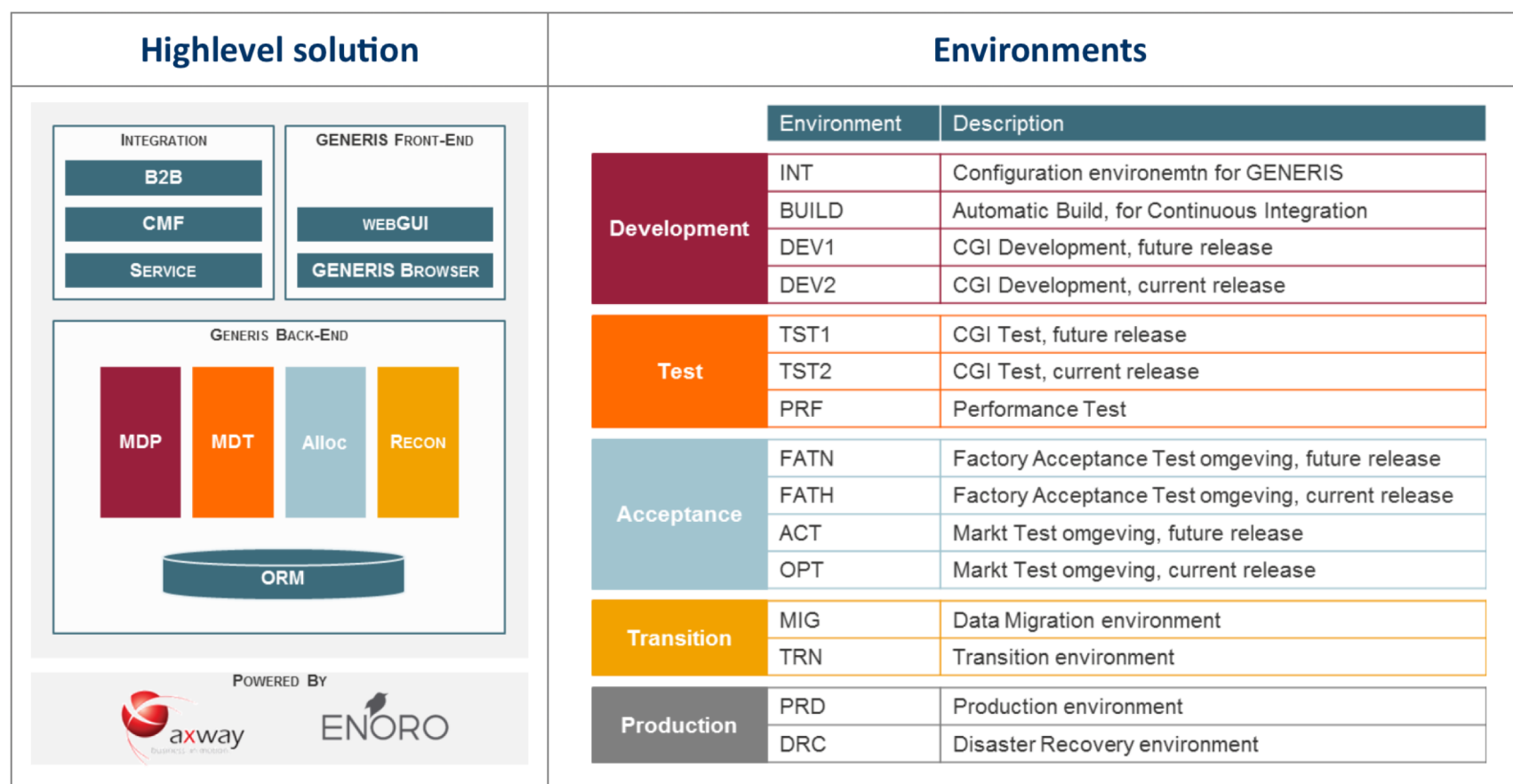
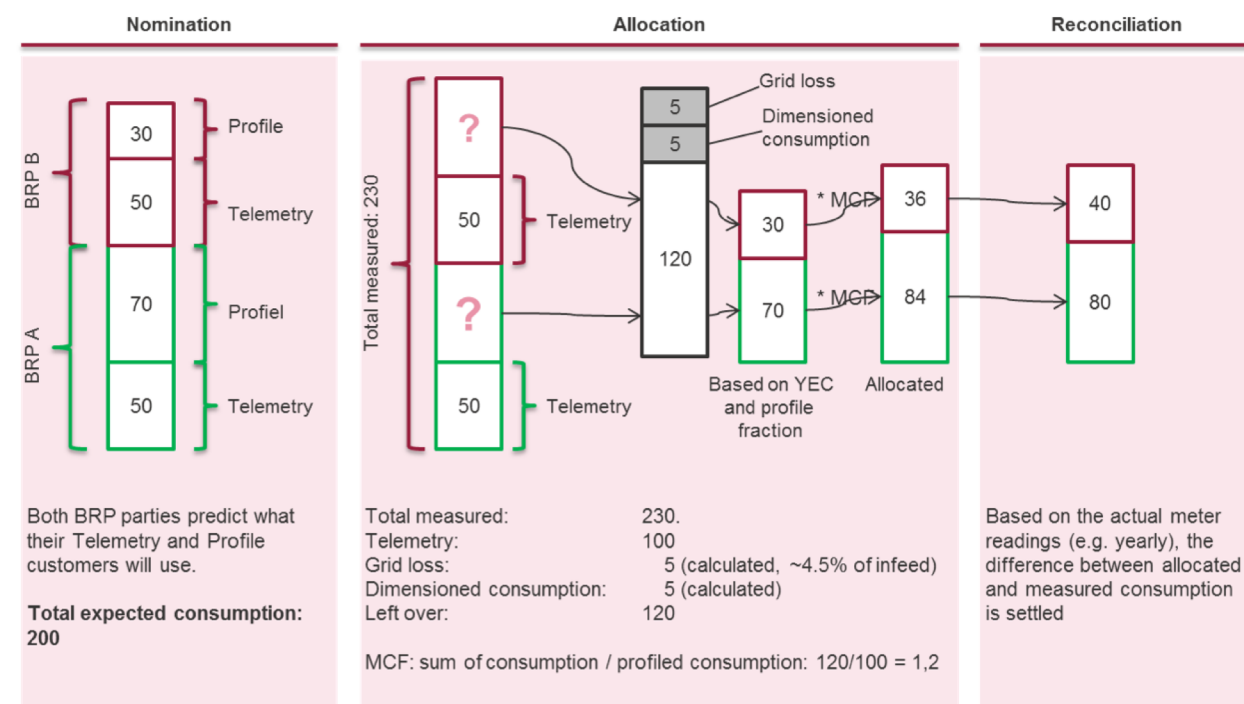
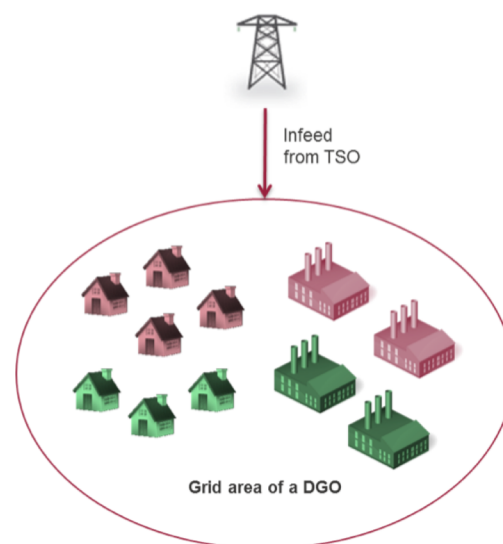


