

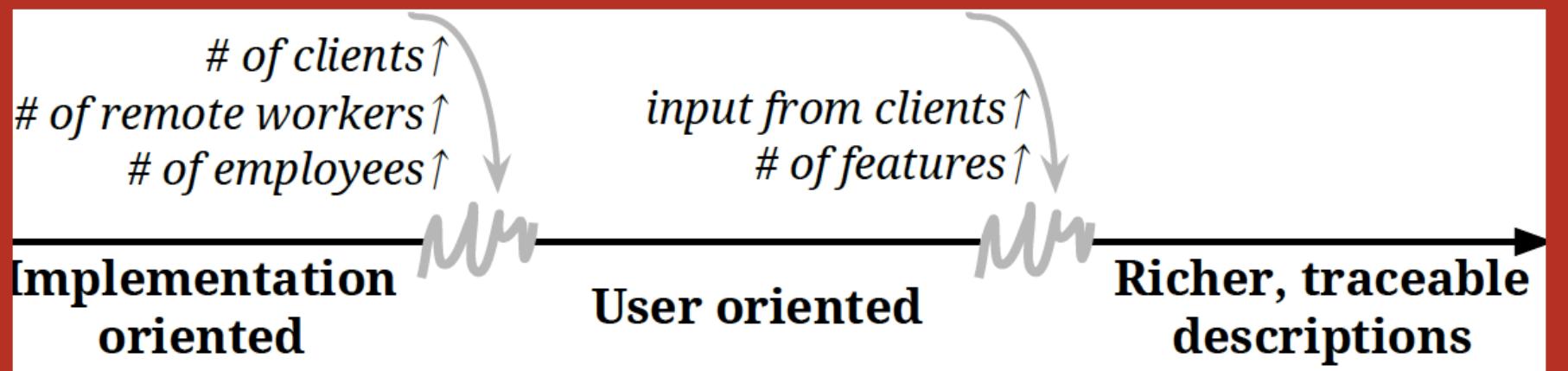
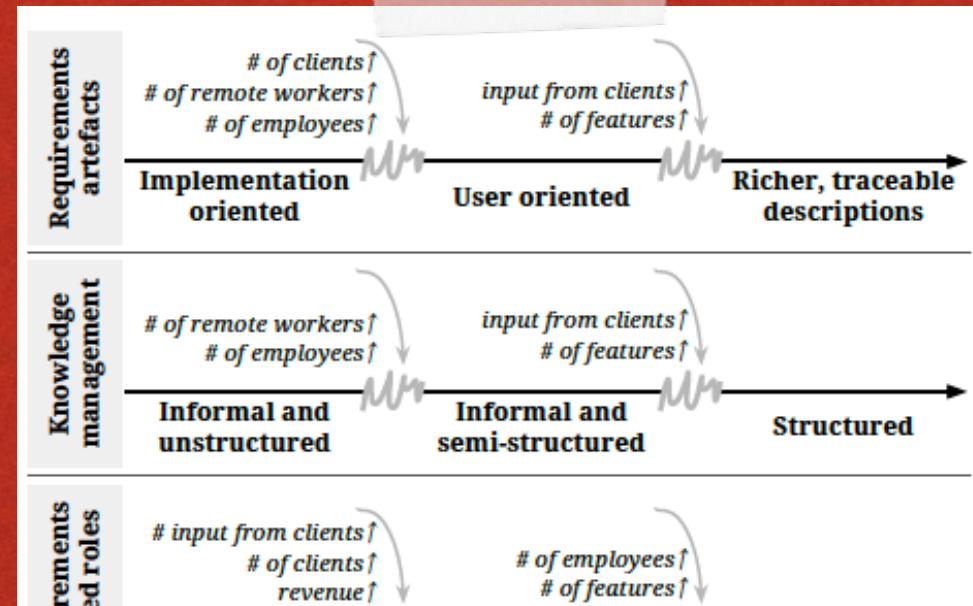
Practical Lightness: Requirements Practice Evolution in Startups



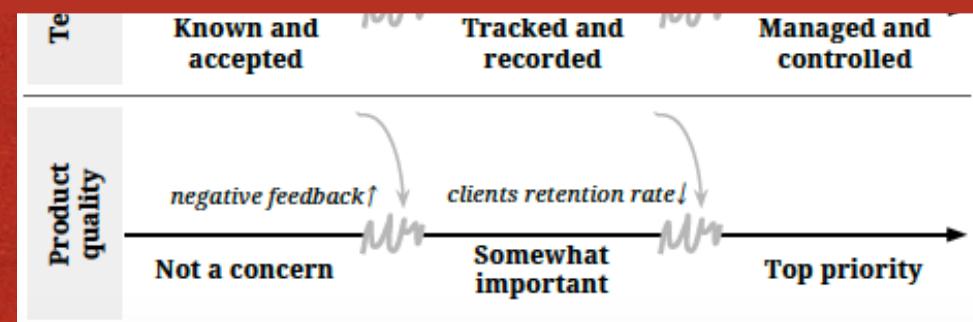
Daniela Damian
University of Victoria
thesegalgroup.org

A study of requirements practices in 16 'maturing' startups*

- Danger of extreme agility!



