Developer to CTO

CS 7002

Romain Untereiner

IT pillars

How to you build tech?

Where do you begin?

What do you need to take into account?

What do you do when the tech is built?

The pillars of the tech team

- System design

- Product management

- Technical design

- Build

- Delivery

- Run

With Human, Tooling and Security management as transversal streams
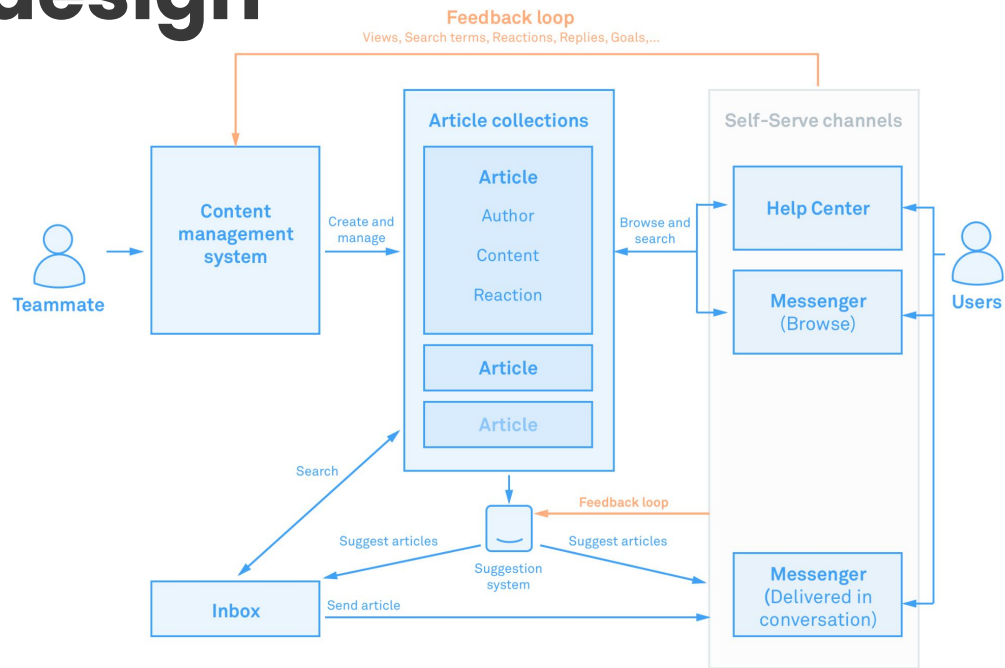
System design

System design goal is to represent to global scope of the product or service you build.

It involves:
        - its stakeholders
        - its domains
        - its functions
        - its relations

System design

Feedback loop
Views, Search terms, Reactions, Replies, Goals,...

Article collections

Self-Serve channels

Content management system

Article
Author
Content
Reaction

Article

Article

Help Center

Messenger (Browse)

