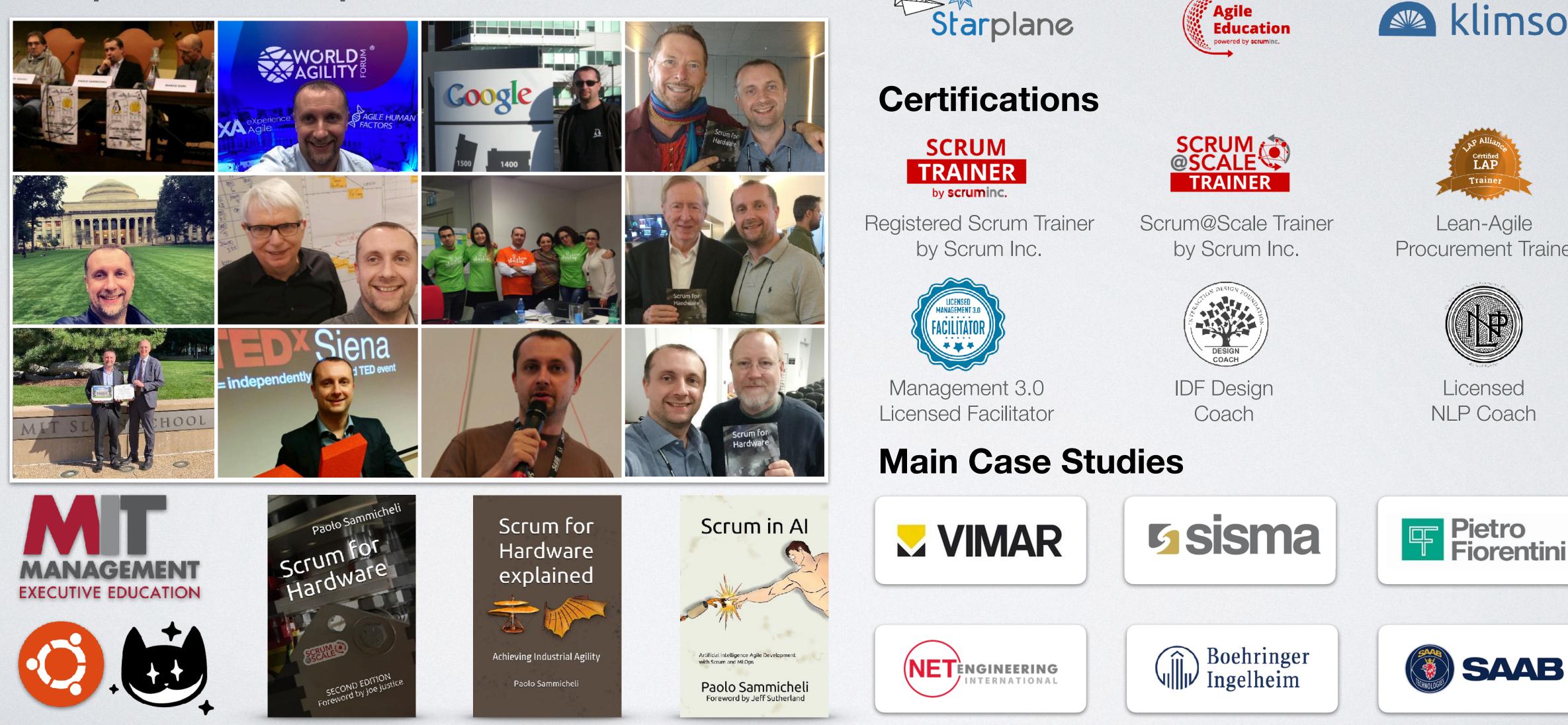
Reducing Time to Market in Hardware Development with Scrum Pietro Fiorentini Case Study