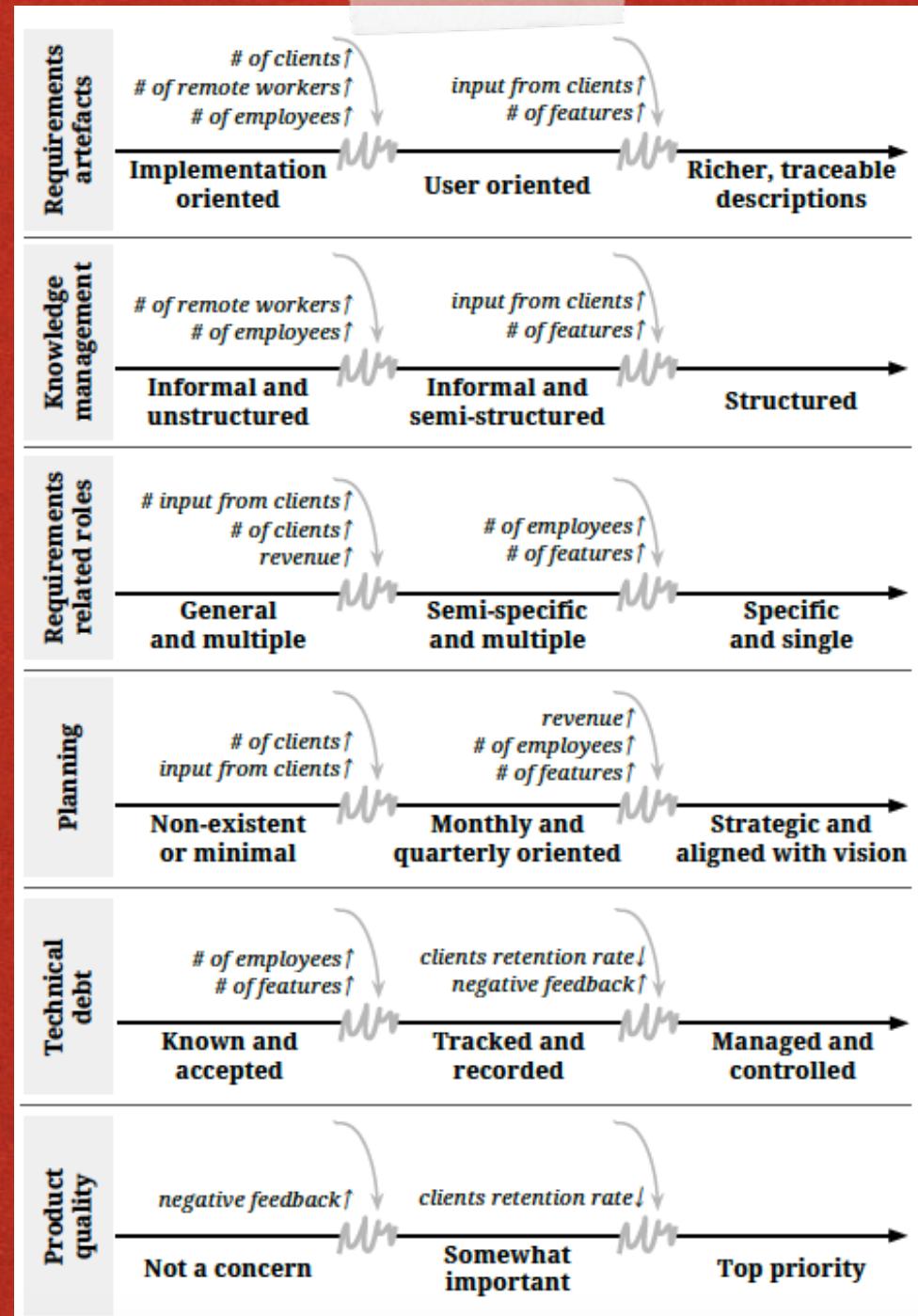
*Based on work in collaboration with C. Gralha, T. Wasserman, M. Goulao, J. Araujo



A study of requirements practices in 16 ‘maturing’ startups*

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An Evolution from “no process” to some organized, planned, documented process



*Based on work in collaboration with C. Gralha, T. Wasserman, M. Goulao, J. Araujo

IN OUR STUDY, A **STARTUP** IS A COMPANY THAT...



