

KNITS

Kuehne Nagel Information Technology School



Portfolio Project

Project Ideas



1

Introduction

Basic terminology and a grid of evaluation

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Product drivers



Business Domain



All data and process
involved into this business

Technology



Software and Hardware

Market



What problem this
product will solve?

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Product drivers and roles



Business Domain



Product Owner



Software Analyst

Technology



Frontend
Developer



Backend
Developer



Quality
Assurance



Dev Ops
Engineer

Market

Sales

Marketing

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How to identify values in product



DATA



Where product data
will come from?

i.e External systems,
user entries, AI agents,
IOT devices

SERVICES



What are the services that
product will provide on
top of those data?

i.e payment on line,
reservation, analytics,
sales, search

USERS



What value will those
services provide to
final users?

i.E monitor and audit
processes, buy
products, book
services, find
supplier?



2

Domain Experience

Where is possible to find the relevant know how

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Domain Driver: Resources



Business Domain experience



Personal

- As Customer
- As Worker
- Daily routines



Emulation

- As Customer
- As Analyst



Innovation

- Research
- Open Data
- Hackatons

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Domain Driver: Resources



Business Domain experience



Personal

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Emulation

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Innovation

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Personal customer experience



Some examples

Experience as passenger **in transportation.**

Experience as customer **in restaurant.**

Experience as customer **in supermarket.**

What are processes I can guess?

What could be a software designed to help this kind of business?

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Personal working experience



Some examples

Experience **as a shop keeper** could help to understand warehouse management, sales through ecommerce, supplier's order management, etc.

Experience **in hotel reception** could help to understand reservation management, additional services, check in and check out processes, etc.

Experience **in manufacturing** could help to understand material supply management, production schedule, human resources management, project management, etc.

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Personal daily routines



Some examples

Time management system.

How you use your time? How many minutes you are spending on X? How much you would like to invest in Y? How much reality was matching with plans? How many hours you'd like to allocate to next goal?

Budget System:

How you spend your money? Track expenses and set a budget for different categories. See in the long run what is expected, and what you can change with your management.

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Domain Driver: Resources



Business Domain experience



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Innovation

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Emulator's customer experience



Some examples

Reservation Systems:

Airplane companies, accommodation, event at venues ,
transportations

Public Advertisement:

Real Estate, Second Hand, Ebay

Real time systems:

Betting systems, Games on line

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Emulator's Analyst steps



- Choose a category of software products
- Select a subset of products to analyze
- Learn about product\by documentation
- Choose best combination of features from products

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Emulator's Analyst steps



Choose a category of software products

Reviews of softwares by categories:

<https://www.goodfirms.co/directories/software>

<https://www.capterra.com/categories>

<https://www.softwareadvice.com/categories>

<https://www.predictiveanalyticstoday.com>

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Emulator's Analyst steps



Select one or more products to analyze

Evaluate quality and availability of product documentation

User manual

Video tutorial

Demo on the cloud

Blog

Open Source

Good reviews

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Emulator's Analyst steps



Learn about product\by documentation

User manual as specification (interview with customer)

User and roles

Features and goals

Processes

Categorize features

Prioritize features

Get into data details

User interface

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Emulator's Analyst steps



Choose best combination of features from products

If you have more than one product in focus you can

Compare features

Compare user interactions

Merge best practice

Improve features

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Simulators - Game



Some examples

On Logistics

<https://www.logitycoon.com>

General List:

https://en.wikipedia.org/wiki/List_of_business_simulation_video_games

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Domain Driver: Resources



Business Domain experience



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Emulation

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Innovation

- Research
- Open Data
- Hackatons

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Innovation Research – Topics of our main interest



- Circular economy
- Smart Cities
- Green supply chain
- JIT Supply Chain management
- Automation and Robotics in Supply Chain

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Innovation and Open data



Some links to api:

<https://www.programmableweb.com/>

<https://rapidapi.com/>

<https://public-apis.io/>

<https://apis.guru/browse-apis/>

<http://apis.io/>

<https://apilist.fun/>

<https://explore.postman.com/>

<https://apiharmony-open.mybluemix.net/public>

<https://developers.google.com/apis-explorer/#p/>

<https://sdks.io/?>

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Some Additional resources



World Open Data:

<https://datacatalog.worldbank.org/search>

Europe Open Data:

<https://data.europa.eu/euodp/en/data/>

Estonia Open Data:

<https://opendata.riik.ee/en/andmehulgad/>

Tallinn Open Data:

<https://avaandmed.tallinn.ee/eng/>

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Some Additional resources



One nice article on How to handle Side Projects:

<https://dzone.com/articles/a-software-developers-guide-to-side-projects>

Startup Projects:

<https://www.producthunt.com/>

Startup Estonia:

<https://startupestonia.ee/startup-database>

Startup and Hackatons:

<http://garage48.org/>



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Time to choose..

How to choose your next project

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Role and time investment



				
<input type="radio"/>	Customer	★★	★★	★★
<input type="radio"/>	Worker	★★	★★	★★
<input type="radio"/>	Utility	★	★	★
<input type="radio"/>	Customer	★	★★	★★★
<input type="radio"/>	Analyst	★	★★★	★★★
<input type="radio"/>	Research	★★★★	★★★★	★★★
<input type="radio"/>	Open Data	★★★	★★★	★★★
<input type="radio"/>	Hackatons	★★★	★★★	★★★

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How to choose next project



- Technological challenge
- Best Time ROI
- Consistent with your CV
- Business is interesting