Paolo Sammicheli

Entrepreneur, Author, Speaker, Scrum Trainer & Coach



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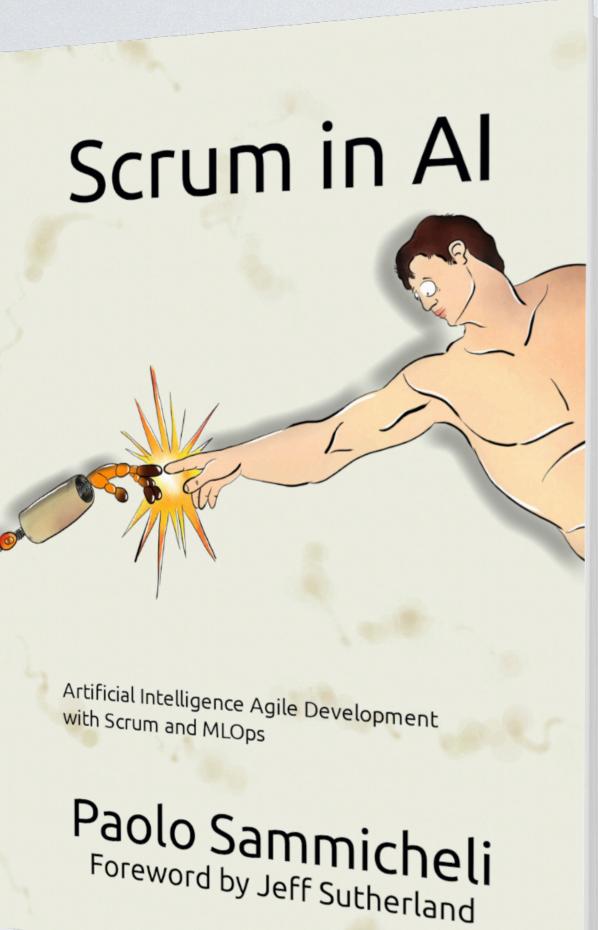


Procurement Trainer





Artificial Intelligence Agile Development with Scrum and MLOps

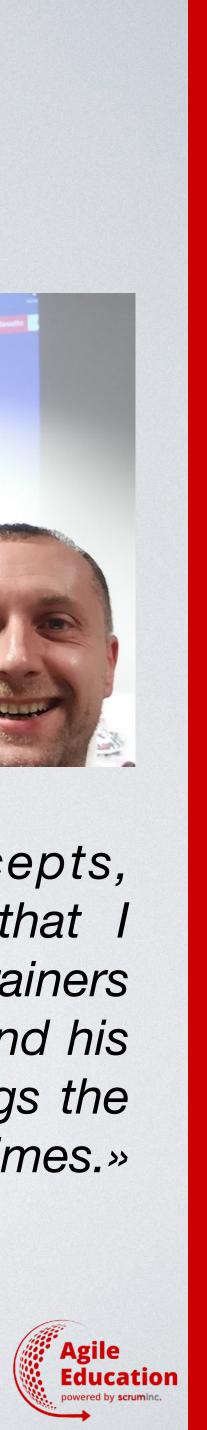


How to develop an Artificial Intelligence application? With Agile and Scrum you will get team spirit, frequent feedback, empirical control, stakeholder involvement and developers motivation. The book includes Agility foundations, the engineering practices, real examples and suggestions on how to implement them in your company. **Foreword by Jeff Sutherland**

«Because Scrum emerged from a hotbed of AI concepts, implementations, and companies, it is with great pleasure that I recommend reading this new book from one of the best Scrum trainers in the world, Paolo Sammicheli. His keen insight into the topic and his ability to show how Scrum can produce better AI solutions brings the relationship between Scrum and AI full circle into contemporary times.» - Jeff Sutherland



www.scrum-ai.com





Scrum for Hardware Explained



Achieving Industrial Agility

Paolo Sammicheli Foreword by Henrik Kniberg "Scrum for Hardware Explained - Achieving Industrial Agility" is your ultimate guide to Agile and Scrum, specially tailored for the manufacturing industry. This comprehensive guide takes you from the basics of Agile and Scrum through detailed Scrum patterns to practical applications for your industry. Whether starting your transformation journey, managing multiple teams, or preparing for production, this book equips you with the knowledge and tools to navigate confidently. As an 'Ultimate Edition,' your purchase is not just a book but a lifetime of learning; with this special edition, you'll receive all future updates and free access to "Scrum for Hardware," the first significant publication in the world on the topic. Twice the reading at half the price!

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Scrum for Hardware is not just a must read, it's a must know for all those looking to get twice the work in half the time in manufacturing.



