



FULLY DISTRIBUTED SCRUM: THE SECRET SAUCE FOR HYPERPRODUCTIVE OUTSOURCED DEVELOPMENT TEAMS

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About Xebia

- Holland, France, India
- 160 people
- Agile & Java focus
- What we do:
 - Software development
 - Agile training&consultancy
 - Agile offshoring



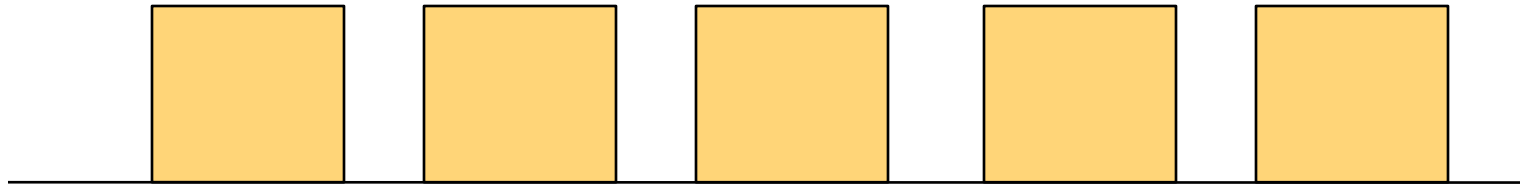
Core values:

- People first
- Customer intimacy
- Quality without compromise
- Share knowledge

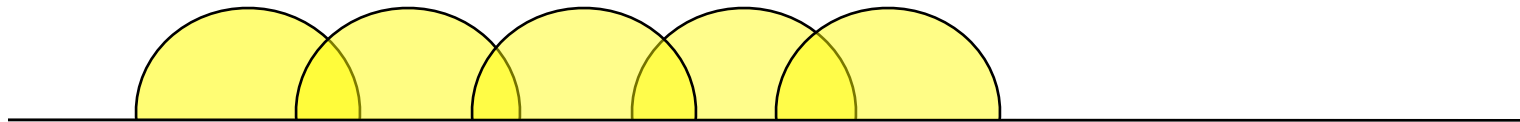
Xebia OneTeam

- *Since 2006, Xebia (Netherlands) started localized projects with half Dutch and half Indian team members.*
- *After establishing localized hyperproductivity, they move the Indian members of the team to India and show increasing velocity with fully distributed teams.*
- *After running XP engineering practices inside many distributed Scrum projects, Xebia has systematically productized a model similar to the SirsiDynix model for high performance, distributed, offshore teams with linear scalability and outstanding quality.*