# Systematic selection of frameworks and platforms to satisfy NFRs in the context of microservices-based systems



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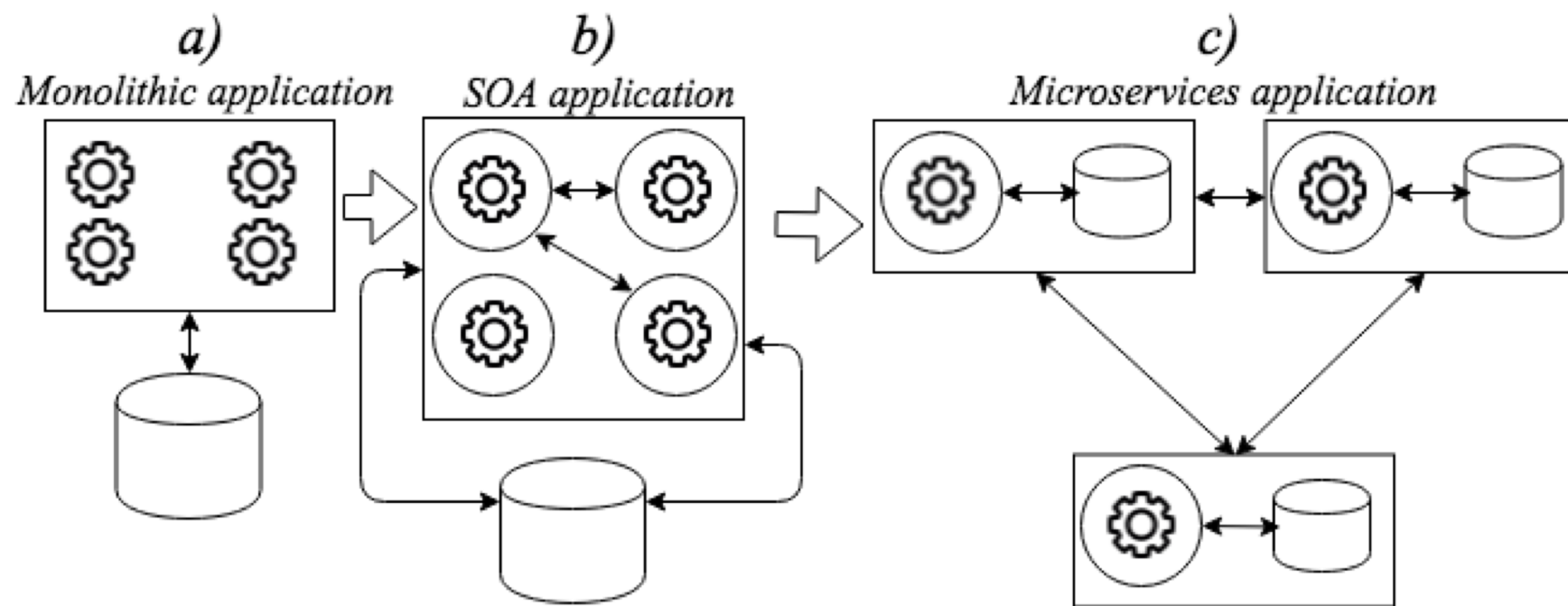
**<https://www.eaton.com/us/en-us.html>**