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www.scrum-hardware.com



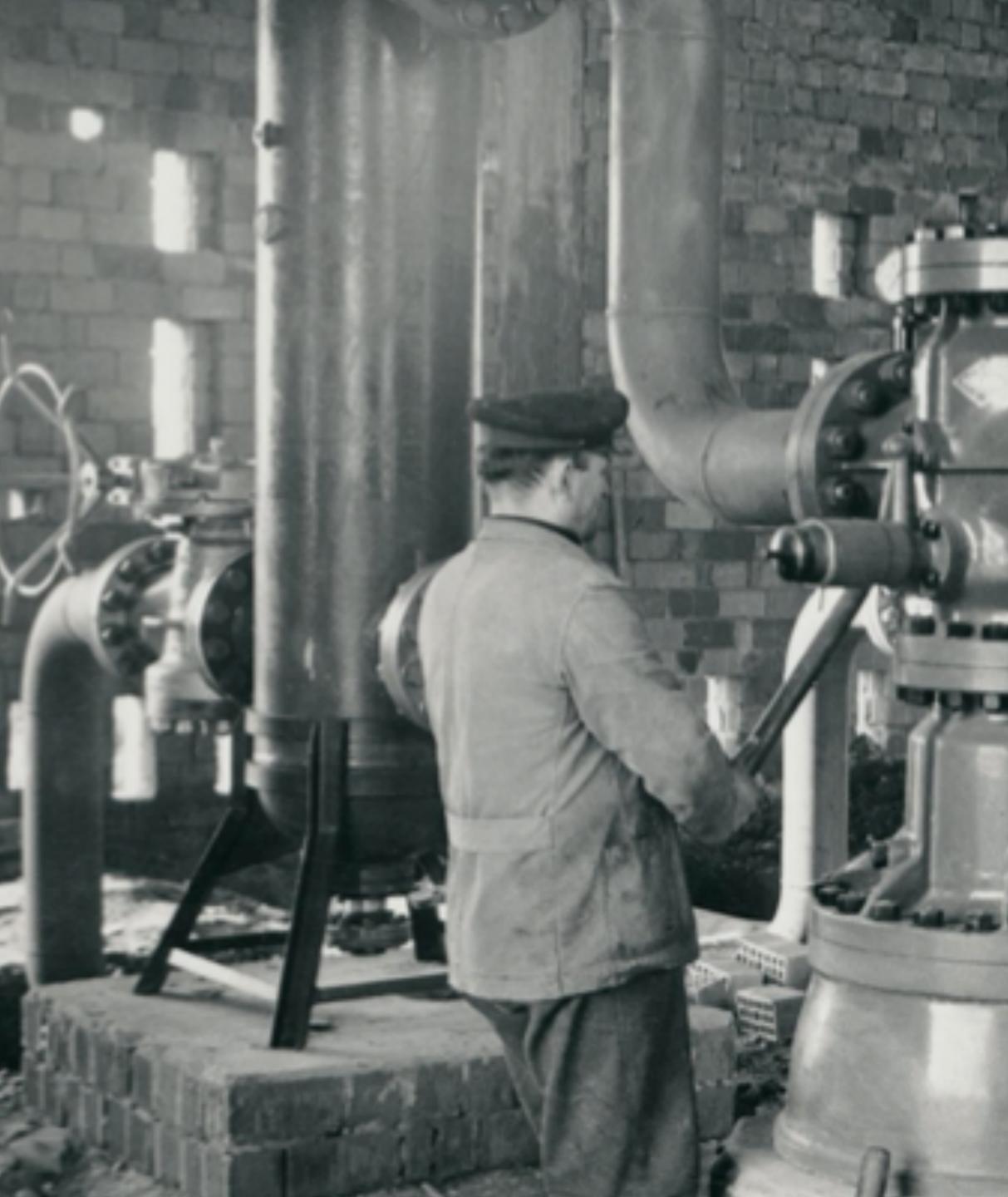
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Pietro Fiorentini Spa We are an international Company that designs, manufactures and installs equipment, complete solutions and services for Oil and Gas treatment, metering and regulation.





Our Numbers

• Over 80 years of history

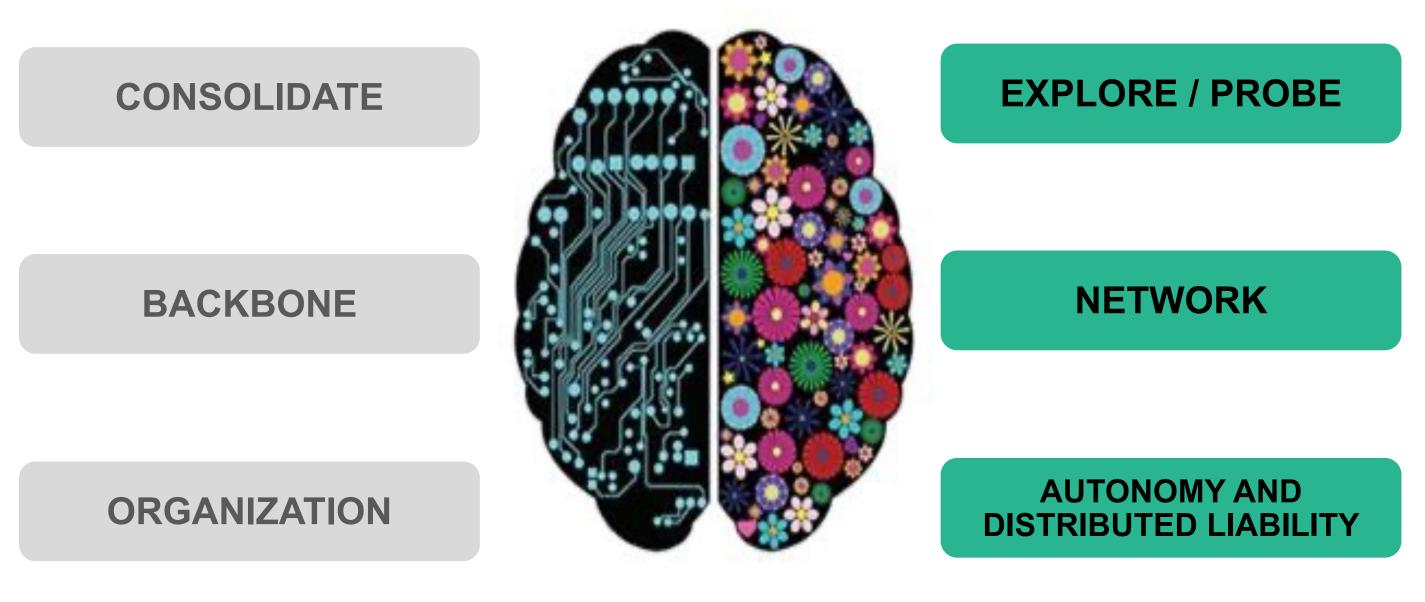
- Export started in 1956
- Over 1700 employees worldwide
- 6 production facilities in Italy
- 7 production facilities worldwide

