Innovation Traps: How to Design for Uncertainty

Cristina Turbatu

A Case Study of:

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Agenda

- Corporate Innovation
- Innovation Traps
- Designing for Uncertainty
- Playtech’s Games Marketplace
- Q&A
Corporate Innovation
Stages of our Corporate Innovation

Idea -> Proof of Concept -> MVP -> Scale -> Handover
Complement the company technology ecosystem

Design for Uncertainty
Innovation Traps

● Focusing on the solution without fully understanding the problem;
● Overengineering;
● “Black Ops” Projects;
● Buggy Proof Of Concept;
● Moving fast. Maybe too fast.
Design for Uncertainty

- Complement the company technology ecosystem
- It takes a strong team to succeed;
- Ask questions. Many many questions.
- Choose flexible technology stack and architecture
- Write Mocks
- Recognise when to scale
- Embrace and seek change

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Case Study: PLAYTECH GAMES Marketplace
What is Playtech Games Marketplace (MP)?
Where MP is today?

40+ Licensees connected

200+ Brands

eGR Supplier Innovation Award 2019

11+ Regulated markets covered

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How we started
late 2016
How did we brainstorm for ideas?
High level view of solution

Remote Game Server (RGS) → TPI → POP → Marketplace

Licensee Backoffice
Proof of concept

2017
Focusing on the solution without fully understanding the problem

Innovation Trap

Defining Baseline Requirements
Ask questions. Many many questions.

Design for Uncertainty
How to get buy in from your dependencies?
Make use of Open Protocols
Design for Uncertainty

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NOW THAT YOU HAVE THAT FEATURE DONE
I WANT IT TO DO SOMETHING ELSE INSTEAD
Use flexible technology stack and architecture

Design for Uncertainty
Overengineering

Innovation Trap
Clear separation of functionality in the codebase

Design for Uncertainty
Build to scale from the start

Design for Uncertainty
Integration Points

S3

FE

LB

BE
Authorization
Authentication

FileAPI

GP
DL

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Mock 1

Mock 2

Mock n
Write Mocks
Design for Uncertainty
“Black Ops” Projects

Innovation Trap

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Buggy Proof Of Concept
Innovation Trap
Pivoting and iterating is critical

Design for Uncertainty
Growing the scope

2018
Add Business Intelligence
Extending to other markets

Marketplace International Instance <PRIMARY>

Marketplace Territory Specific Instance <REPLICA>

S3

MongoDB

MongoDB

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Growing the team

2018

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Short version: we failed
Little documentation as the system changed often

Tradeoff of a flexible system
Marketplace as a Service
Scaling

2019

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Game Discovery Loop

Our first Out Of Memory
Moving fast. Maybe too fast.
Innovation Trap
Recognise when to scale

Design for Uncertainty
“As soon as you start to scale, everything is going to change. Everything.”

Ryan Smith, CEO of Qualtrics
Current Microservice Architecture

- FE
- LB
- S3
- Marketplace API
- FileAPI
- BI
- NOTIF
- GP
- DL
- Authorization
- Authentication
- Audit
- Metrics

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New challenges

2020

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Architectural Evolution
Changing some of the Tech Stack

- **FE**
- **LB**
- **BE**
  - Authorization
  - Authentication
  - Audit
  - Metrics
- **Marketplace API**
- **FileAPI**
- **BI**
- **NOTIF**
- **GP**
- **DL**

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Event Based Messages

- S3
- FE
- LB
- FileAPI
- BI
- NOTIF
- Authorization
- Audit
- Metrics
- Marketplace API
- DL
- GP

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Changing some of the Tech Stack

FE

LB

S3

Marketplace API

Authorization
Authentication
Audit
Metrics

FileAPI

BI

NOTIF

GP

DL

nest
GraphQL
neo4j

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"Success is achieved in two ways: [Insane] Luck or having failed so many times that success is the only possible next outcome"

Peter Mares, Group CTO BetKing
Embrace and seek change.

Design for Uncertainty
Q&A
Innovation Traps: How to Design for Uncertainty

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Innovation traps: How to design for uncertainty

1:15 PM - 2:05 PM, Wed, Feb 26, 2020
Murray Hill

The path to growing innovation projects to highly scalable, resilient, and performant systems is riddled with challenges and decisions. Cristina Turbatu draws on her experience to highlight the problems that occur during the rapid evolution of prototype architectures to production-ready products while discussing some of the solutions to overcome uncertainty and constant pivots.

Track: Fundamentals
Keywords: 50-minute session

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