Interview
PCS Cargonaut Solution

Pillar: Event Processing

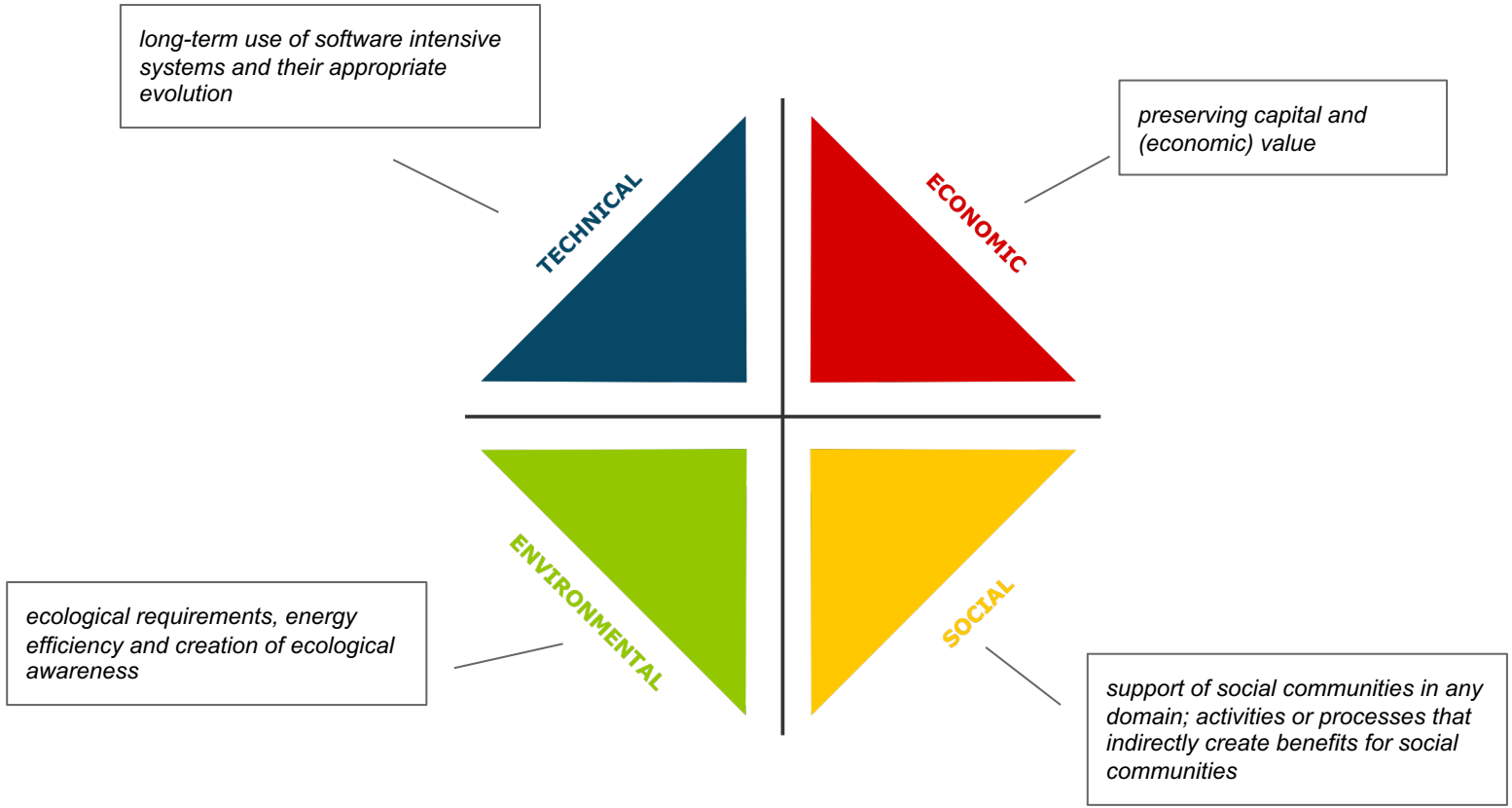
Agenda

- Introduction
  Sustainability
- Interview
- Further Questions

Introduction

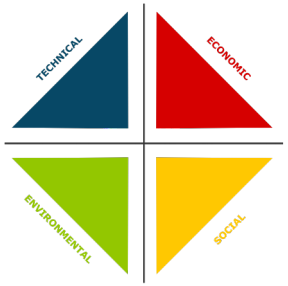
“Framing Sustainability as a Property of Software Quality” [1]