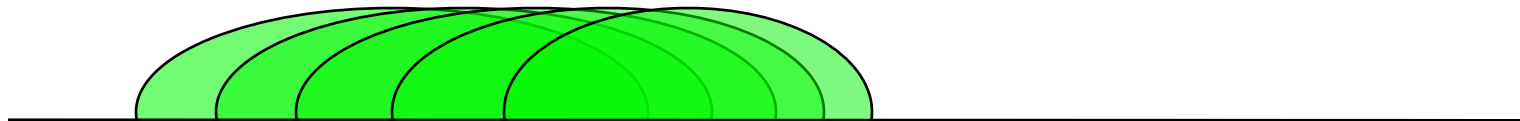
Distributed/Outsourcing Styles



Isolated Scrums



Distributed Scrum of Scrums



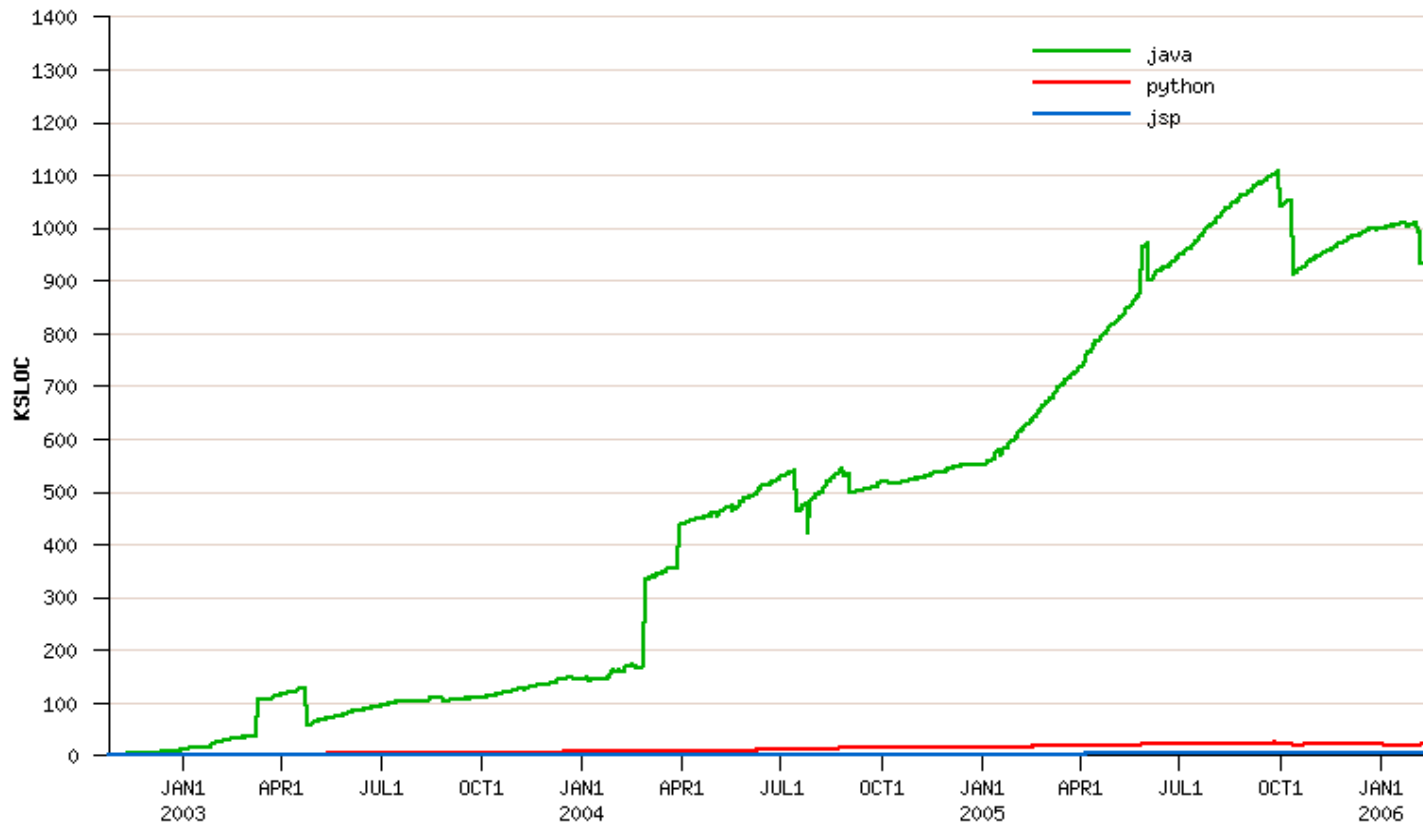
Totally Integrated Scrums

Outsourcing

- What happens if you outsource \$2M of development?
 - Industry data show 20% cost savings on average
- Outsourcing from PatientKeeper to Indian waterfall team:
 - Two years of data showed breakeven point occurs when Indian developer costs 10% of American Scrum developer
 - Actual Indian cost is 30%
- \$2M of Scrum development at my company costs \$6M when outsourced to waterfall teams
- Never outsource to waterfall teams. Only outsource to Scrum teams.

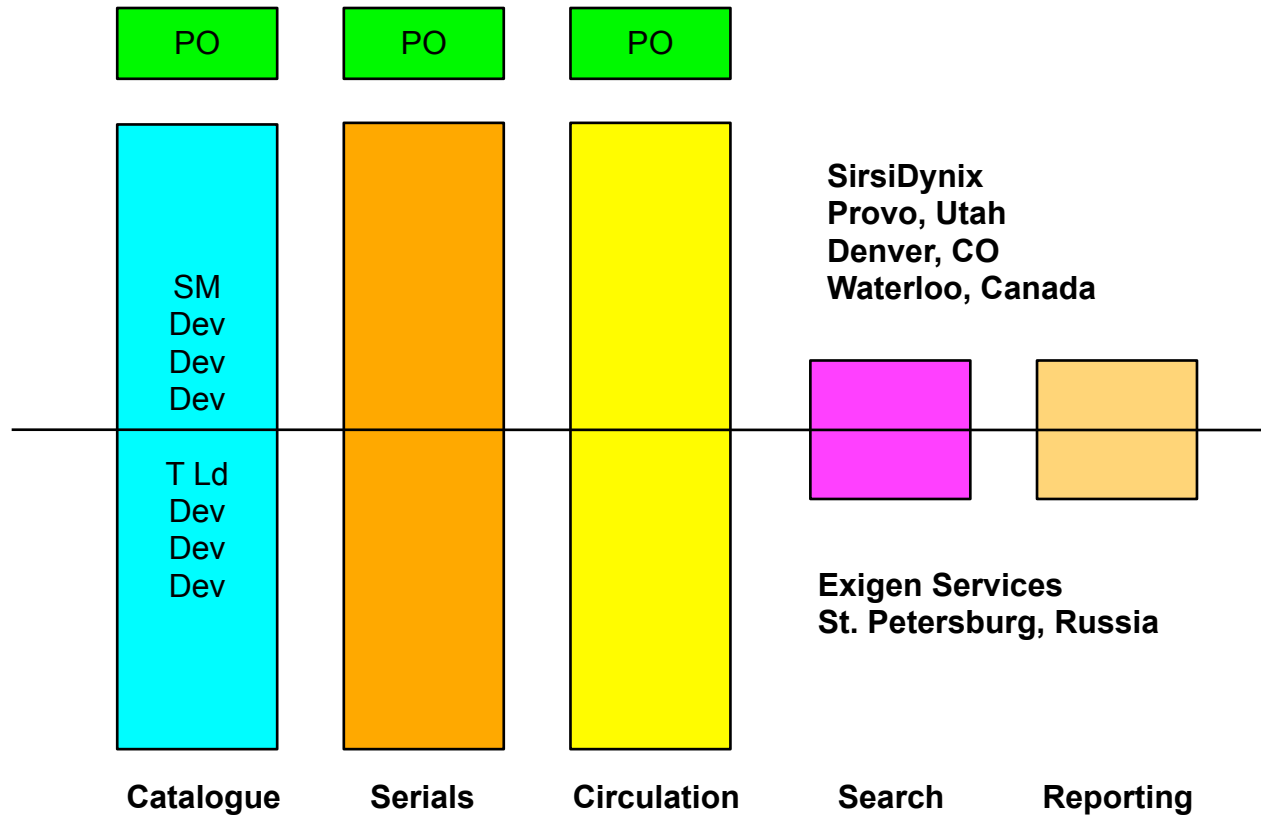
SirsiDynix - Anatomy of a failed project

