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Agile adoption in Aeronautics Computing Center of Brazilian Air Force
Fernando de Sá

- Developer since 1999
- Agile Coach and Scrum Master

Everton Lucas
Summary

- Mission of CCA-SJ and its position in Brazilian Air Force (FAB)
- First attempts to adopt Agile Methods in CCA-SJ
- The motivation to create the PMO
- Work in progress and its results
- 2 cases of success
- Next steps
CCA-SJ

Mission
• Develop and support Software and Flight Simulators for FAB

Projects and systems
• Archival and document management
• Command and control
• Visual scenarios for flight simulators
• Low cost flight simulators
• Among others
Location

- Department of Science and Aerospace Technology (DCTA)

The city of São José dos Campos

- Main city of “Parahyba Valley”
- 19th largest GDP of cities in Brazil
- >700k habitants (6th largest city in São Paulo state)
Brazilian Air Force (FAB)
Logical Levels of Thinking

- 3-9 yo
- 9-14 yo
- 14-21 yo
- 21-28 yo
- 28-∞ yo

- Environment
- Behaviour
- Capabilities
- Beliefs/Values
- Identity
- Mission


Who Else?
Agile: 1st attempts
Agile: 1\textsuperscript{st} attempts
## Agile: 1st attempts

### Challenges with implementing Scrum

| Organizational design and culture made it difficult to adopt and scale | 51% |
| Difficult to transition from traditional Waterfall | |
| No clearly defined metrics to identify and measure success | 41% |
| Alignment with other projects in portfolio | 40% |
| Lack of trust | 38% |
| Desire for perceived predictability | 35% |

### Causing tension between Scrum teams and organization

| Adherence to top-down, command-and-control management approaches | 64% |
| Resistance to change | 63% |

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https://www.scrumalliance.org/learn-about-scrum/state-of-scrum
PMO: our motivation
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Organizational Climate Survey:

- **Hierarchical** decisions were made instead of **technical** decisions
- Several officers felt that their work was not **valued**
- Low level of **satisfaction** in relationship with superiors
- **Communication** problems
- Lack of **support** from the chain of command
PMO: our motivation

Action Plan:

• Run Team Building Exercises
• Guide POs and SMs not to allow hierarchical decisions
• Foster meetings to share progress and present results
• Training
PMO: our motivation

1st results:
WIP and results
WIP and results
WIP and results

APR 2019

MAY 2019

MAY 2019

SCRUM
Takeaways

• Transparency is key to gaining trust
• The importance of both top-down and bottom-up approaches
• Reinforcement of the importance of applying the principles and practices of the framework
• A case of success becomes an example for other teams and encourages changes that can be made
2 cases of success

http://www.fab.mil.br/publicacao/listagemNotaer
2 cases of success

http://www.fab.mil.br/publicacao/listagemAerovisao
2 cases of success

AVOEM

system that controls the overflight of foreign military and state aircrafts in Brazilian's airspace
2 cases of success

C-95M’s Flight Simulator

In the beginning:
- There were 49 User Stories
- There was a Kanban board
- But…
  No Product Owner
  No Scrum Master
  Sprints were milestones
2 cases of success

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C-95M’s Flight Simulator

3d printing
Computer monitors
Raspberry Pi
2 cases of success

C-95M’s Flight Simulator
Next Steps

- AUG 2019
- AUG 2019
- SEP 2019
- OCT 2019

Lean Inception caroli.org

AGILE BRAZIL 2019

AGILE TRENDS GOV

PSM II