[1] P. Lago, S. A. Koçak, I. Crnkovic, and B. Penzenstadler, “Framing sustainability as a property of software quality,” Commun. ACM, vol. 58, no. 10, pp. 70–78, Sep. 2015, doi: 10.1145/2714560.


long-term use of software intensive systems and their appropriate evolution
TECHNICAL
preserving capital and (economic) value
ECONOMIC
ecological requirements, energy efficiency and creation of ecological awareness
ENVIRONMENTAL
SOCIAL
support of social communities in any domain; activities or processes that indirectly create benefits for social communities

Software Architectural Principles

1



Sustainability Mapping

2

Impact Measurement

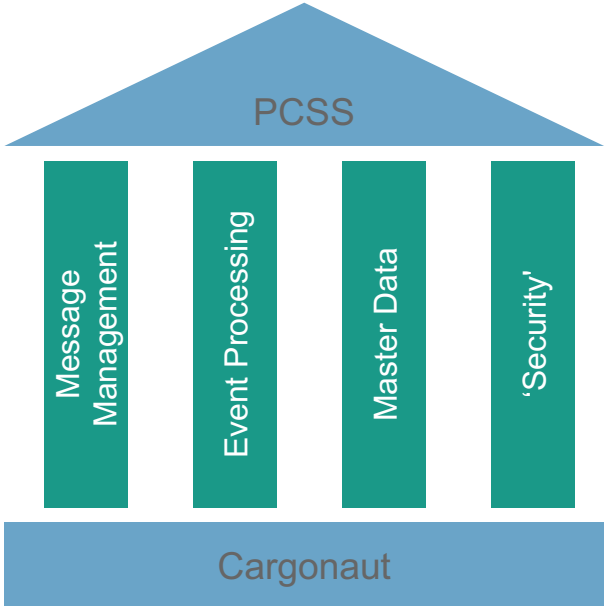
3

Long Term Evaluation

Interview

Q#1

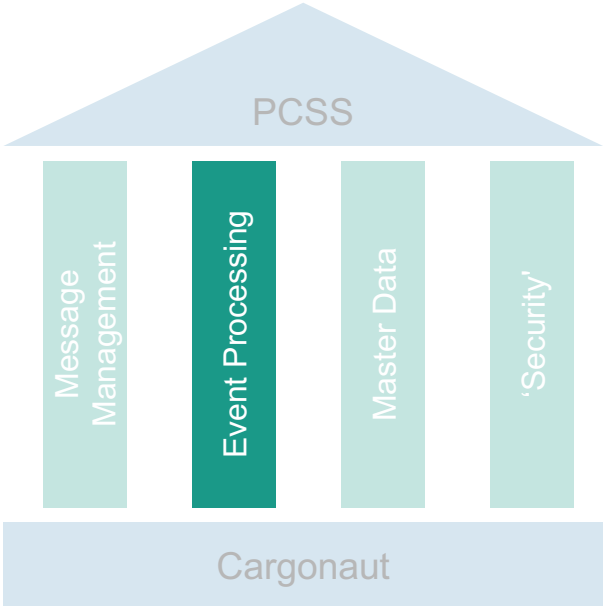
What architectural tiers would you define to structure the PCS Cargonaut solution?



Q#2

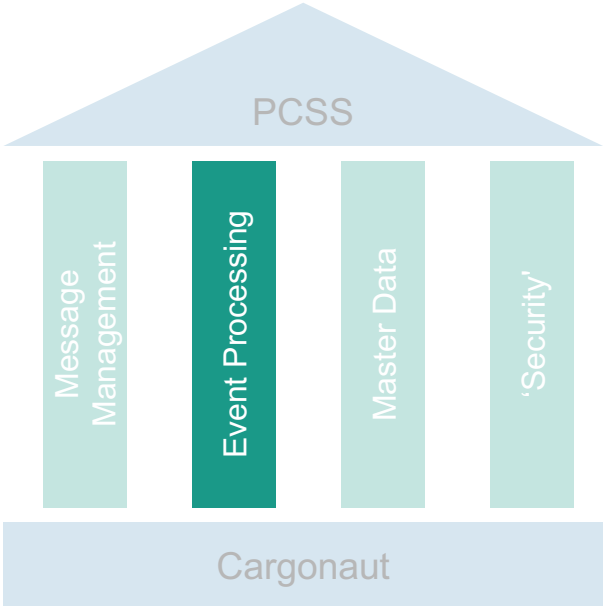
Would you confirm that this abstraction represents the major components of the PCS solution sufficiently?