- Over a million lines of Java code



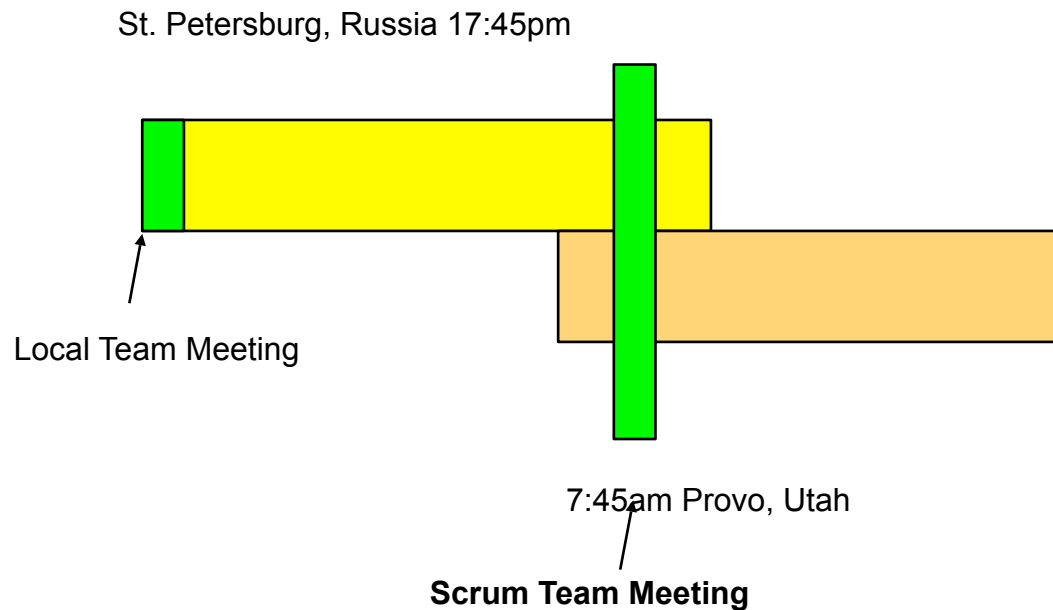
SirsiDynix Distributed Scrum

- 56 developers distributed across sites



SirsiDynix Distributed Scrum

- Scrum daily meetings



Velocity in Function Points/Dev month

	Scrum[1]	Waterfall[1]	SirsiDynix[2]
Person Months	54	540	827
Lines of Java	51,000	58,000	671,688
Function Points	959	900	12673
Function Points per Dev/Mon	17.8	2.0	15.3

1. M. Cohn, User Stories Applied for Agile Development. Addison-Wesley, 2004
2. J. Sutherland, A. Viktorov, J. Blount, and N. Puntikov, "Distributed Scrum: Agile Project Management with Outsourced Development Teams," in HICSS'40, Hawaii International Conference on Software Systems, Big Island, Hawaii,

Should we look at excellent Scrum teams?

- Often extreme data points are not sustainable.
- The most productive team ever recorded at Borland produced a failed product.
- The most productive distributed team (SirsiDynix) had quality problems, management problems, and internal company conflicts that caused the product to be killed.
- The second most productive team in the world (Motorola - David Anderson data) was overwhelmed with bureaucracy, completely demotivated, their product was killed, and the team died a painful death.

SirsiDynix Challenges

- ScrumButt
- Builds were stable only at Sprint boundaries
- ScrumMasters, Product Owners, and Architects only in U.S.
- No XP in U.S, only in Russia
- No face to face meetings
- Low test coverage
- Poor refactoring practice
- Did not have equal talent across teams
- Company merger created competitive products
- Sirsi now owned Dynix and killed Dynix product

Research Issue

- SirsiDynix was a retrospective study of a single data point
- Even if quality was perfect, it does not prove anyone else can do it.
- Even worse, if you observe a finding after the fact, you cannot infer causality
- Is SirsiDynix a lucky accident? Or maybe an unlucky accident?