Teammate

Users

Create and manage

Browse and search

Search

Suggest articles

Feedback loop

Suggest articles

Suggestion system

Inbox

Send article
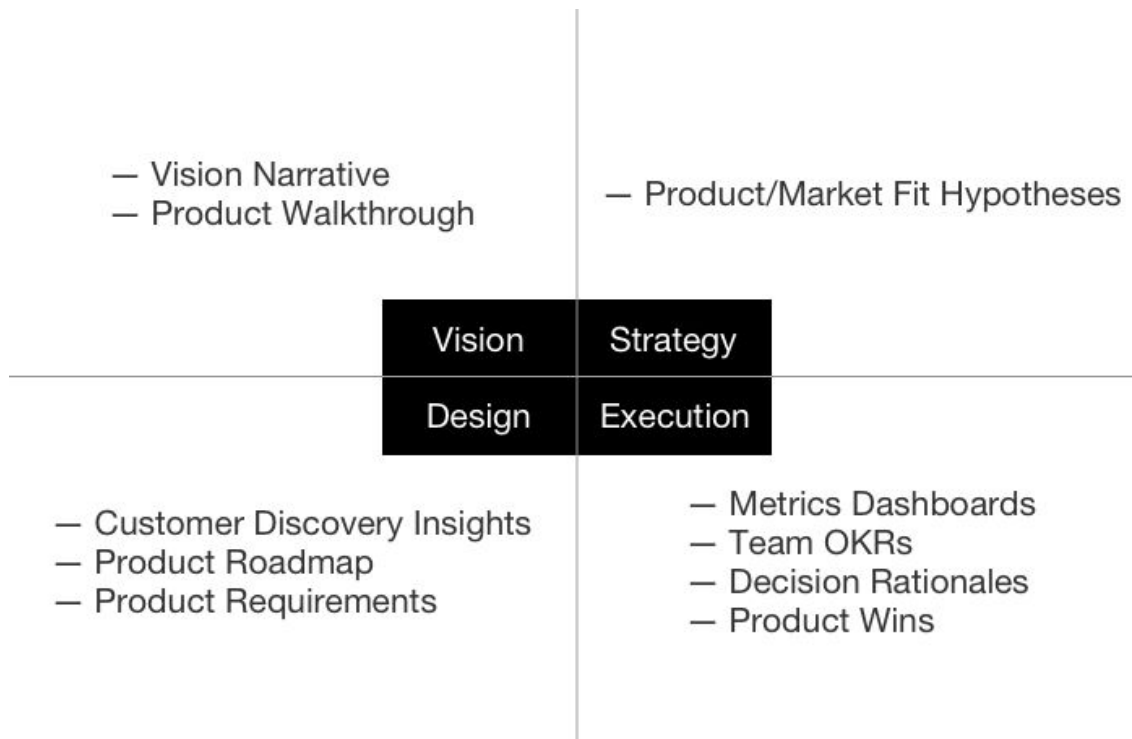
Messenger (Delivered in conversation)

Product management

Product management is an organizational function that guides every step of a product's lifecycle: from development, to positioning and pricing, by focusing on the product and its stakeholders.
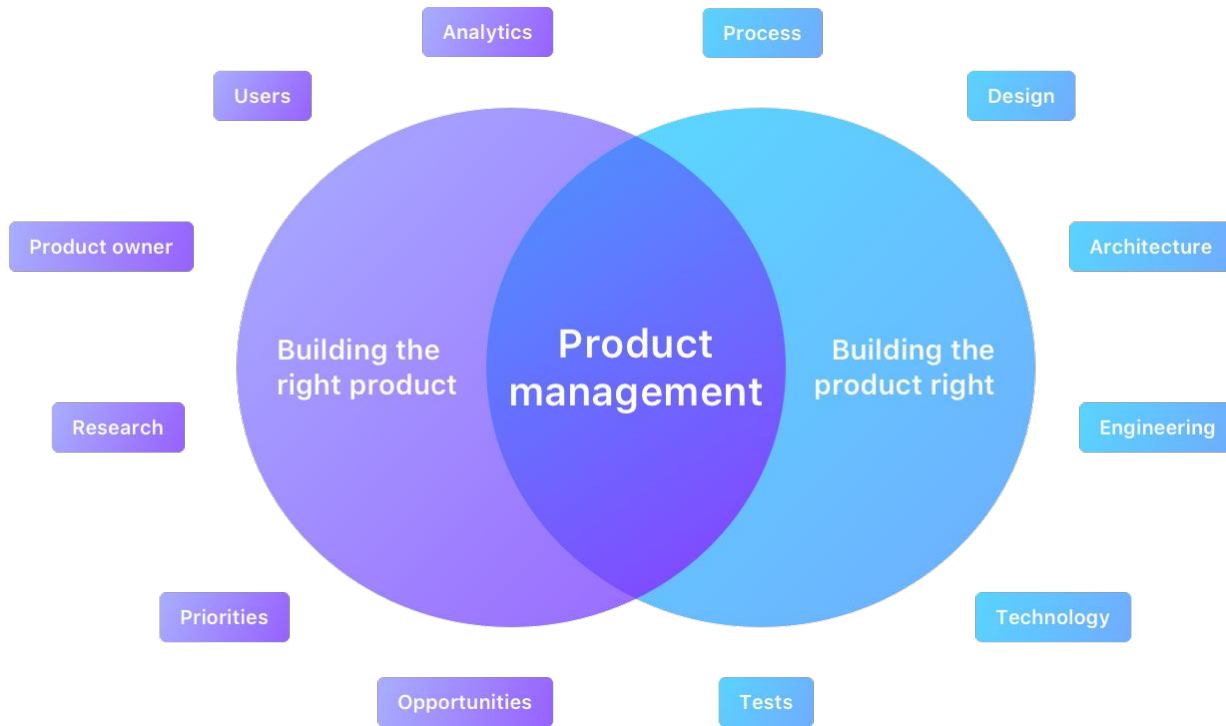
It involves:
- strategy and market research
- vision
- need and process discovery
- business model and financials
- product design (UX, requirements, UI...)
- planning
- lifecycle management
- monitoring
- marketing