Or would you add/change certain pillars?



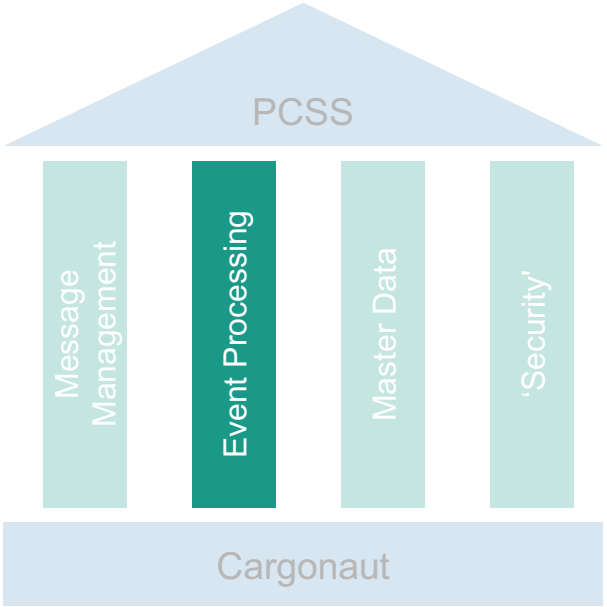
Q#3

What are the responsibilities of this pillar regarding the PCS solution?



Q#4

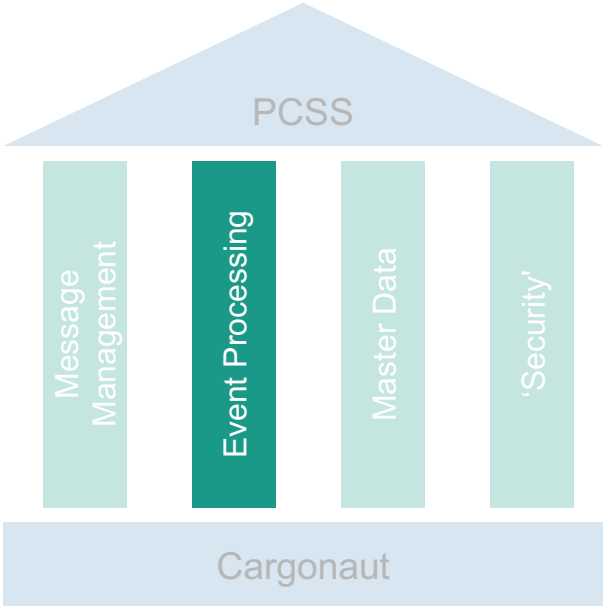
Which main stakeholder(s) are involved / addressed by this pillar?



Q#5

Are **SaaS** / **ETO** building-blocks / **PaaS** solutions used to provide certain “Governance & Security” implementations for the PCS?

And Why?



Q#6

What architectural principle(s) would you define as **driving** architectural principle(s)?

And why?

Economic	Social	Environmental	Technical
Maintainability	User-friendly	Energy-efficiency	Maintainability
Adaptability	Accessibility	Effectiveness	Usability
Reusability	Usability	Technical correctness	Security
Modularity	Acceptable	Environmental compensation	Adaptability
Usefulness	Security	Environmental purpose	Scalability
Circularity	Usefulness		Robustness
Security	Adaptability		Portability
Usability			Software quality
Well-thought-out			
Interdependancy			
Robustness			

(provide list [1] only if none are mentioned)

Q#7

For each sustainability dimension: which sustainability quality attribute(s) would you select as the **driving attributes** for the mentioned selected architectural principle?

[1] S. Overgoor and P. Lago, “Software Sustainability in the field,” Vrije Universiteit Amsterdam, the Netherlands, 2019.

Q#8

For the selected sustainability quality attributes, can you define corresponding **KPIs** to track their impact?

Q#9

The KPI mentioned, how can they be **measured** (automated / manual / surveys, etc.)?

Thank you!