

Collaboration of Development Teams – Where Project Management and Systems Engineering meet!

SWISSED23 – Team of Teams. System of Systems

Ivo Locher VS Andy Tonazzi Sept 18, 2023



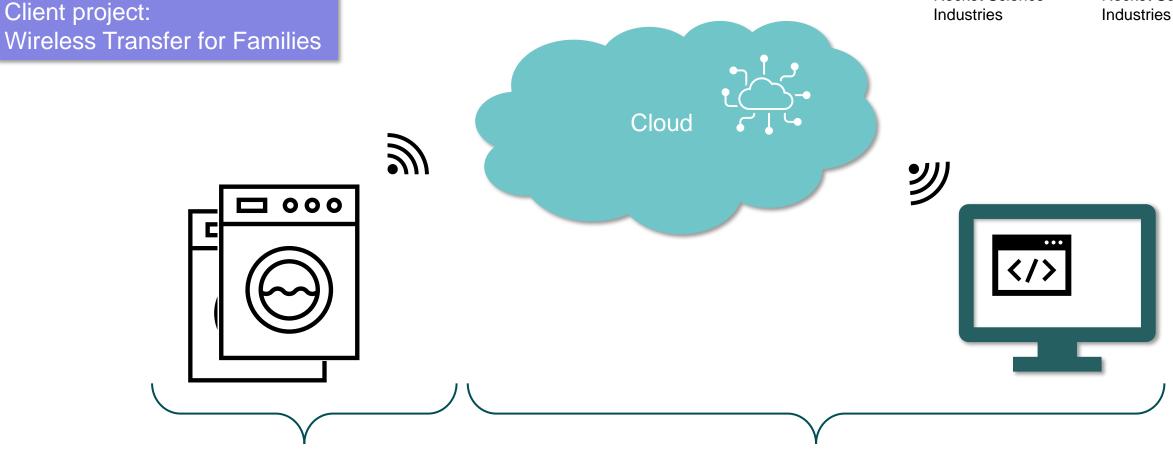
Project WTF: internal status meeting - Scope



Peter – Project Mgr Rocket Science Industries



Dick – Head of IT Rocket Science



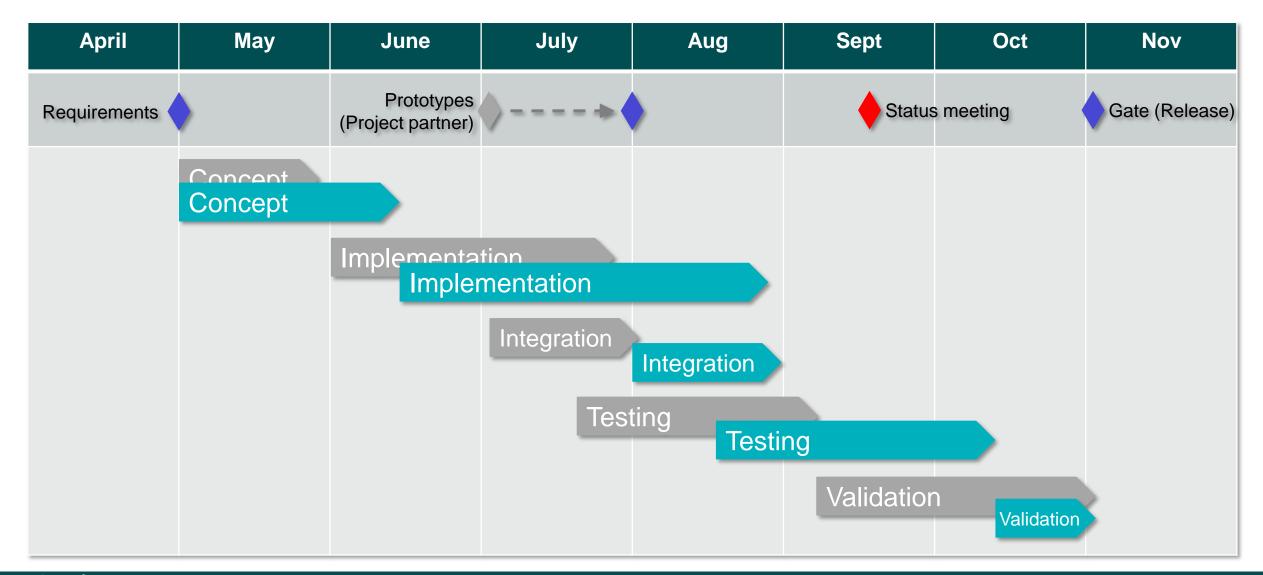
Project partner's responsibility

Rocket Science Industries' responsibility

Original schedule

Project WTF: internal status meeting - Schedule

Current schedule



What are actual issues on the professional level? (1)

