

IN5320 - Development in Platform Ecosystems

Lecture 4: *Governance in Platform Ecosystems*

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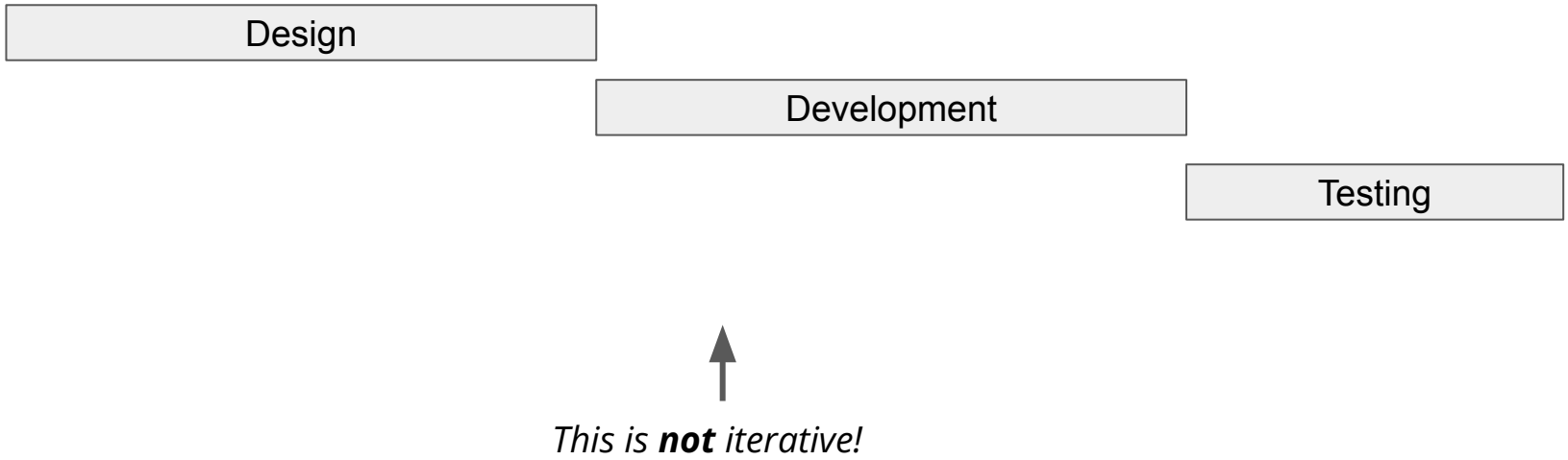
A few words on the project

The project

- Looks like all of you (so far) have understood the selected case
- Remember: only four weeks left!
- Use the seminar groups for help!

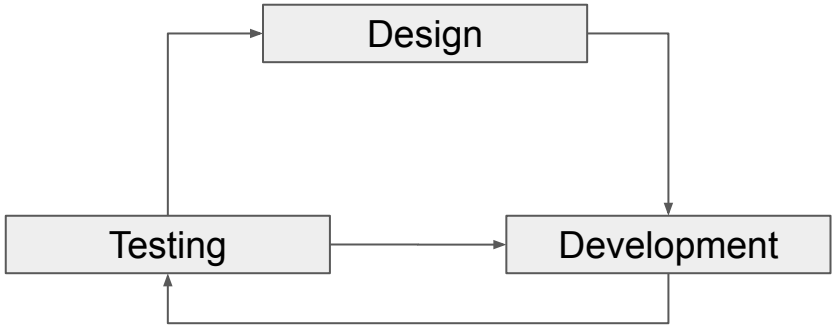
The project

- “We’re working through an iterative process”