Product management

— Vision Narrative
— Product Walkthrough

— Product/Market Fit Hypotheses

Vision	Strategy
Design	Execution

— Customer Discovery Insights
— Product Roadmap
— Product Requirements

— Metrics Dashboards
— Team OKRs
— Decision Rationales
— Product Wins

Product to tech

Analytics

Process

Users

Design

Product owner

Architecture

Building the right product

Product management

Building the product right

Research

Engineering

Priorities

Technology

Opportunities

Tests

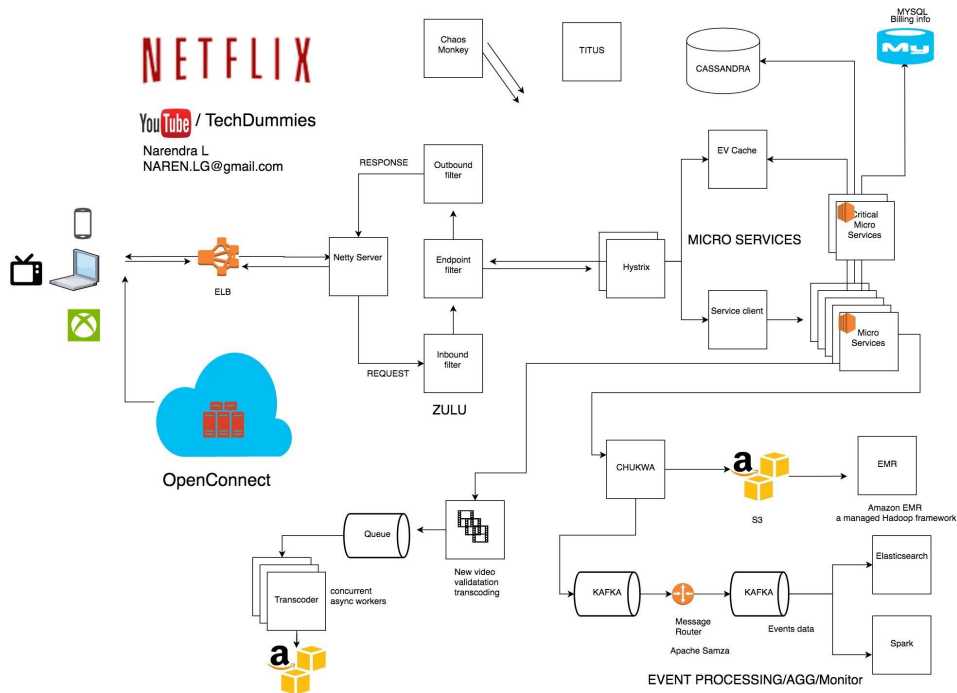Developer to CTO - Romain Untereiner - 2021

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Technical design

The technical blueprint and specifications for any tech implementation

Functional design specifies how a **program** will **behave** to outside agents and the **technical design** describes how that **functionality** is to be **implemented** in code and infra.