 Sales offices located in Europe, America, Africa and Asia



Why Lean and Agile together

- With Lean we achieved Efficiency
- With Agile we want to improve Effectiveness





An organization that simultaneously manages the existing business model and its change





Pietro Fiorentini is serious about Lean

- Lean Production Lines everywhere
- Value Streams + Organizational Functional Units
- Yearly company-wide Lean Transformation Plan
- 1 Kaizen week / month, 15 teams (**3000+ man-hour** per month!)
- Japanese Sensei overlooking the Kaizen process
- 5S for workstation efficiency
- 3P methodology for hardware prototyping
- They've been doing this for two decades
- Lean culture deeply ingrained in the organization





MASSIMILIANO DEL BARBA

ANIZZAZIONE

PREFAZIONE DI ARNALDO CAMUFFO

posteditori | @ | ICHAMPIONS





The selected Scrum Team Product was the **Production Line** of a New Gas Pressure Regulator.

The New Gas Pressure Regulator (in the picture) was develop by another Team in another site and started before the production line.

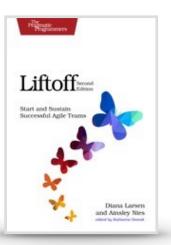








Team Lift Off





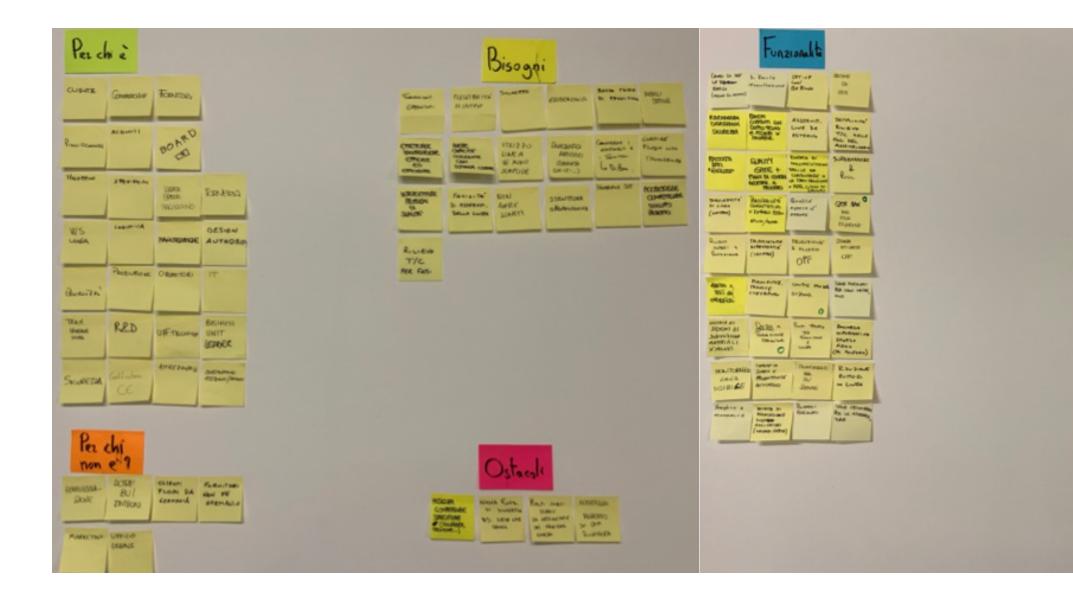






Basic Canvas

• The brainstorming occurred in 4 different table. All the ideas then have been then merged into a single Canvas explaining the reason why of the new product.