The project

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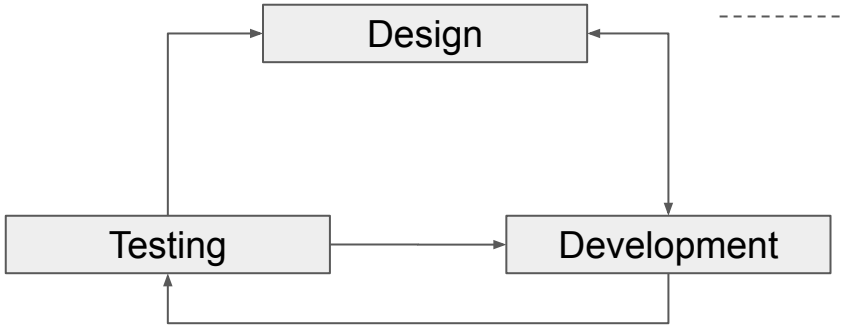


This is iterative

First iteration(s):
MVP
Second iteration:
Additional features 1
Third iteration
Additional features 2
Fourth iteration
Additional features 3

The project

- “We’re working through an iterative process”



“Design”

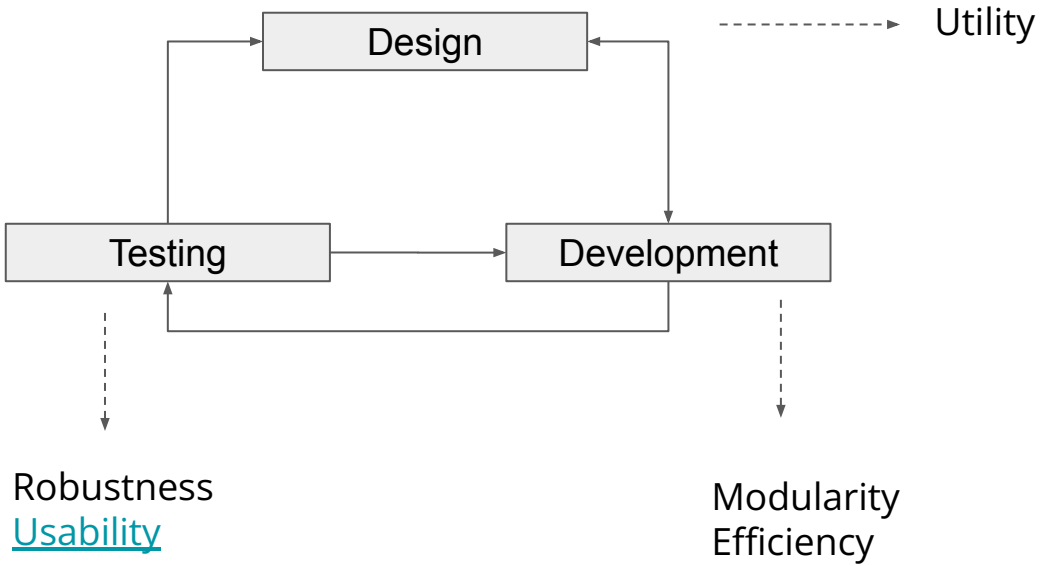
About analysis, ideation, prototyping *based on the case description*

I.e., what to build and how to build it (function and form)

- Use the toolkit!