It involves:
- interface design
- class and method design
- data design
- logic design
- infrastructure design
- requirement design
- monitoring and alerting design

Technical design

Build

The build step implements in sandboxed environment the feature described in technical designs and specifications
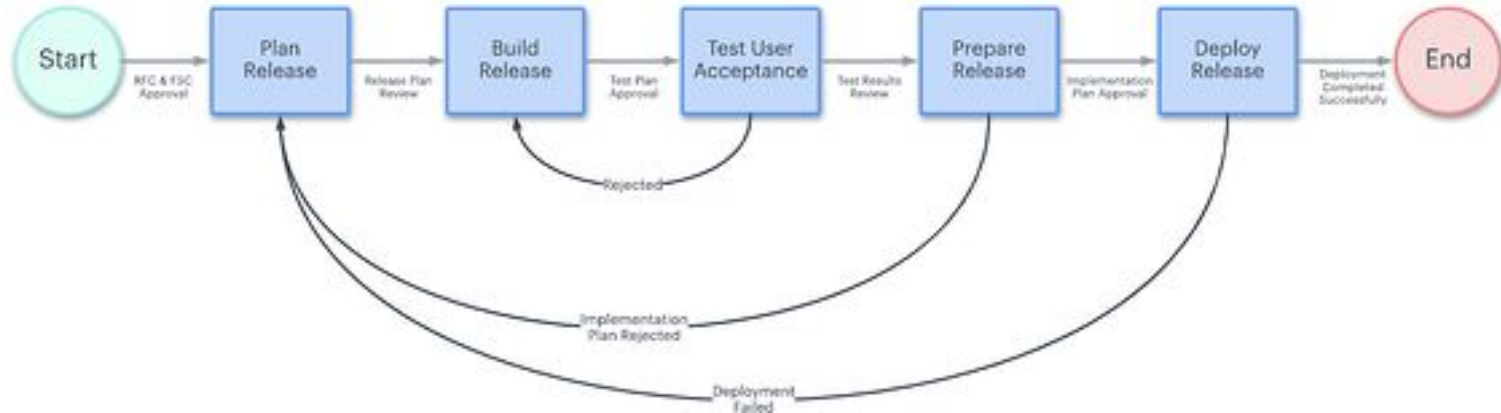
It involves:
- data model implementation
- interface implementation
- logic implementation
- security implementation
- testing implementation
- monitoring implementation
- altering implementation

Delivery

The delivery is the feedback loop after Build is considered as done. Technical and Product level OKRs are measured and validated, requirements verified, release process specified, planned, validated with the Run constraints and done.

Delivery

Release Management Process

Run

The Run represents a product or service part that is available for a stakeholder

It implies:
- business monitoring
- technica monitoring
- support
- incident management
- event management
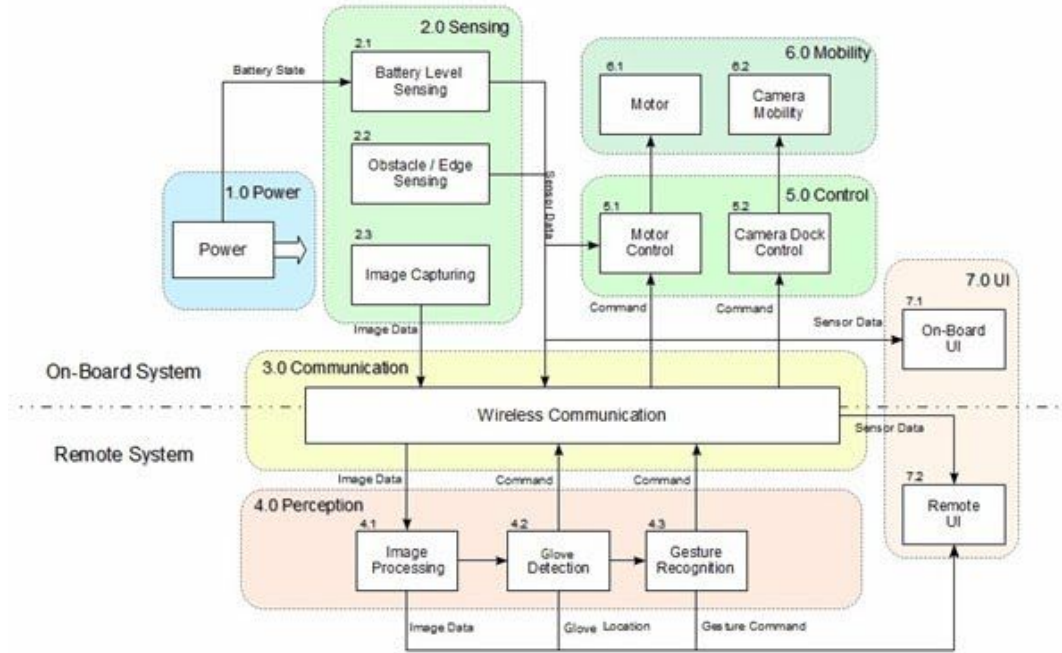- changement management
- contractual management

