale: Short life-spans of solutions cause unnecessary short renewals and this way wastes resources.

Keywords: High Quality, Best Practice.



EC Minimize ENERGY Consumption

Minimize the consumption and maximize the saving of energy in all production and operation processes.

Rationale: Electric energy still has to be partially generated from non-renewable resources.

Keywords: Eco Mode, Reduced CI/CD.



IA Minimize INFORMATION Amount

Minimize the total amount of gathered, transmitted, stored and spreaded information.

Rationale: Reduced amount of information means less data transmission, less data storage, less GDPR issues, etc.

Keywords: Compression, No Big Data.



EE Minimize ECOSYSTEM Exploitation

Minimize the exploitation and maximize the back-contribution in any type of ecosystems.

Rationale: The consumer and provider behaviour have to be in balance for every long-lasting ecosystem.

Keywords: Open Source Software.



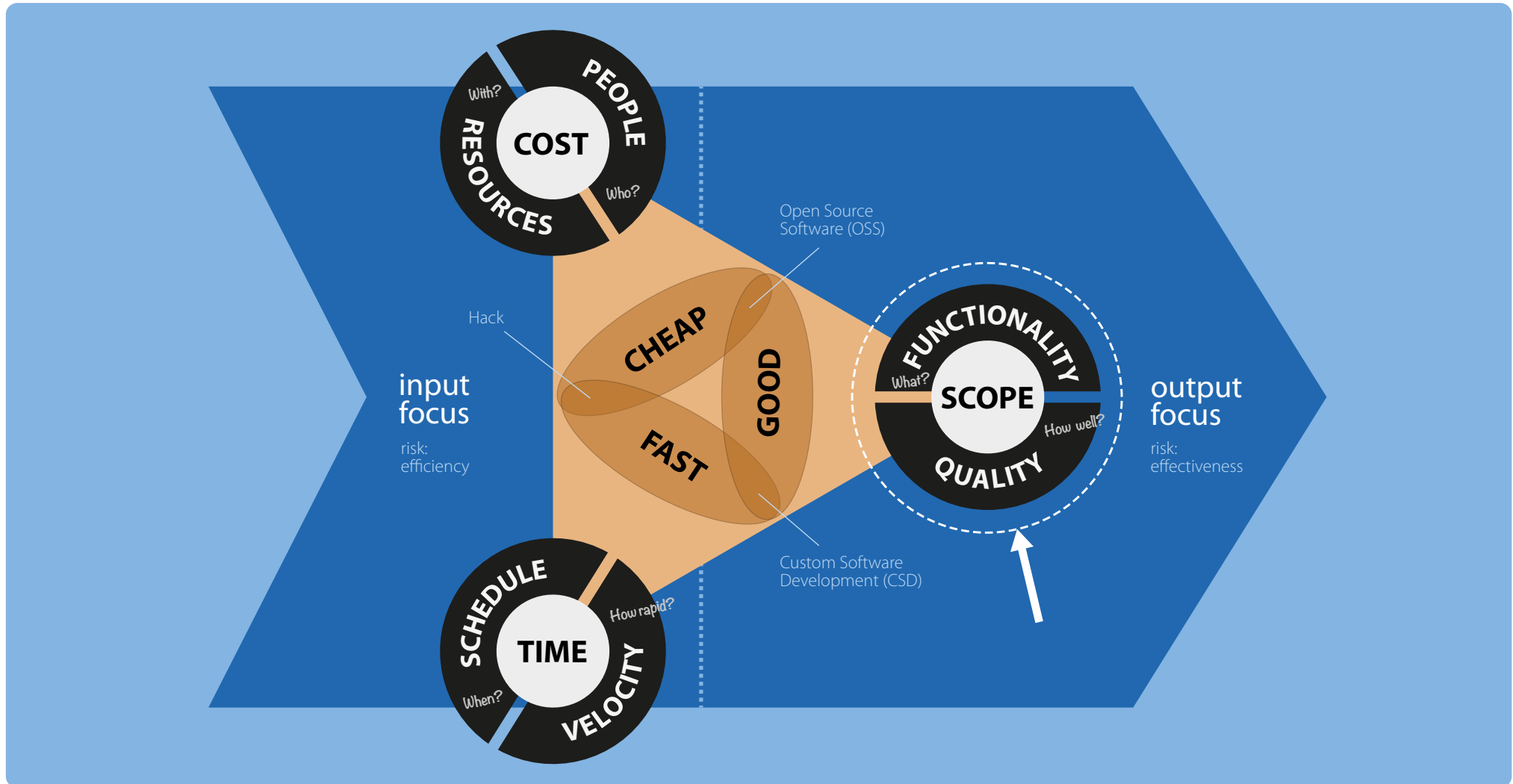
CE Minimize CARBON Emission

Minimize the carbon emission and hence the footprint during any type of production and operation processes.

Rationale: Climate change and global warming is partially caused or at least accelerated by carbon emissions.

Keywords: Reduced CO2 Footprint.





Definition of a *Project*:

"Temporary endeavor undertaken to create a unique product, service or result."

Temporary in that it has a defined beginning and end in time, and a defined scope and cost.

Unique in that it is not a routine operation, but a one-time, single-goal, and risk-containing operation.

Project Management *Iron Triangle*:

A project is constrained by **time**, **cost** and **scope**. No constraint in this triangle can be changed without affecting the others.

Time splits into **schedule** and **velocity**.
Cost splits into **people** and **resources**. Scope
splits into **functionality** and result **quality**.

Project Management *Trilemma*:

"Fast. Cheap. Good. Pick two!"

Each project optimization effort has the choice among **three** favourable options — only **two** of them are possible at the same time.