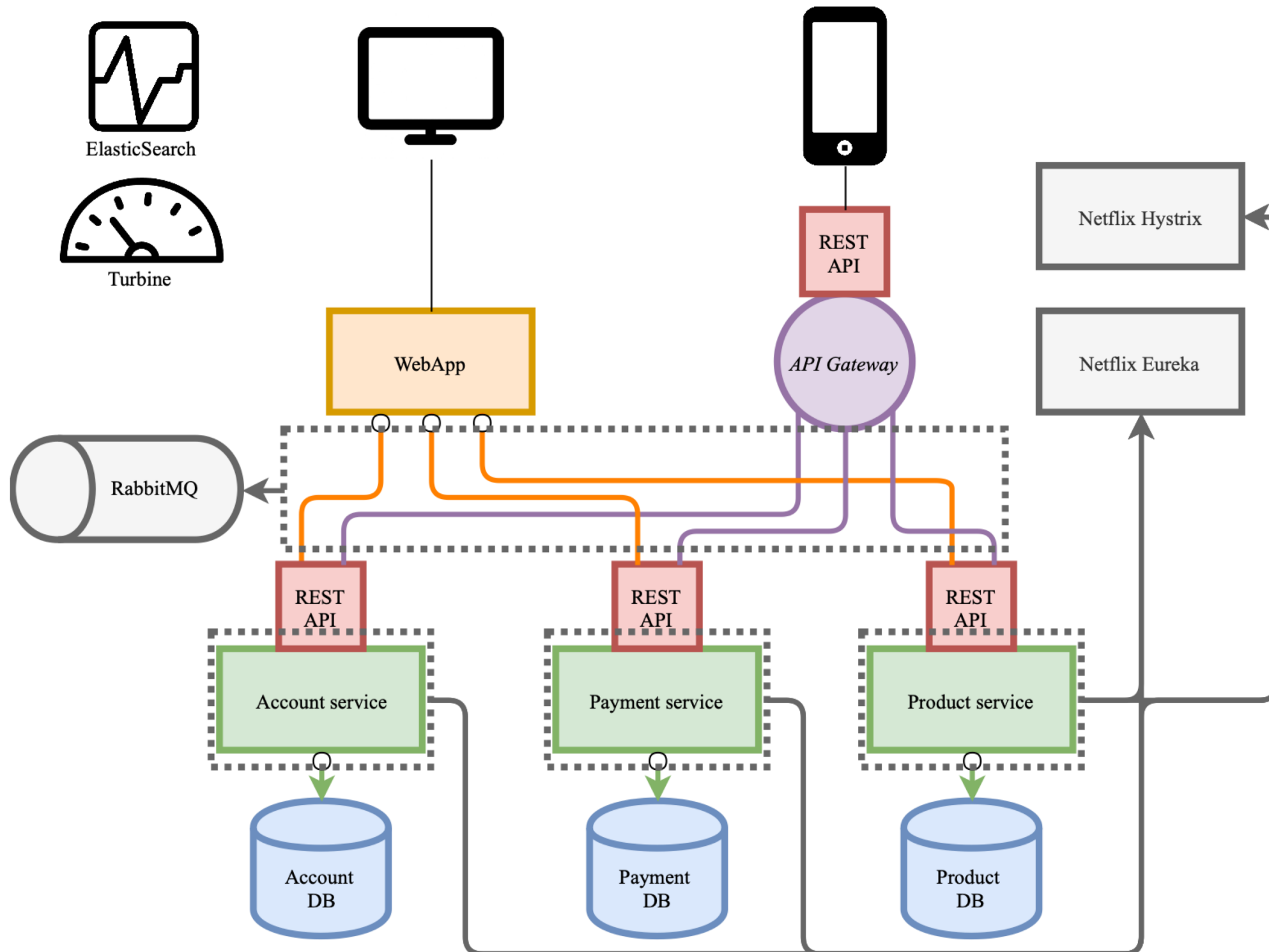
***Safety, security and emergency communications***