Functional design

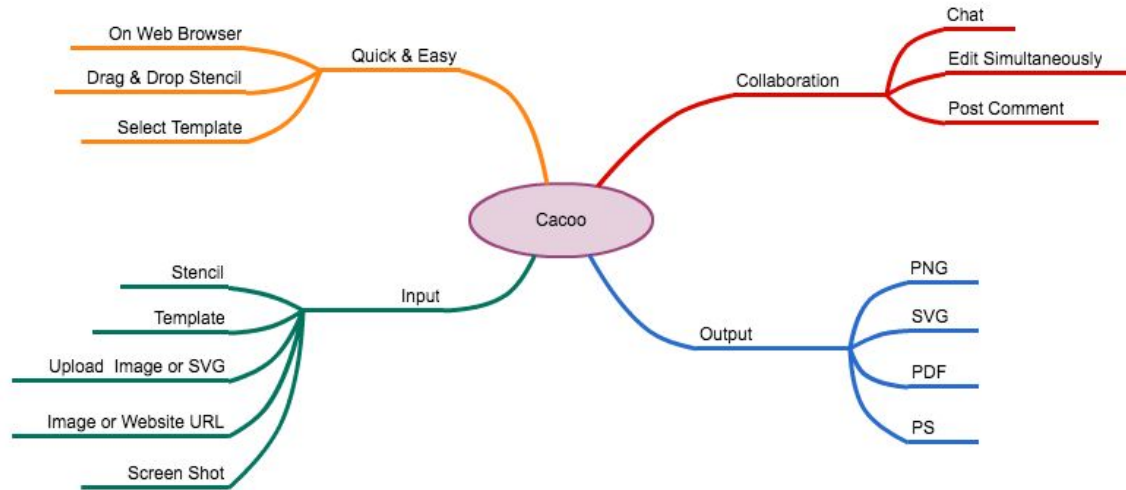Functional Design is a paradigm used to simplify the design of systems.

The goal is **to represented system in a comprehensible way**, to support thinking, presentation and evolutions.

One of the main challenge is to guarantee **low coupling**. DDD & EDD can help to solve this coupling challenge.

Functional architecture

Mind mapping

On Web Browser
Drag & Drop Stencil
Select Template
Quick & Easy

Chat
Edit Simultaneously
Post Comment
Collaboration

Cacoo

Stencil
Template
Upload Image or SVG
Image or Website URL
Screen Shot
Input

PNG
SVG
PDF
PS
Output

Session learnings

- Entreprise can be modeled with EA

- A project has several connect layers of organisation

- Many frameworks exist, defending very similar principles

- Main element resides in Ownership, Decision making and Enterprise stakeholder alignment

- The size of an enterprise requires a correlated level of organisation

For the next session

- Choose the **main strategic goals** you want for your project

- Draft the **systemic functional architecture** and **mind map** of your project

Next session

- Managing technology

- Lean, Scrum

- DDD