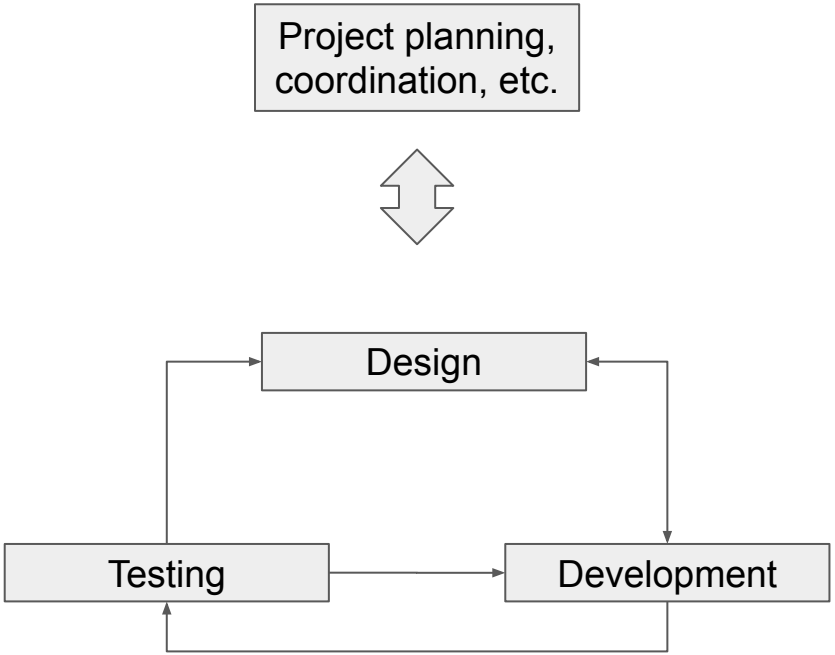
The project

- “We’re working through an iterative process”



The project

- “We’re working through an iterative process”



The project

- Deciding upon additional functionality - a function of:

  Plausible utility for end-users given the case ***and*** time and difficulty of implementation

  High utility + low difficulty = high priority

  Low utility + high difficulty = low or no priority

The project

- Remember to note down:
  - Assumptions (regarding the case)
  - Major decisions (regarding features and how these are implemented)
  - Weaknesses with decided approaches
  - The reasoning around utility when deciding upon additional features

Short summary of last lecture

Platforms

Two types of *digital platforms*:

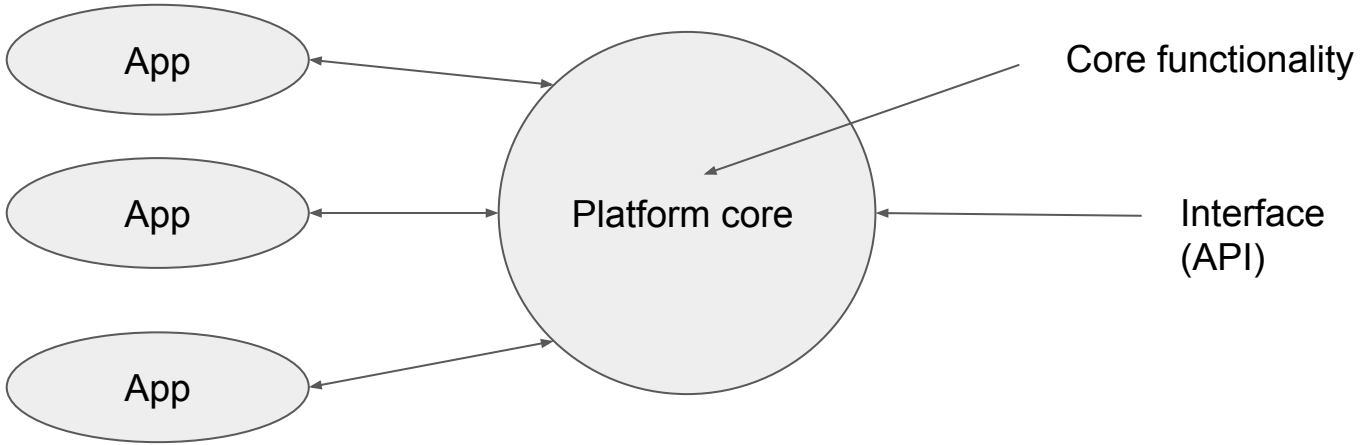
- **Transaction platforms**
  Facilitates interaction between participants in a market or network

- **Innovation platforms** (software platforms or platform architectures)
  Facilitates innovation by enabling efficient use and reorganization of resources by a large audience.
  Main focus of this course

What is a platform?

"A software platform is a software-based product or service that serves as a foundation on which outside parties can build complementary products or services" - Tiwana 2013 p5

- Provides core functionality which is extendable
- Entails interfaces that allows third parties to develop *apps* that extend the functionality of the platform



Core characteristics (beyond the architecture)

- *Innovation* or *software* platforms are characterized by an architecture with a stable core + APIs - enabling development of apps.
- Their emergence is driven by several environmental factors.