...has recently spun-off from a large company



...is still at a stage without a solid revenue stream



...has not yet gone public

EMERGING COMPANIES



RESEARCH METHODOLOGY

Companies from 1 to 10 years old in
Canada, US, Argentina

Developed theoretical *dimensions* in the
model

Turning points in the evolution



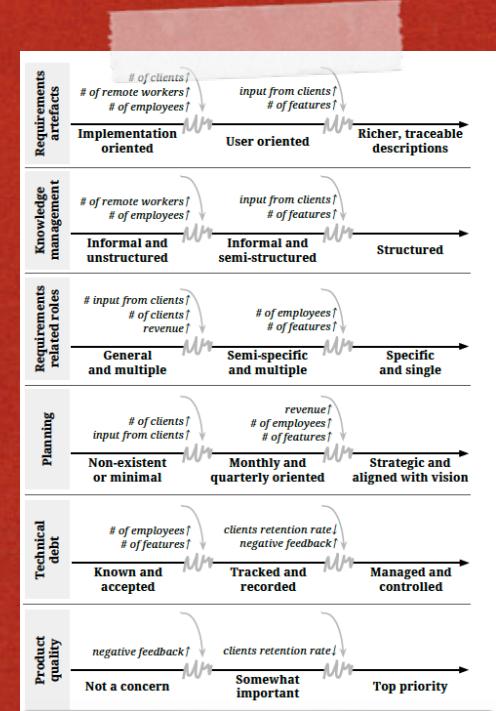
14 project meetings
attendance



6 full-day
observations



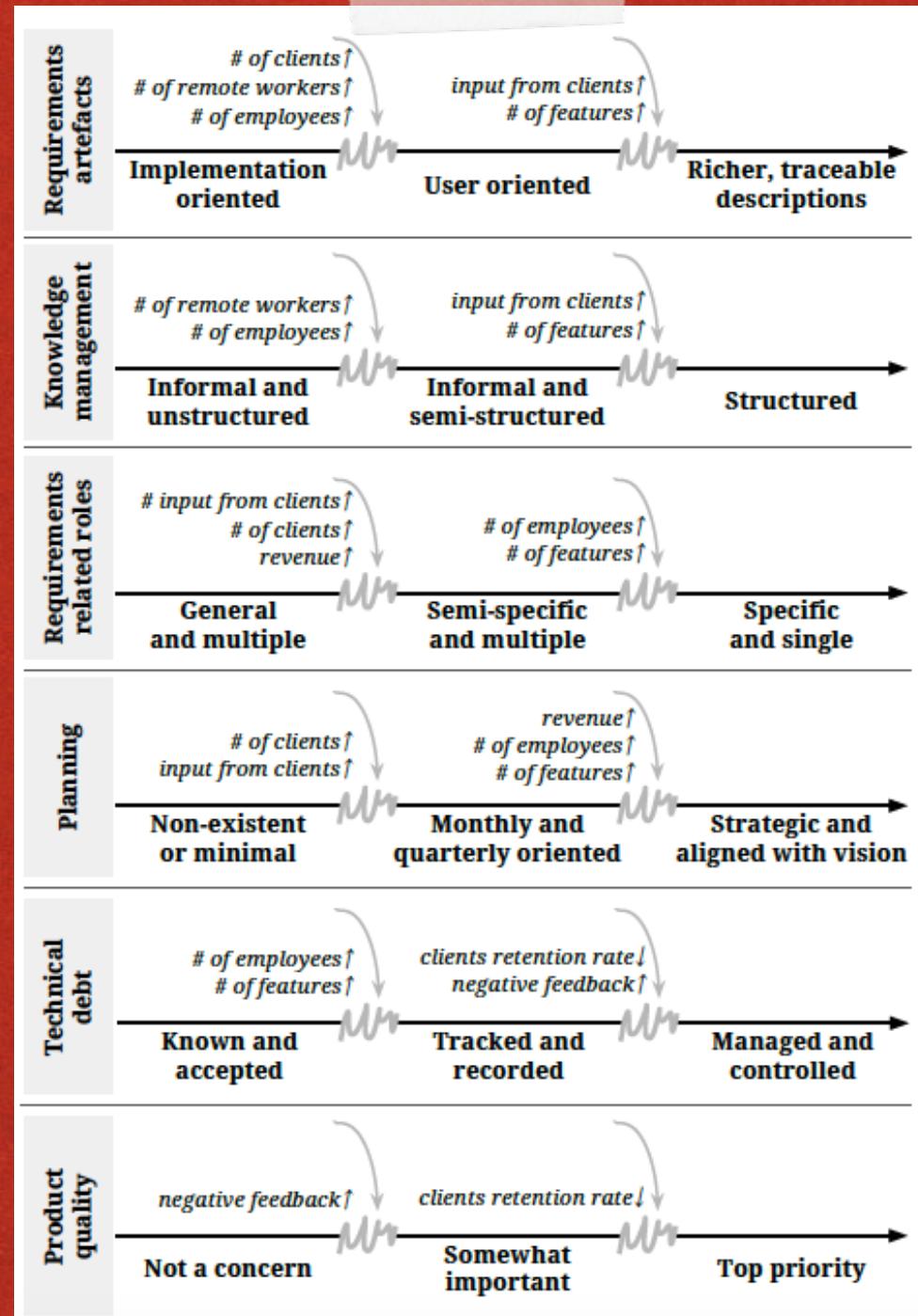
18 semi-structured
interviews



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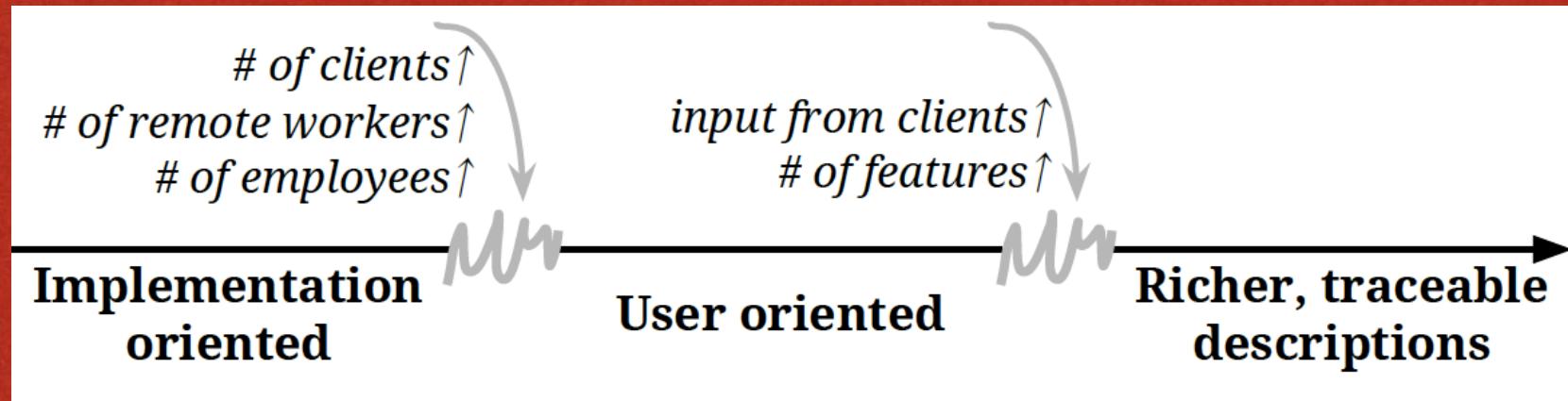