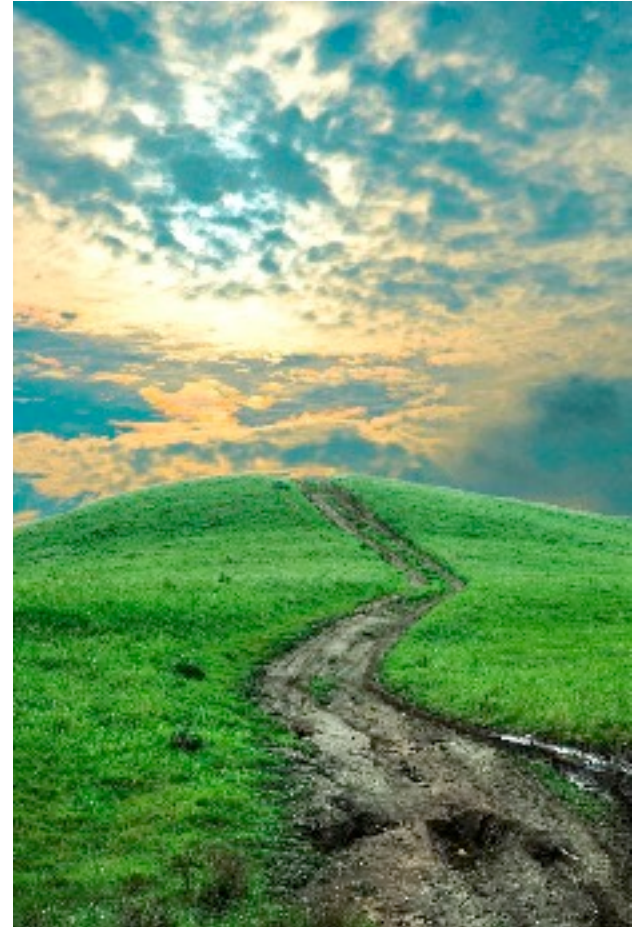
We needed a prospective study

- Define the distributed team model before projects start
- Assure consistent talent, tools, process, and organization across geographies
- Establish high quality data gathering techniques on velocity, quality, cost and environmental factors.
- Run a consistent team model on a series of projects and look for comparable results
- Demonstrate that local velocity = distributed velocity
- Demonstrate that local quality = distributed quality
- Demonstrate linear scaling at constant velocity per developer

Aren't Agile and Offshoring like oil and water?

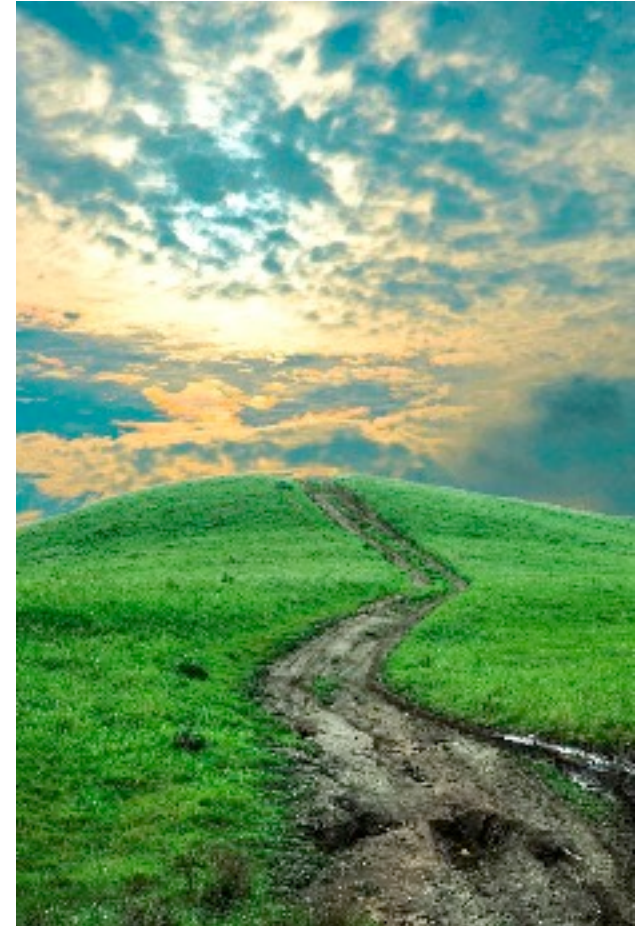
- Scrum Hyperproductive teams are colocated with shared ownership, shared responsibility, high interaction
- And then you want to distribute them halfway around the planet? Are you crazy?

Mixing both worlds makes a killer combination



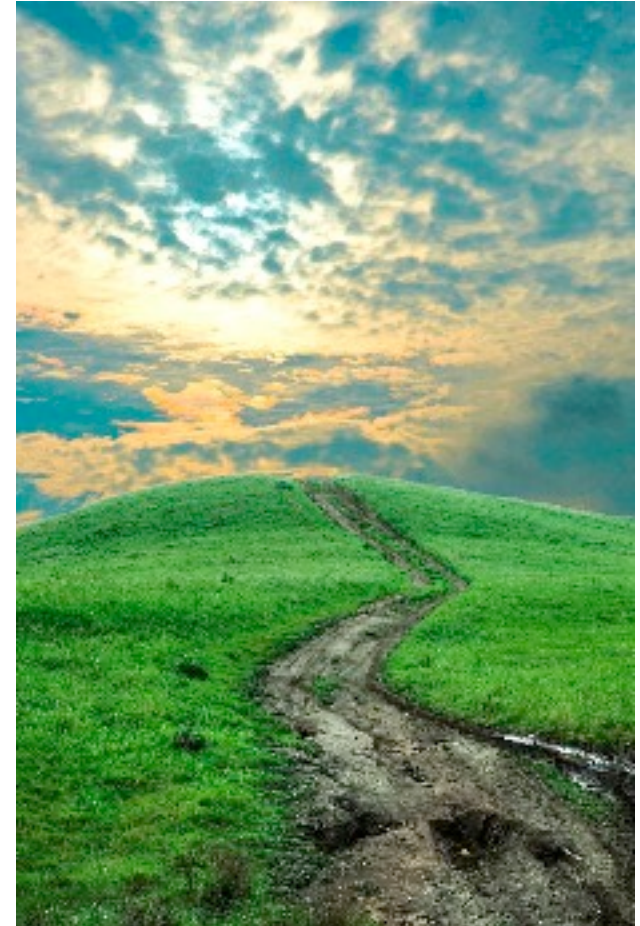
Mixing both worlds makes a killer combination