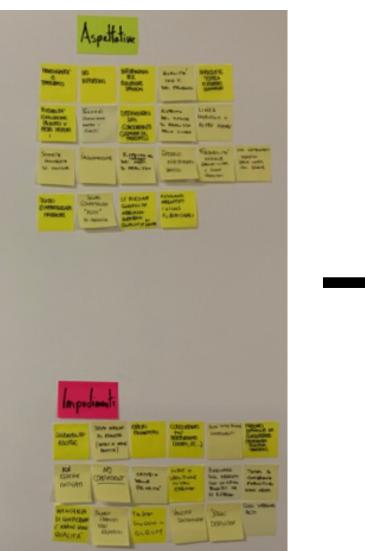


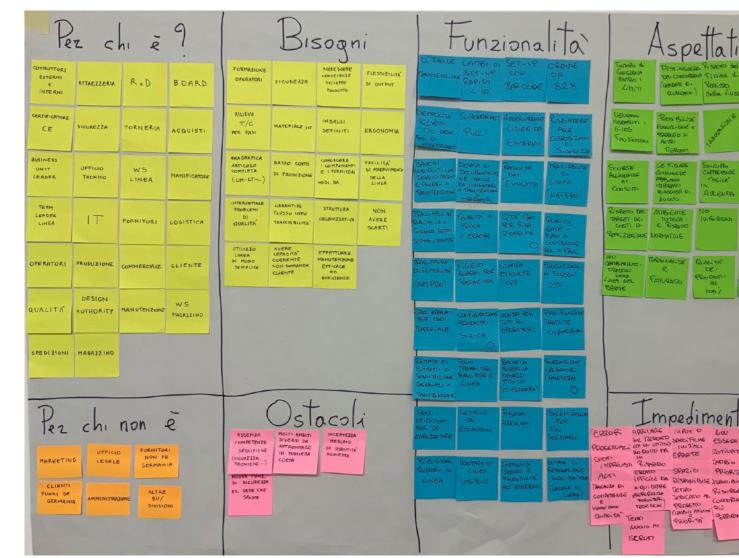
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The Basic Canvas		Project:	Date:					
	For Who is it?	Needs and Desire	Solution	Expec				
	For Who is not?	Obstacles	Alternatives	Ris				
	This work is licensed under a Creative Commons Attribution-ShareAlike 4.0 International License. The Basic Canvas, by Paolo Sammiche Inspired by the work of Alex Osterwalder, Astronomy Compared by the work of Alex Osterwalder,							

Free Download: https://paolo.sammiche.li/download









Pilot Team formed: theRollingScrums

- The existing KPO served the team as Scrum Master
- Cross functional team with representatives from: Tooling department, Maintenance and Logistics