Now: additional characteristics:

- Multi-sidedness
- Network effects
- Multi-homing
- Tipping-points
- Lock-ins
- Competitive durability
- Envelopment

Today's lecture

1. What is governance?
2. Dimensions of governance in platform ecosystems
3. Challenges and tensions with governance in platform ecosystems
4. Boundary resources

What is governance?

Today's lecture

Governance

"the act or process of governing or overseeing the control and direction of something (such as a country or an organization)" (merriam-webster.com)



What is Governance?

Governance - the traditional hierarchical organization



CEO

CTO | COO | CMO | CSO

Sub-manager | Sub-manager | Sub-manager | Sub-manager | Sub-manager | Sub-manager

Worker | Worker | Worker | Worker | Worker | Worker | Worker | Worker | Worker | Worker

Exercise

Think and note down some bullet points on the following question:

- What may be different about governing a platform ecosystem as compared to a traditional hierarchical organization?

What is Governance in Platform Ecosystems?

"If the metaphor for traditional organizations is an army, the metaphor for platform ecosystems is a symphony. The platform owner is like the conductor and the app developers are like the musicians." (Tiwana, 2013 p. 117)

- Platform owner to not direct, but **orchestrates** to "ensure overall coherence in their collective performance" (Tiwana, 2013 p. 117)
- The third-party firms choose to follow the platform owner

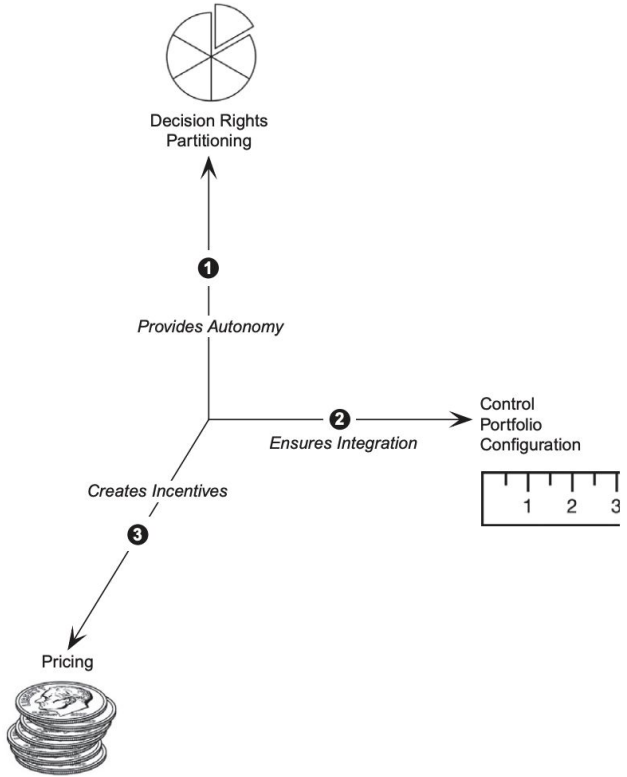
"Governance of a platform ecosystem broadly refers to the mechanisms through which a platform owner exerts ***influence*** over app developers participating in a platform's ecosystem" (Tiwana, 2013, p. 118)

Key dimensions

Key dimensions of governance in platform ecosystems

Three key dimensions of Governance in platform ecosystems, according to Tiwana (2013):

1. Decision rights partitioning
2. Control portfolio design
3. Pricing

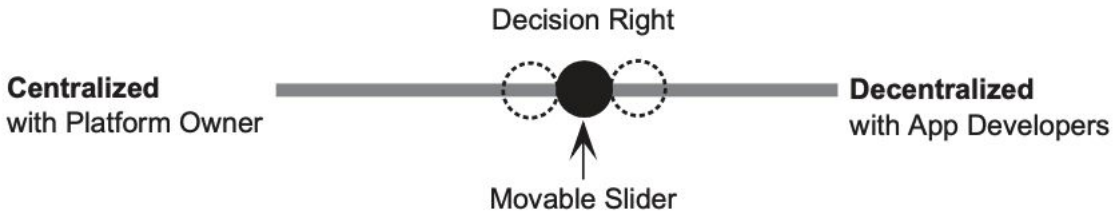


Key dimensions of governance in platform ecosystems

Decision rights partitioning

- Who decides what?
- Decisions related to the platform core
- Decision related to apps

- Strategic: what is the platform or app to accomplish
- Implementation: how is it to accomplish it?