- Agile hyperproductivity and quality combined with offshoring benefits:
 - Cost reduction
 - Availability of talent
 - Scaling up/down with knowledge retention and without local layoffs



Mixing both worlds makes a killer combination

- Agile hyperproductivity and quality combined with offshoring benefits:
 - Cost reduction
 - Availability of talent
 - Scaling up/down with knowledge retention and without local layoffs
- Solution: Fully Distributed Scrum



Case study: Building a new railway information system



Getting in the same mindspace

We are looking for:

- Shared ownership
- Shared context
- Personal relationships
- Team culture and standards
- Shared Agile value system

We need to tie people closely together with shared goals:
SCRUM!

Forming the Fully Distributed team

- Shared ownership from the start
- Decide architecture together
- Get to know the client and domain
- Norming session for the team
- Form personal relationships



Establish local hyperproductivity

Distributed Scrum Meetings

- Video conferencing is a must!
- Same Scrum rules apply
- Planning poker over video or with digital tool
- Digital Scrum boards



The single most important thing the Scrum cycle facilitates is communication!

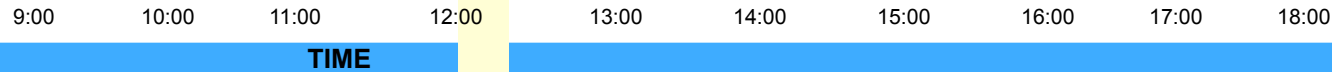
A day in the life...