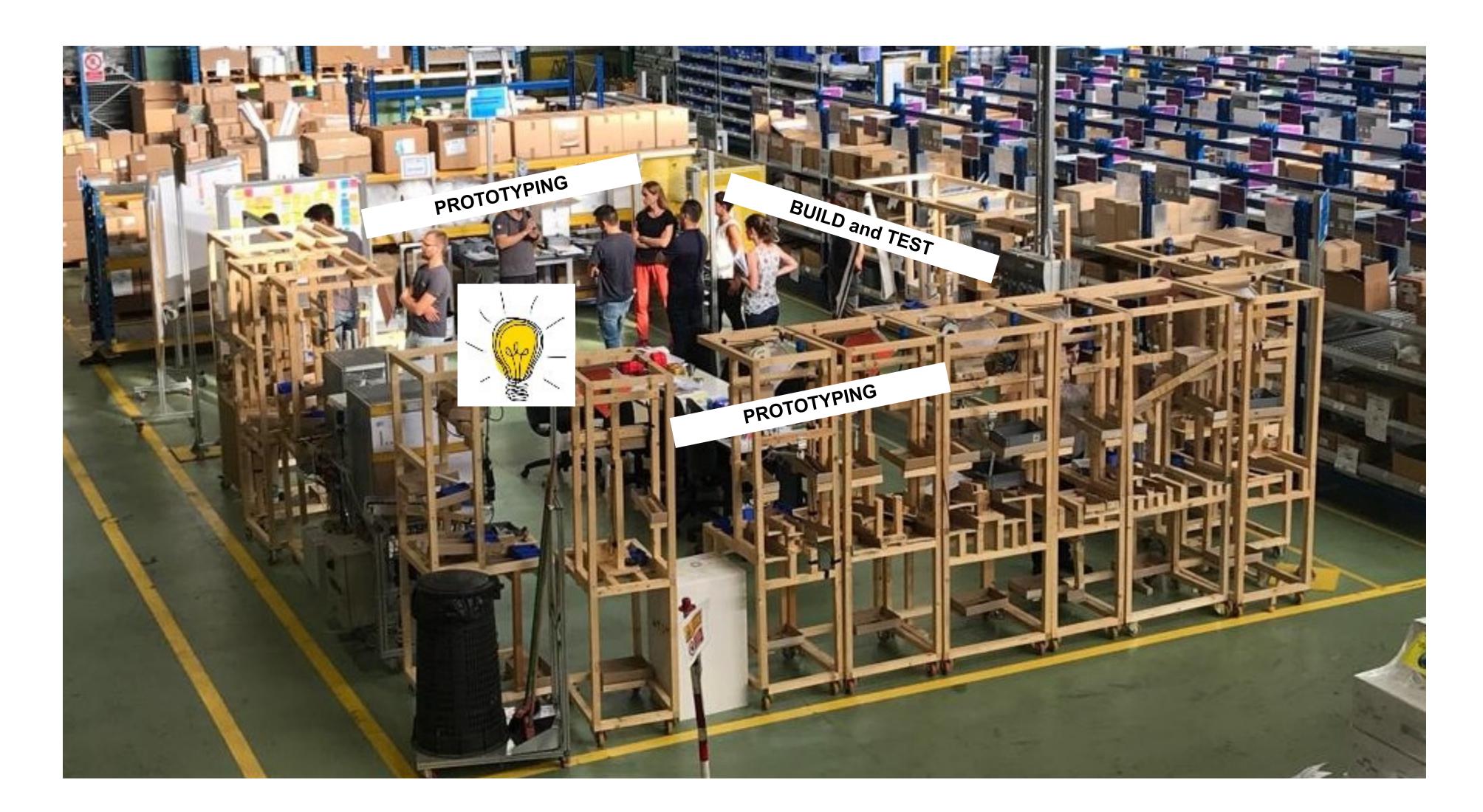








Scrum Team Room





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Incremental development with Lean 3P

«Lean 3P is an event-driven cross-functional team process.

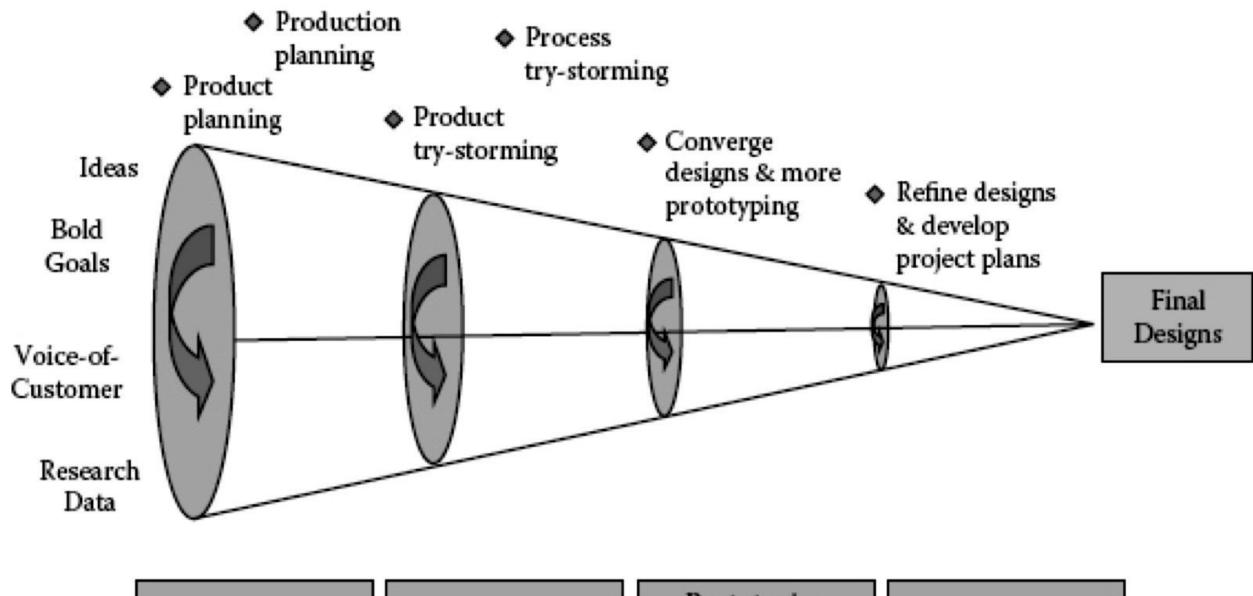
This rapid prototyping process is called *try-storming*, and it involves creation of trial designs to see how well they solve product and process challenges.

Try-storming, like the name implies, is a hands-on extension of the brainstorming process.

Try-storming is a type of prototyping that takes ideas and quickly mocks them up, so they can be evaluated physically.