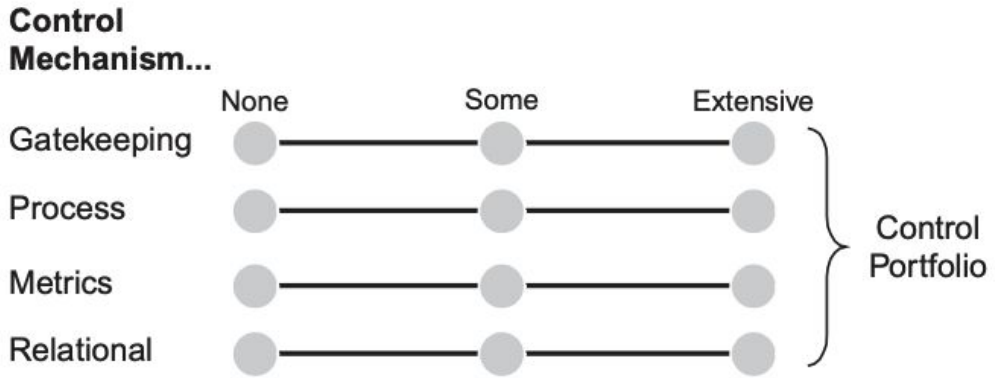


Key dimensions of governance in platform ecosystems

Control portfolio design

“Control is implemented by the platform owner over app developers using a variety of control mechanisms. Therefore control mechanisms are the tools that platform owners use to implement and enforce rules that reward desirable behavior, punish bad behavior, and promulgate standards of behavior among app developers” (Tiwana 2013, p123)

- Gatekeeping
- Process control
- Metrics
- Relational control



Exercise

Think and note down some bullet points on the following question:

- Think about a) Microsoft Windows and b) Apple's iOS as software platforms. Are there any differences in the "control portfolio" of the two?

Key dimensions of governance in platform ecosystems

Pricing

“create incentives that are compelling enough to encourage app developers to make personal investments to ensure the prosperity of their own app offerings, and in turn the vibrancy of the platform ecosystem as a whole” (Tiwana 2013, p 126)

1. Whether pricing should be symmetric or asymmetric for the two sides of the platform
2. If asymmetric, who to subsidize and for how long?
3. Pricing for access versus usage?
4. Pie-splitting using a fixed scale or a sliding scale?
5. App pricing decisions

Challenges and tensions

Exercise

Think and note down some bullet points on the following question:

- What are potential challenges related to governance in a platform ecosystem?

Some key challenges and tensions

1. Diversity versus control
2. Ecosystem-wide versus dyadic relationships and rules
3. Soft versus hard regulation

Diversity versus control

- On the one hand, platform owners wants to afford “generativity” i.e., “the ability of a self-contained system to create, generate, or produce a new output, structure, or behaviour without any input from the originator of the system” (Wareham, 2014)
- On the other, it wants to avoid bad quality, fragmentation, incompatibility, and self-opportunistic behaviour
- Thus has to balance *enablement and diversity* with *control*.

E.g., process standardization without “killing” innovative ways of design and development or product standardization without “killing” innovative apps

Ecosystem-wide arms-length versus dyadic relationships

"governance is costly. The optimal governance structure is the simplest one that achieves the goals of a platform at the least cost to both app developers and the platform owner" (Tiwana 2013, p119)

- Thus, on the one hand, platform owners must standardize their relationship with third-party firms.
- On the other, there may be situations where it makes sense to treat certain third-parties different
- When to deviate, and when not do deviate from ecosystem-wide rules?