Local standup



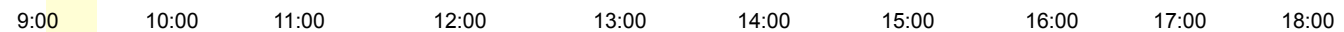
India

Update Scrum board



Stand up

Stand up



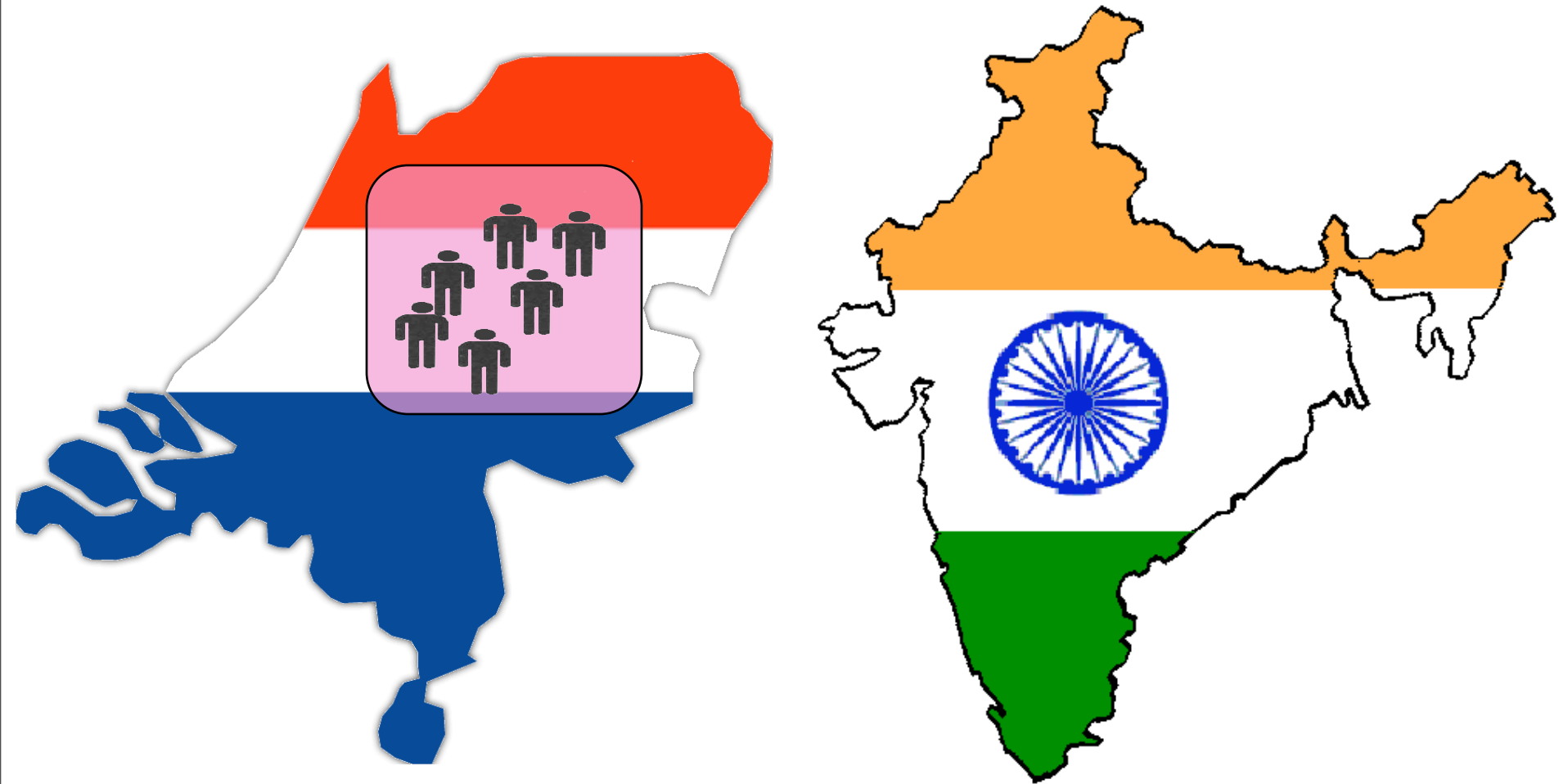
NL

Update Scrum board

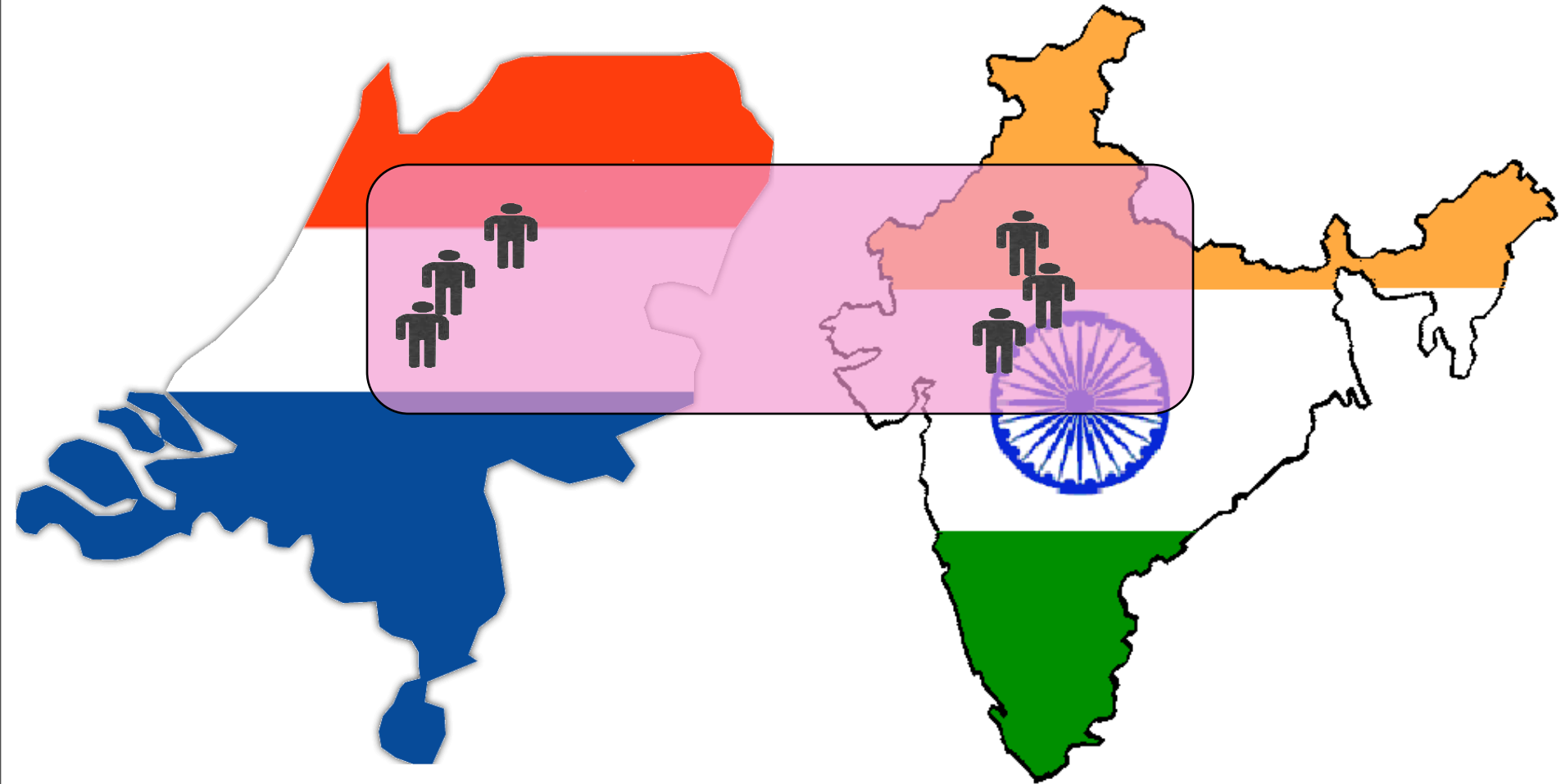
Scaling the project



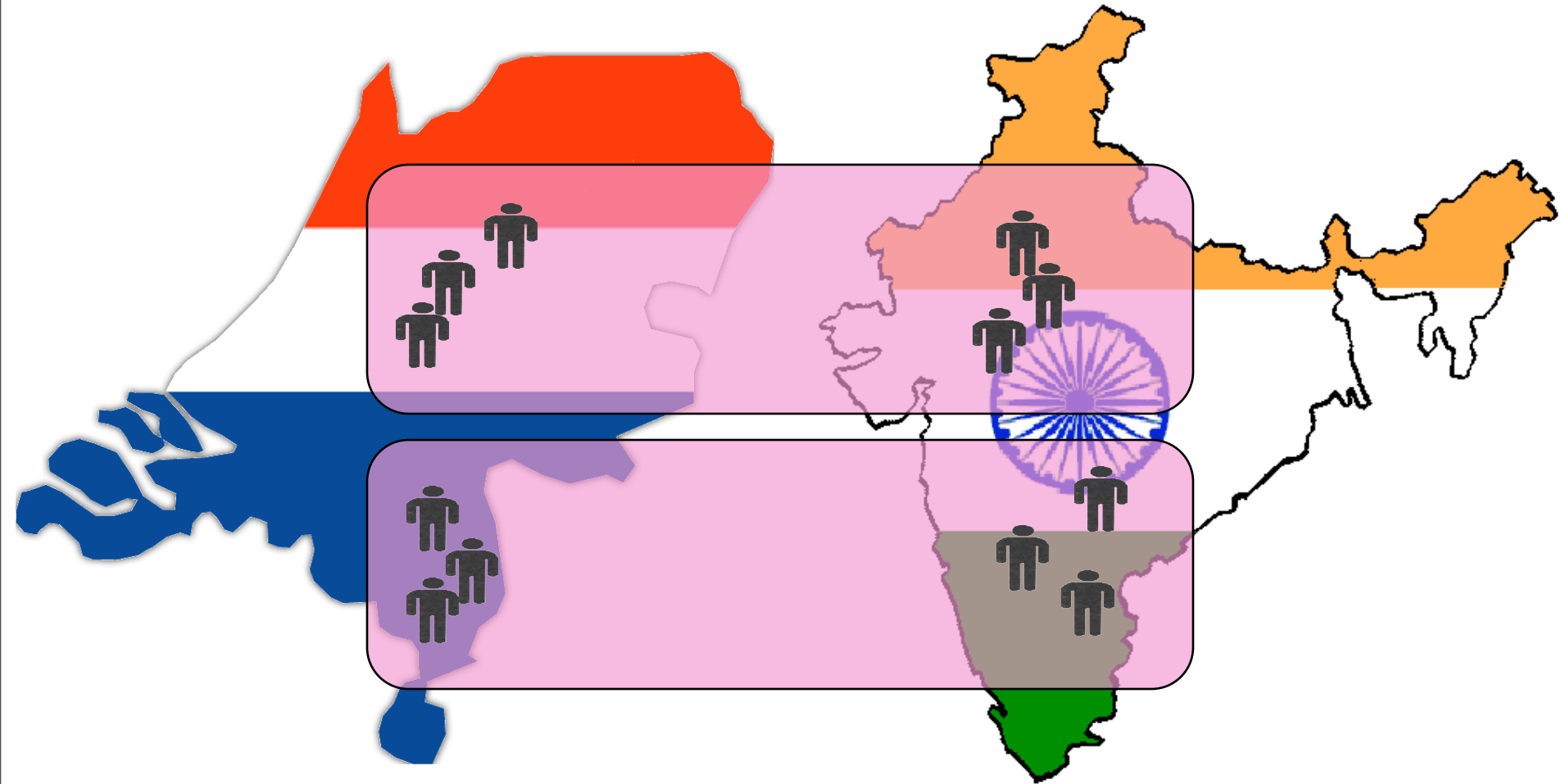
Scaling the project



Scaling the project



Scaling the project

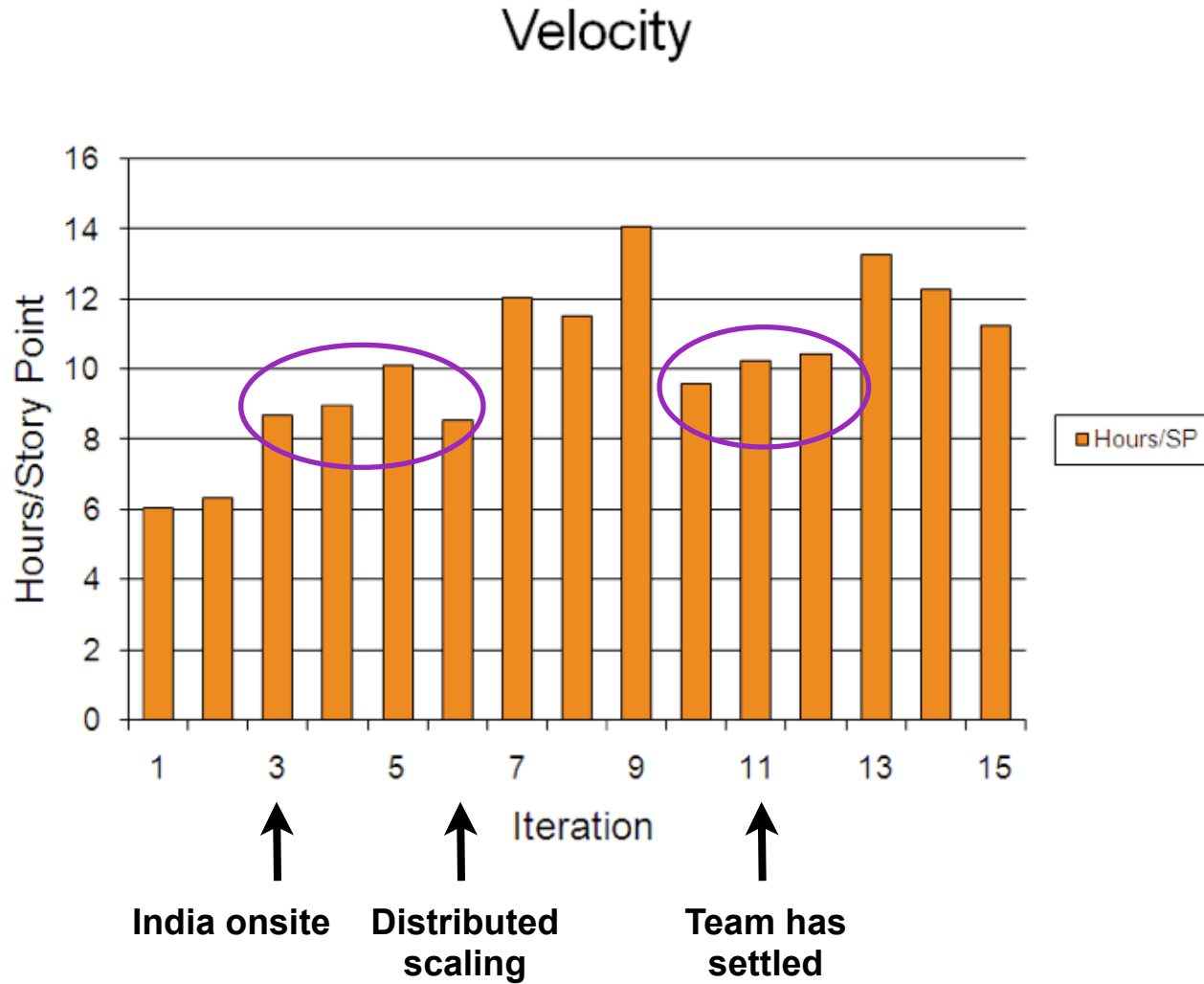


Some work is hard to distribute

- Software architecture distributes easily enough
- Enterprise architecture often does not
- Xebia rule: client gets same experience as with a local team