 (\ldots)

It should be inserted early in the Product Development process to align all of the many vertical functions in our horizontal value stream.»



Information	Innovation	Prototyping & Redesign	Optimization
Knowledge	Develop	Prototyping &	Evaluation &
Gathering	Alternatives	Convergence	Detailed Planning



Architectural Fishbone served as User Story Mapping

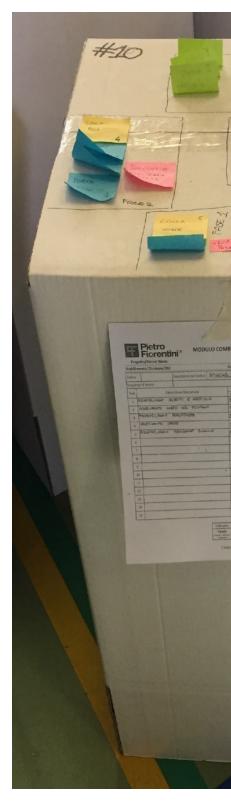






Lean 3P and Scrum

- Lean 3P incremental level served as User Story's Acceptance Criteria.
- Very smooth adoption since the team members were familiar with the approach from the beginning.





x10

x50

x250







Sprint Board



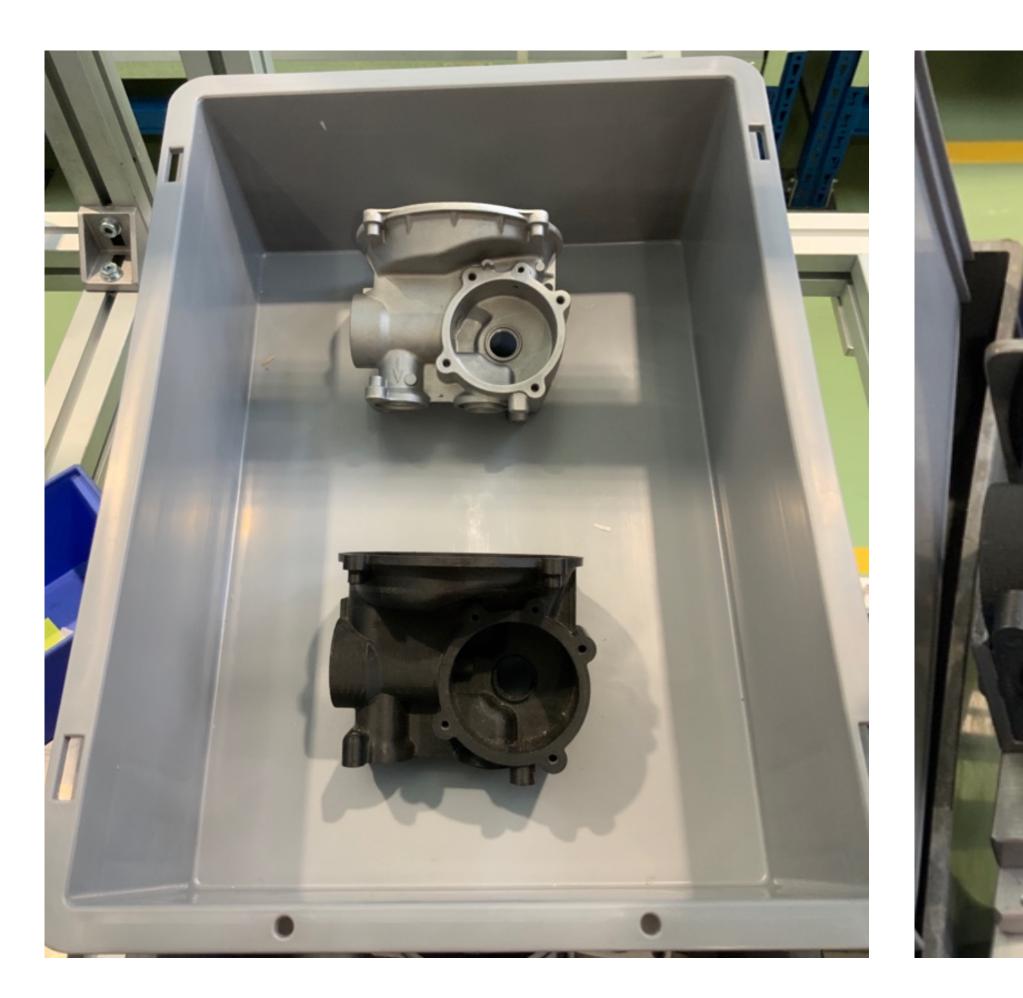
- Including everything: Features, Bugs, Chore, Interruptions and Kaizen.
- Scrum Patterns implemented:
 - Interruption Buffer
 - Scrumming the Scrum
 - Yesterday's Weather
 - Swarming