Soft versus hard forms of regulation

- Excessive use of “hard” rules and regulations could be ‘dangerous’:
  - Third-party firms may steer away from the platform
  - May constrain the kind of innovation taking place
  - May go against the platform “ethos” (e.g., in DHIS2 or open source projects)
- Platform owners sometimes employ “soft”, voluntary rules that tries to steer the behaviour of participants
- E.g., resources making it easier to do things in a certain way
- How to balance between hard and soft regulations - when are each appropriate? How do they affect platform openness and generativity?

Boundary resources

Boundary resources

“To successfully build platform ecosystems, the focus of the platform owner must shift from developing applications to providing resources that support third-party developers in their development work” - Ghazawneh & Henfridsson 2013 p 174

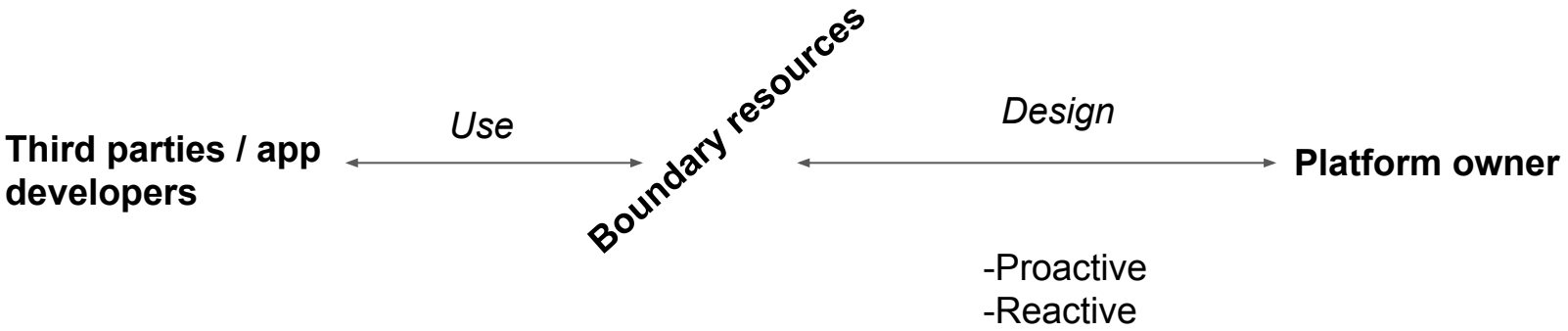
→ Boundary resources: resources enabling and controlling third party development through tools and regulations



Boundary resources

- To enable innovation, design and development of new functionality to the platform.
- To control the platform and its evolution in some desired direction.

Therefore: boundary resources has to be designed with the balance between these two in mind.



Platforms, ecosystems and boundary resources - example

Ghazawneh & Henfridsson 2013 describe the evolution of the iOS from a closed operating system toward a platform ecosystem.

We follow the design of boundary resources, which both enable third-party developers to create apps, and exercise control over the platform.

1. Opening up the system with an SDK - and adding a review process
2. Extending the API with additional features.
3. Extended control: Ensuring that competing platforms are not running on their platform through regulations.

Exercise

Think and note down some bullet points on the following question:

- What are examples of boundary resources in the DHIS2 ecosystem?

Summary

Exercise

Think and note down some bullet points on the following question:

- Imagine that you’re consulted by a firm that trying to establish a software platform. What key advice would you give them?

Summary

- Governance in Platform Ecosystem is about *orchestrating* the activities of the ecosystem participants
- Key dimensions include: 1) Decision rights partitioning, 2) control portfolio design, and 3) pricing
- Key challenges and tensions include: 1) diversity versus control, 2) ecosystem-wide versus dyadic relationships, 3) soft versus hard regulation
- Boundary resources is a commonly used concept that captures “the software tools and regulations that serve as the interface for the arm’s-length relationship between the platform owner and the application developer” (Ghazawneh & Henfridsson, 2013)