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REQUIREMENTS ARTIFACTS

REQUIREMENTS ARTIFACTS

Content of information & User Orientation Matters



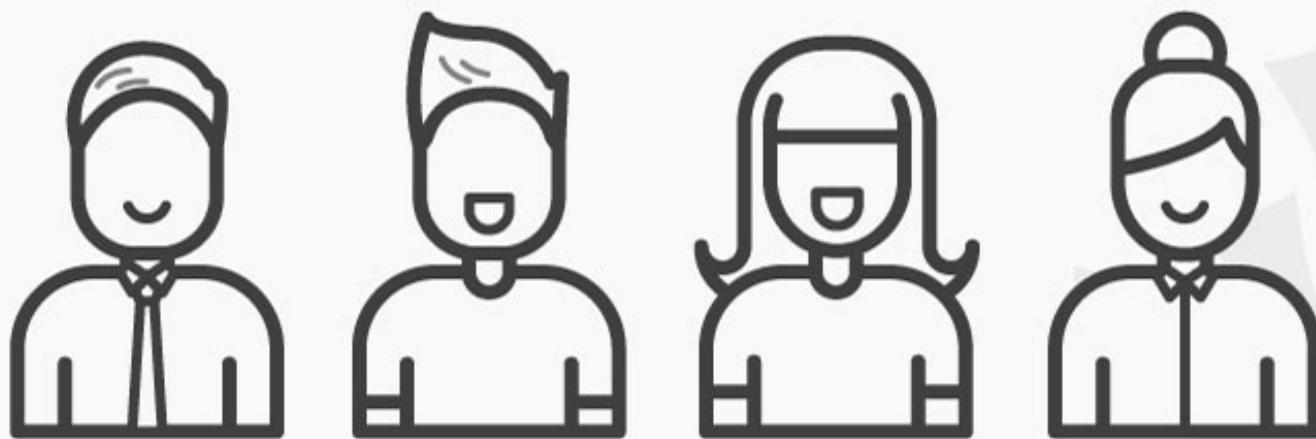
Changes in:

User Orientation (personas, user stories)

Content (sticky notes-> idea, feature, UI, tasks -> task dependencies, acceptance tests and traceability links)

*“It was mainly because we had more and more **clients** (...) We need to know their **needs** when we are writing code, so (...) **user stories** are important”*

Personas



example: customer persona

SYS. ADMIN SAM



AGE: 32

OCCUPATION: System Administrator

EDUCATION: B.S. Computer Science

EXPERIENCE IN ROLE: 7 Years

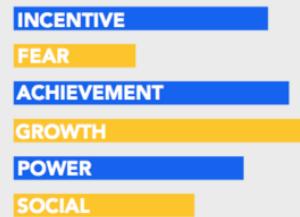
STATUS: Single

TIER: First Time User

ARCHETYPE: The Realist

"I want streamlined communication/ processes across the company so I don't waste my time on trivial tasks that colleagues could easily perform themselves"

MOTIVATIONS



GOALS

Auto alert & corrected issues
Real time advanced network mapping
Predictive analysis & custom reports
Configuration management

PROGRESSIVE

EFFICIENT

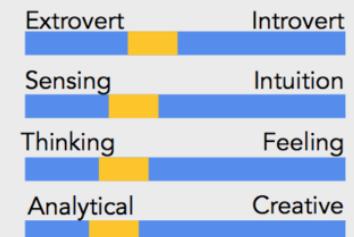
ANALYTICAL

IMPATIENT

RESPONSIBILITIES

Monitoring and configuration of networked systems
Installing and maintaining application software
Managing user accounts and access rights