# Microservices

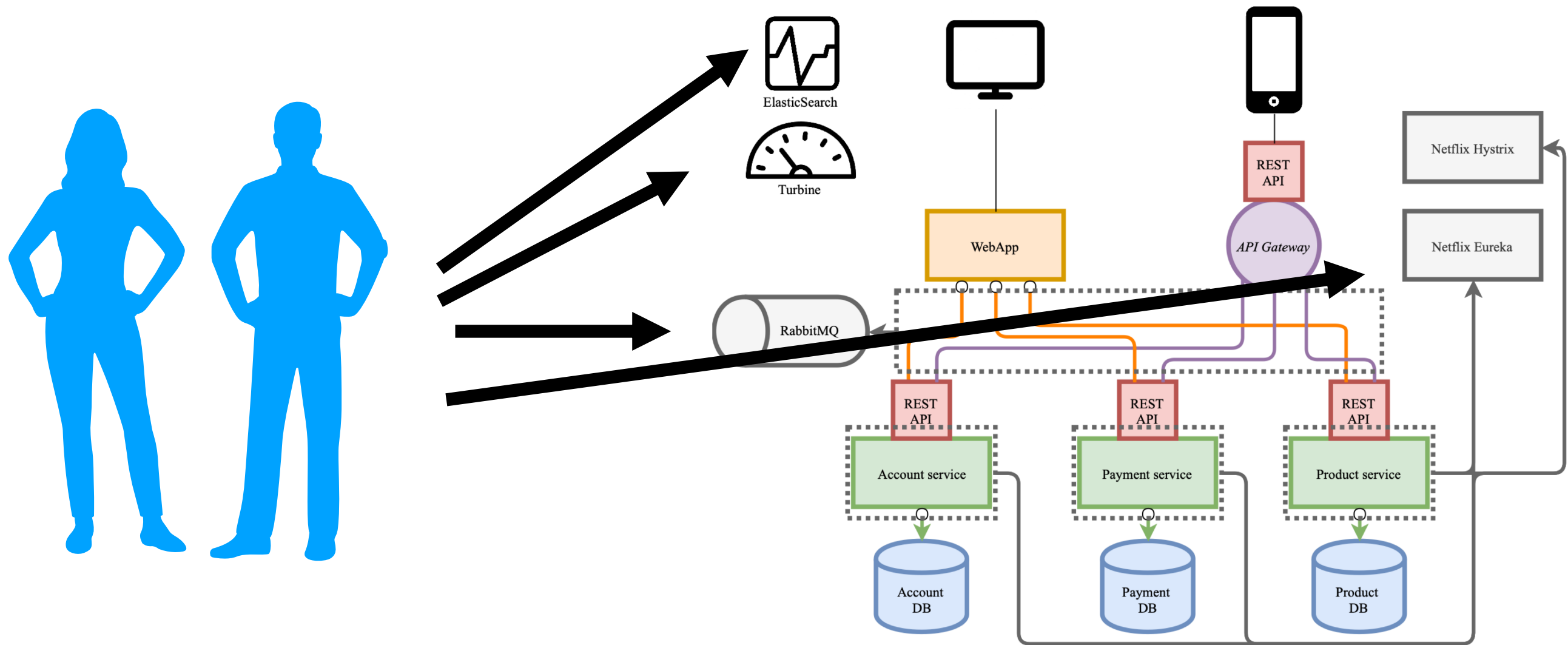
# Microservices



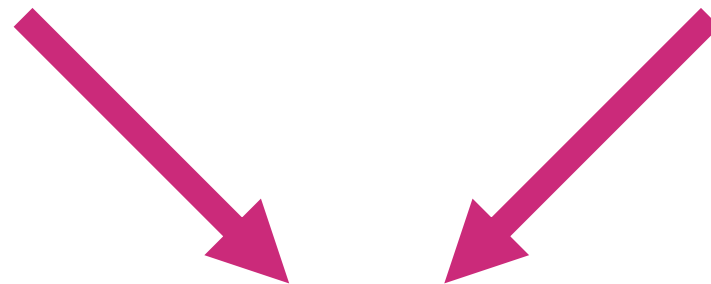
# Microservices



# Microservices



# Exercise



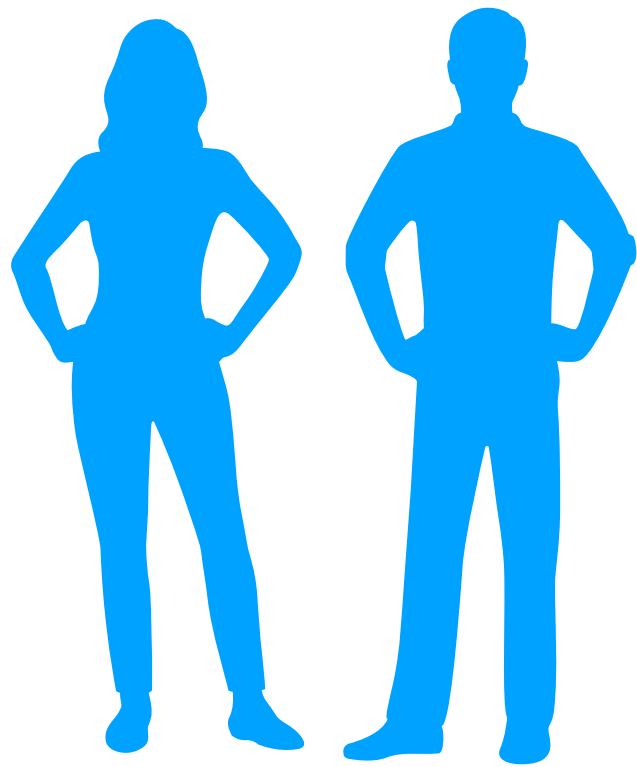
**2 casos**



# Exercise

1. Read the documentation given to each person [10 minutes]
2. Present extra-functional requirement
3. Select properties
4. Evaluate frameworks
5. Select frameworks
6. Justify the decision

