Designing complex softwares.

PLAN

[Introduction: 1](#_Toc14701358)

[I) Context and Research problem 2](#_Toc14701359)

[II) State of the art 2](#_Toc14701360)

[III) Research Methodology 2](#_Toc14701361)

[IV) Study 2](#_Toc14701362)

[V) Validation 2](#_Toc14701363)

[VI) Conclusion and further work 2](#_Toc14701364)

# Introduction:

According to the computer science context, complex softwares are considered as related to critical business domains (e.g. health, insurance, banking services), where the business knowledge is hold by a small set of domain experts, moreover, the software is distributed across different computing environments and handling the heavy lifting of thousands or millions of users traffic.  
We are using complex softwares platforms on daily basis (Airbnb, leboncoin, platforms and mobile applications for banking services) and we cannot ignore at which extend they are almost vital to us. As complex softwares are of an undeniable importance, the challenges needed to achieve their development are just as important. Tackling issues related to those challenges is therefore unavoidable. We’ve seen these past 30 years a bunch of project management methodologies as well as software design patterns emerging in order to come across those issues that are from several kinds: from project management to software designs patterns and technical development best practices. However, getting to know those practices include reading tons of documentation, sometimes not clear and simple enough, leading to misunderstandings, dropping out of the learning process, bad usage, and finally facing the same issues that the methodologies where supposed to resolve.  
This paper did focus on software designs patterns and technical development best practices with the aim to produce guidelines with concrete step by step methodology.  
Methodologies have been elicited and categorized by the kind of issues they are addressing:  
design issues, software implementation related issues, and methodology concreteness related issues, then by the mean of qualitative and quantitative research through semi-structured interviews and questionnaires, feedback from complex software project stakeholders has been extracted with the most important methodologies and practices in order to provide the guidelines, that have been assessed through a bank loan project at Axa Banque.

# Context and Research problem

# State of the art

# Research Methodology

# Study

# Validation

# Conclusion and further work