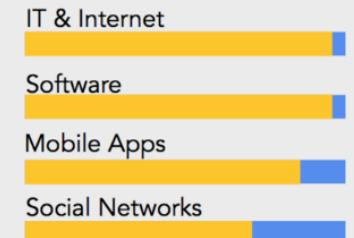
PERSONALITY



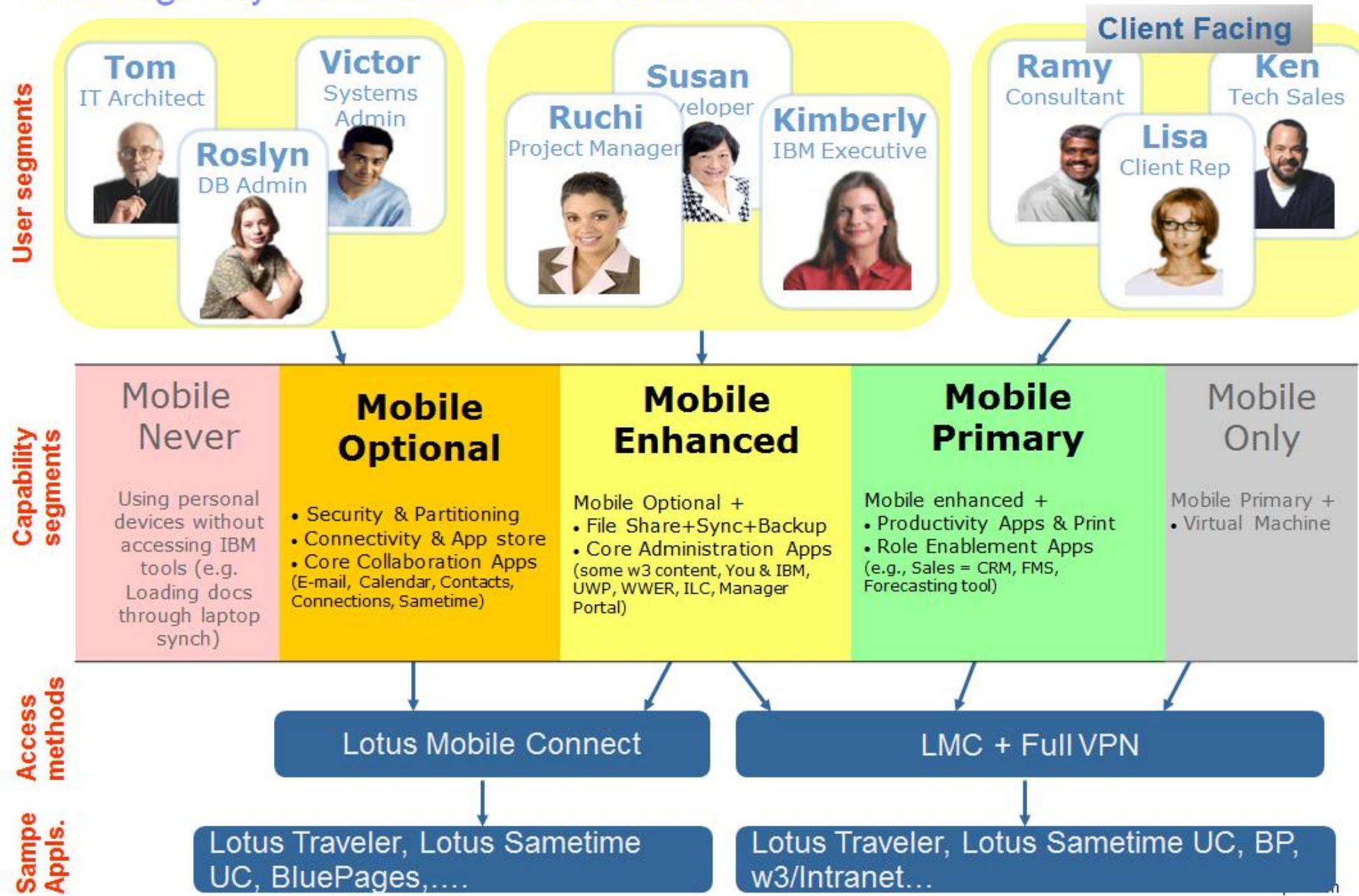
FRUSTRATIONS

Lack of documentation/change management and interdisciplinary communication
Wasted time/lack of progress
User error - users who don't document error messages

TECHNOLOGY



Employee personas will help determine the mobile device and eligibility for access to the IBM network



user stories in lieu of requirements

As who, I want what
so that why

As a <role>
I want <goal>
So that <benefit>

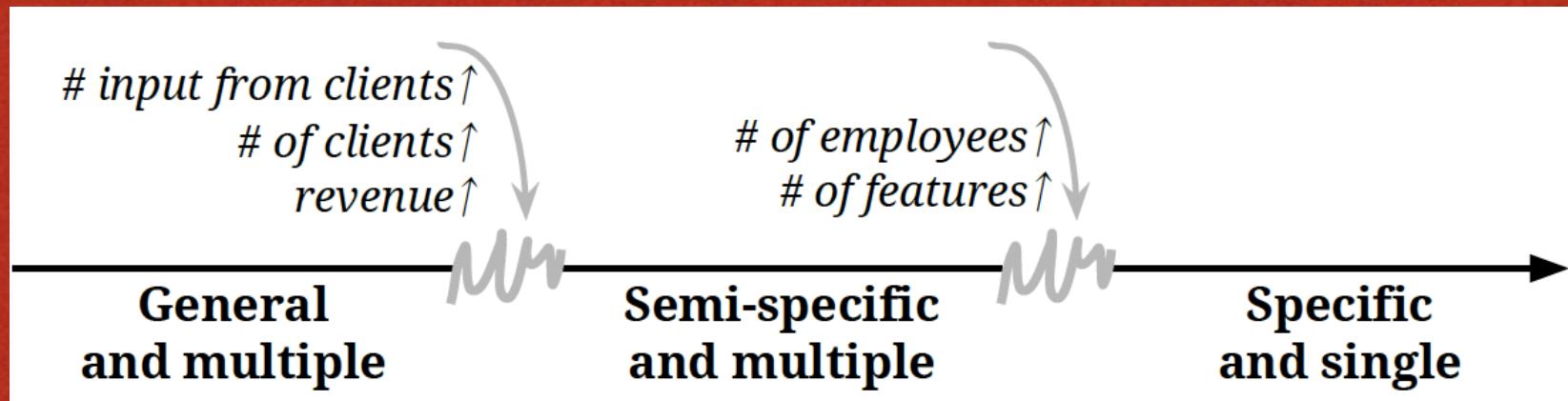
Acceptance criteria:

...

REQUIREMENTS-RELATED ROLES

REQUIREMENTS-RELATED ROLES

Focusing on customer-facing roles matters



Changes in:

Number/type of people collecting/managing requirements info

*“We started hiring more people for specific roles. We had **developers** (...) we hired a **client success manager** to stay on track of all of our clients. We still need to be more specialised.”*

KNOWLEDGE MANAGEMENT

KNOWLEDGE MANAGEMENT

Project Communication and Documentation Matters



Changes in:

Project communication (ad-hoc - > regular meetings)

Documentation (relationships and accessibility of feature information, tools — Asana, Jira, Confluence, google docs, .xls)

PRODUCT QUALITY

Tradeoffs between quality and speed start to matter



Changes in:

people and attention given to product/service features/scope

“Our development speed is something that we really don’t want to give up, so just get out and test it, because we can always go back, we can always change it or fix it quickly.”