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3D Printing to shorten feedback













Sprint Review



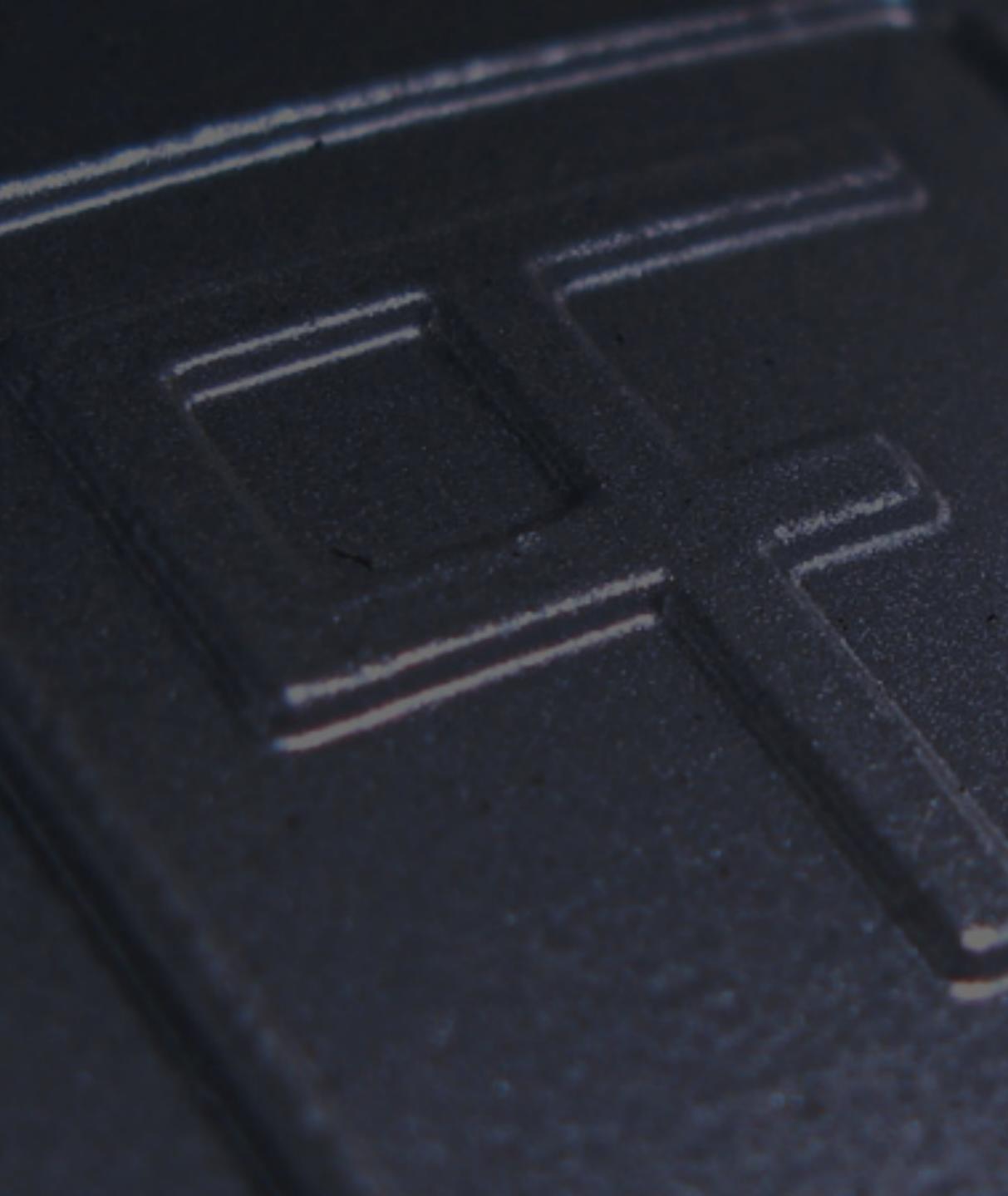


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Conclusions





Benefits

- Increased know-how sharing across the Team
- Distributed Leadership
- Effectiveness together with Efficiency
- Responding to change with a stable team, the time required to change priorities or to start a new project moved from weeks to hours
- The Sprint Review structured the feedback in a single moment, increasing stakeholders alignment and reducing risks
- Easier planning with a Single Scrum Board that contains everything: new implementations, fixes, interruptions





Points of Attention

- Better to involve the main stakeholders from the beginning so they enter in the right mindset of cadence and early regular feedback.
- Initial team composition needs to be taken into consideration, since later changes may impact on the performance and the morale of the team
- Management commitment is essential to allow team members to be fully dedicated to the SCRUM team