# Exercise



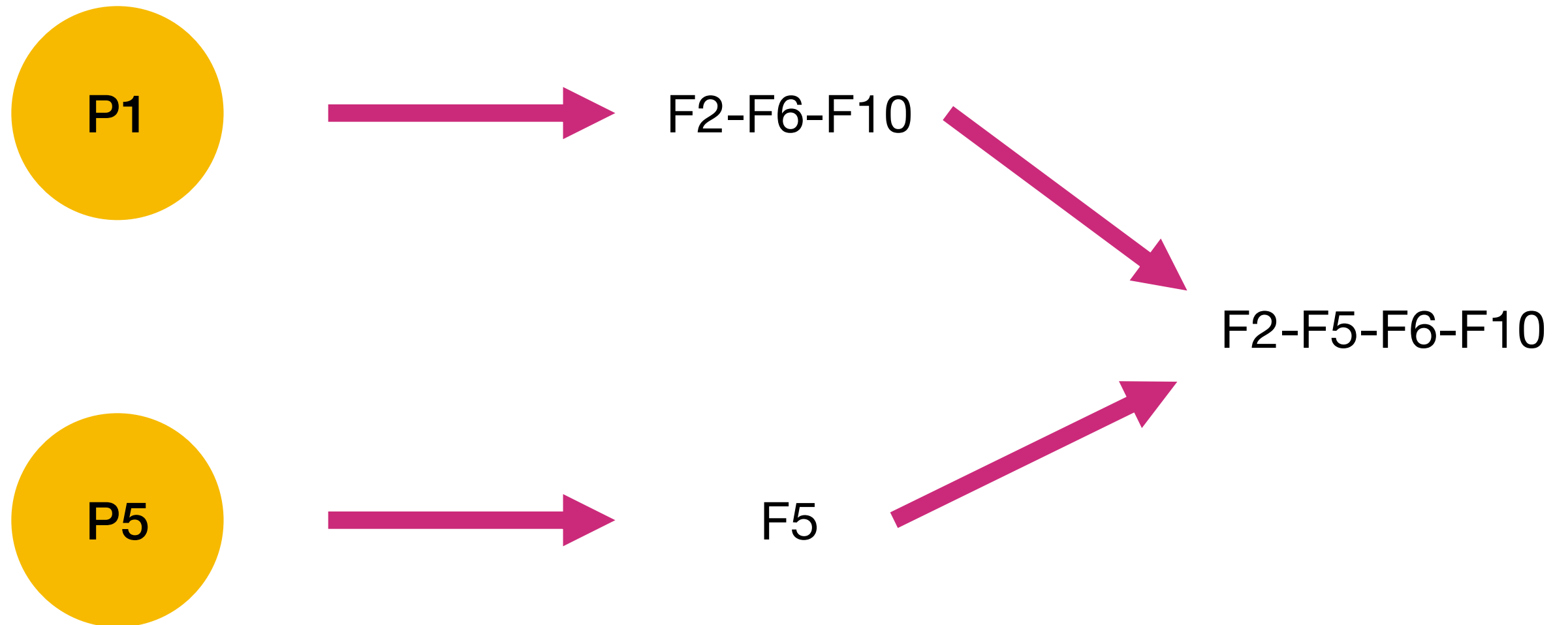
Non-functional requirements



P1

P5

# Exercise



# Exercise



*Justification*

# Cases

# Case 1

Sitewhere (<https://sitewhere.io/en/>) is an open source IoT platform that provides a microservices infrastructure to build and deploy IoT systems.

A certain customer needs to add a new smart water meter service to the Sitewhere platform. The service receives meter data for every minute.

# Case 1

**High availability requirement:** The smart water meter service needs to be available 99.5% of the day for the Sitewhere platform to generate daily reports of water consumption using other services

# Case 2

A forestry company in Chile called *ABC* wants to migrate its current Salary Payment Systems towards a microservices architecture. The main reasons for perform this migration are (1) the acquisition of new job services, (2) hiring of more administrative personnel, (3) organizational growth and (4) integration with other companies



# Case 2

**High availability requirement:** It is critical that the last 5 days of each month the Salary Payment System must provide the salary without any problem (99.9% availability), since another system must check AFP and FONASA/ISAPRE for each employee. In the event that payments are delayed, the *ABC* company may suffer tax penalties and possible lawsuits.

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