TECHNICAL DEBT

Understanding the impact of technical debt on product/service matters



Changes in:

attitude towards technical debt

ability to manage the technical debt

“Basically everything was built with popsicle sticks and duct tape, because it was fast, as fast as you can get something out”.

PLANNING

PLANNING

Company/product vision and alignment with it matters



Changes in:

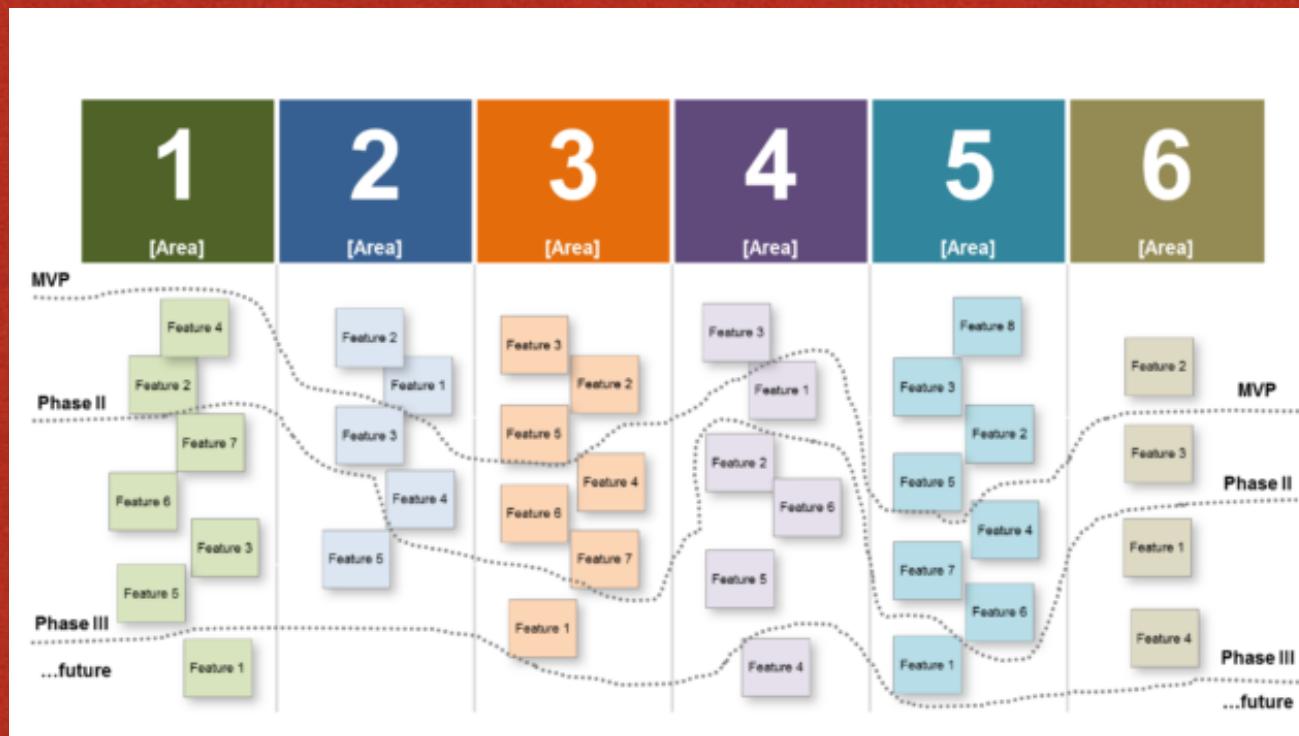
Task/iteration scheduling (daily push - > planned delivery)

Understanding product relative to market and company vision and position (schedules driven by company roadmap)

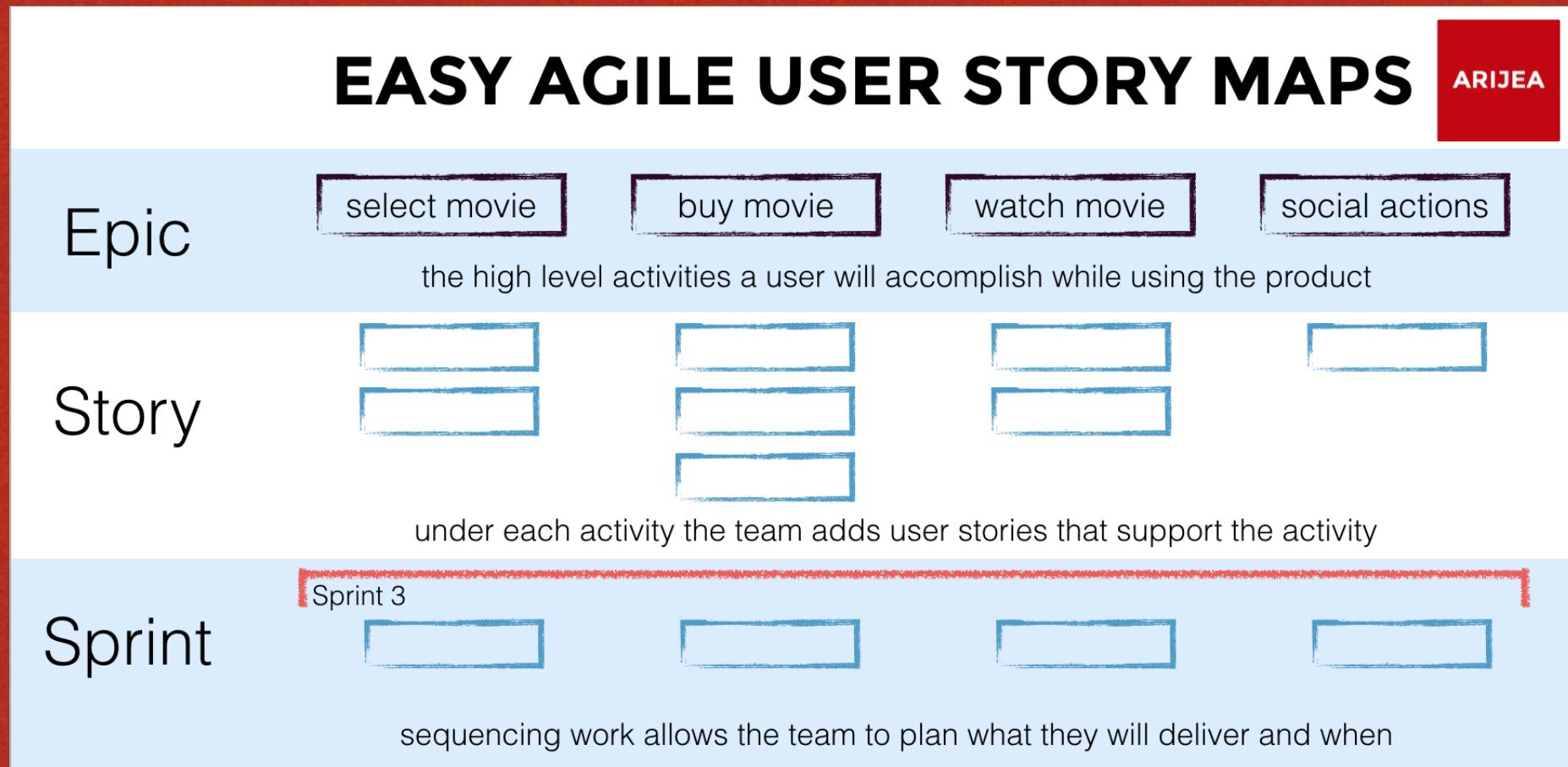
“We’ve always been kind of averse to deadlines (...) I mean, deadlines don’t make results better, and it’s not an enjoyable place to work (...) you feel like you were working at a factory”