Taking unspoken features for granted

- Scope drift and extension
- Satisfaction: Expectation vs. what is delivered \(\bigcup_{\text{op}} \)
- Example:

Scope: Windows App should print!

Drift: App should handle printer errors as well

Immature conclusions

- People are visual
- Root causes vs. fast conclusions
- Example: IoT device talks to mobile phone → Any communication error is a mobile app flaw

Potential solution approach

- Walk stakeholders through all steps (no matter how long it takes); Understand each other.
- List of features of what will be done AND list of what will NOT be done



Potential solution approach

- Overarching technical systems lead as communicator
- Integration sessions (War room)

What are actual issues on the professional level? (2)

M

Nobody can provide answers

- ∑ (scope of sub-systems) ≠ scope of entire system
- Example: BLE communication protocol vs behavior of devices (state machine)

Priorities of project partner are not aligned, jeopardizing overall timeline

Feedback to questions takes forever

- Organizational structure might not be suitable for projects
- Example: Review and approval of design documents

Potential solution approach

- Overarching technical systems lead
- Overarching agile approach (sprints)



Potential solution approach

- Dedicated project team (organization)
- Empowerment of people and teams
- Culture of dealing with failures

Unfortunately, addressing the professional level alone might not be enough

High Performing Team Lack Avoidance of Accountability **Lack of Commitment Fear of Conflict Lack of Trust**

Dysfunctional Team

Unfortunately, addressing the professional level might not help...

High Performing Team

Results

- · Highly motivate and stable team
- · Consistently hitting objects and result
- · Focused on the team results

Accountability

- · Poor performance is dealt with
- · Team standards the same for all
- · People understand and own their work

Commitment

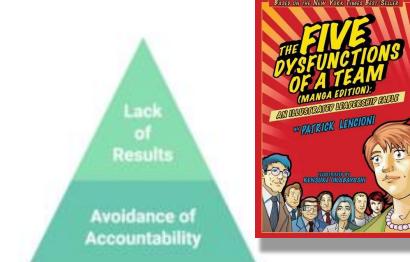
- · Clear objectives and priority
- · Buy in from the team
- · Fully engaged team members

Conflict

- · Have healthy team debates
- · Work out solutions to issues together
- Challenge poor behaviour quickly

Trust

- Ask for help
- · Share weakness and help each other
- · Believe everyone is trying their best



Lack of Commitment

Fear of Conflict

Lack of Trust

Dysfunctional Team

Result

- · High team turnover
- Poor performers
- · Focus on own results, not the team

Accountability

Poor performance is tolerated Lack o ownership from the team Objectives missed

Commitment

- Keep discussing the same thing over and over
- · Wont commit to work
- · Unclear objectives and priority

Conflict

- Avoid people
- Avoid problems
- · Don't confront issues or behaviours

Trust

- · Hide mistakes
- Make assumptions
- Hold grudges

Conclusion

Technical challenges

- All teams need to understand the entire product to some extent
- Lead systems engineer orchestrates / Overarching agile setup
- Overarching planning, what can be planned
- Common priorities and overall risk management

Psychological challenges

- Regular exchange between the teams and client, maintaining good personal relationships
- E.g. agile setup with dailies (or weeklies), demos. Focusing on TEAM results = TRUST!
 - Meet face-to-face → Stimulates interactivity
- Systematically improve empowerment and learning culture with suitable methods = Psychological Safety
- HOW is as important as WHAT!

Remark: the project example in this presentation is purely fictive.



Please visit us at the booth outside



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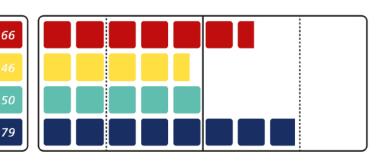
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