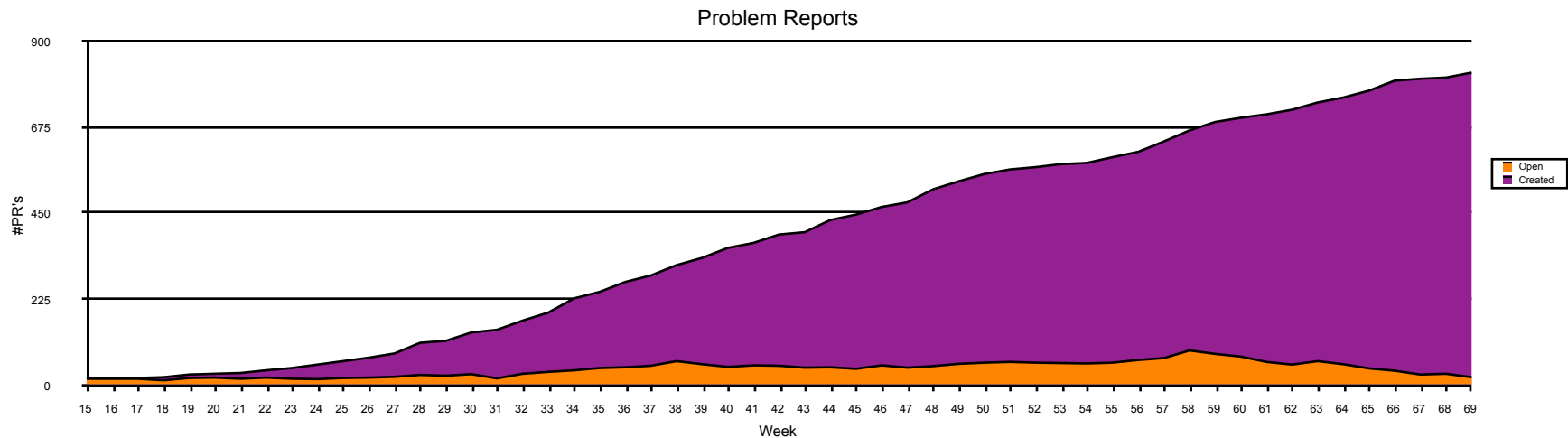


Linear productivity increase



Quality by Definition of Done & XP

- Facts:
 - 95 % found in iteration
 - 50 in acceptance
 - 0.5 – 1.0 per kLOC



Dutch Velocity vs. Russian Velocity

	SirsiDynix[2]	Xebia[3]
Person Months	827	125
Lines of Java	671,688	100,000
Function Points	12673	1887
Function Points per Dev/Month	15.3	15.1

1. M. Cohn, User Stories Applied for Agile Development. Addison-Wesley, 2004
2. J. Sutherland, A. Viktorov, J. Blount, and N. Puntikov, "Distributed Scrum: Agile Project Management with Outsourced Development Teams," in HICSS'40, Hawaii International Conference on Software Systems, Big Island, Hawaii,
3. J. Sutherland, G. Schoonheim, E. Rustenburg, M. Rijk. Fully Distributed Scrum: The Secret Sauce for Hyperproductive Outsourced Development Teams. Agile 2008, Toronto, Aug 4-8 (submission, preliminary data)

Conclusion

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- Fully Distributed Scrum has the full benefits of both local hyperproductive teams and offshoring

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Fully Distributed Scrum has more value than localized Scrum