“We were much more hungry for clients before, so we bent over backwards a lot more, doing basically what they wanted us to do. So we would have a bunch of one-off things.”

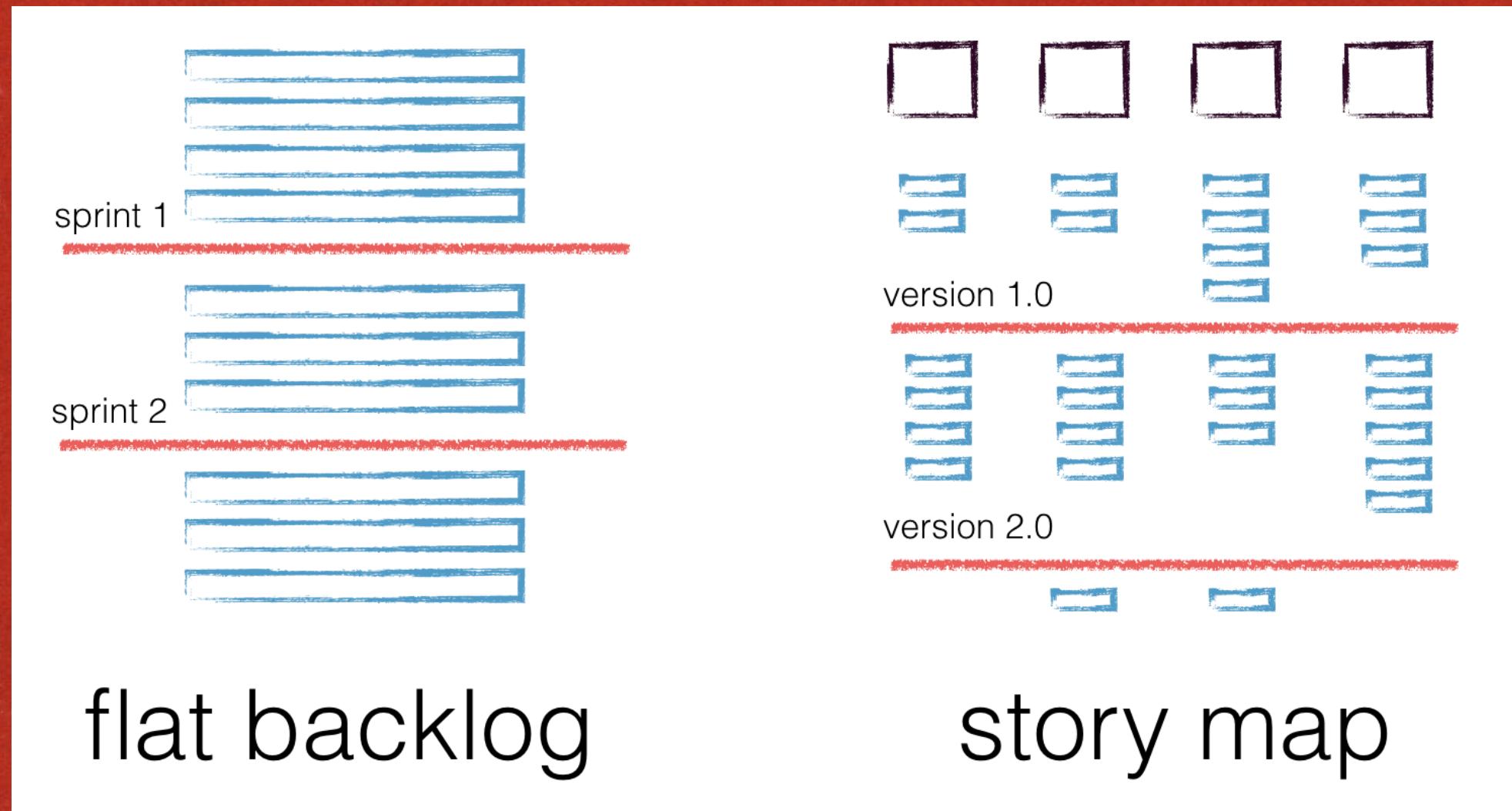
Release Planning or User story mapping

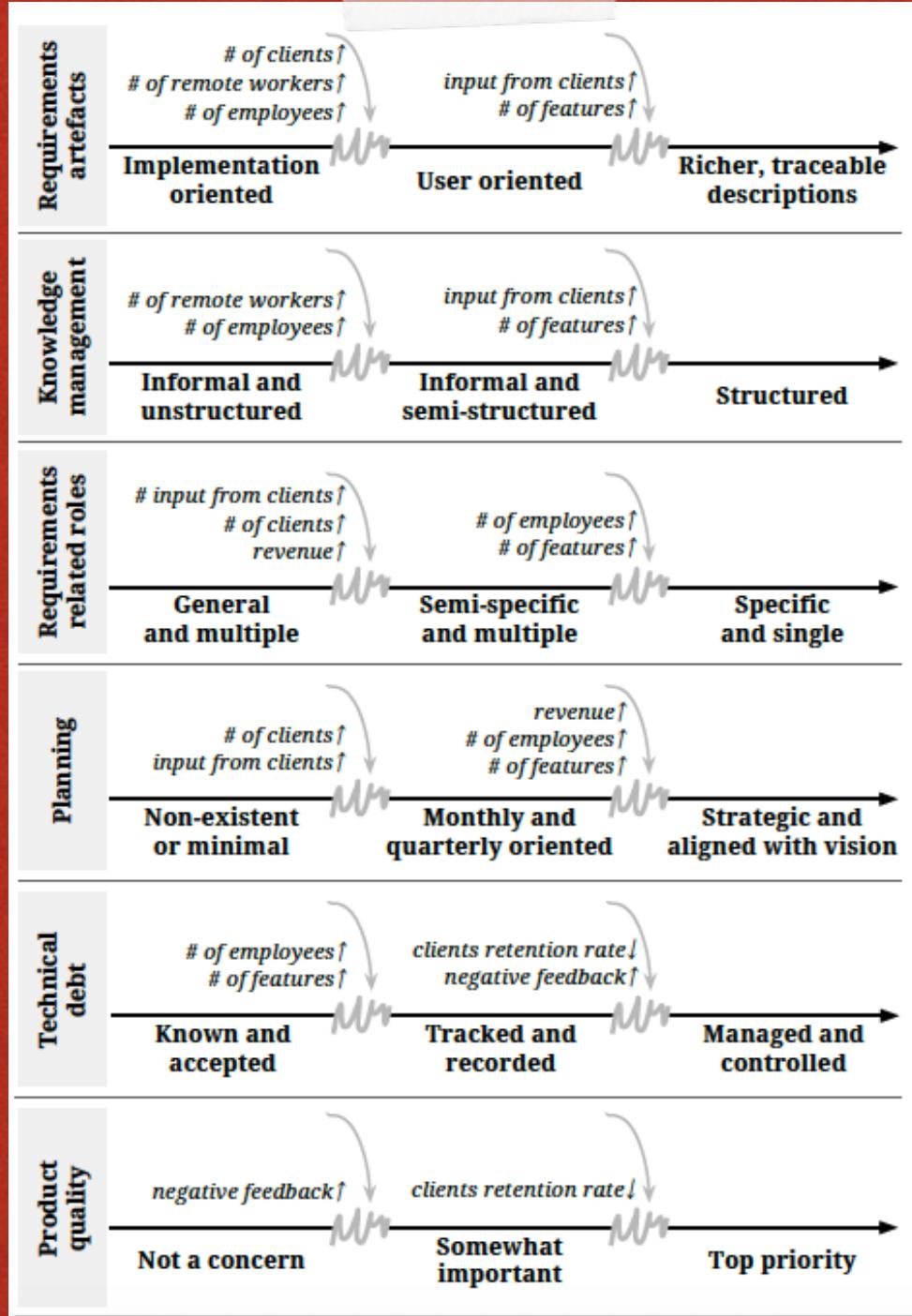


Release Planning or User story mapping



Release Planning or User story mapping





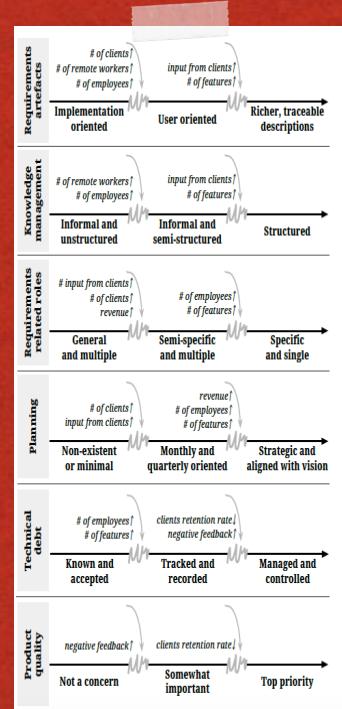
(extreme) AGILITY IN STARTUPS

A *pragmatic lightness* towards an ‘engineering’ of reqts

An evolution towards more structured, plan-based, documentation-based and **CUSTOMER**-oriented approaches

Changes are *reactive* and *just-in-time*

Adapt and adopt based on customer/market feedback





IS **EVOLUTION** ALONG THE 6
DIMENSIONS FUNDAMENTAL TO THE
SUCCESS OF A STARTUP?

THANKS!