Scrum@ ebaY

敏捷中国大会

ThoughtWorks® **InfoQ** Enterprise Software Development Community

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eBay Inc. Overview

As of December 31, 2007

- Founded in September of 1995, eBay is a global online marketplace where practically anyone can trade practically anything.

- eBay has a global presence in 39 markets, including the U.S.

- eBay has approximately 276 million registered users worldwide.

- Marketplaces net revenues totaled a record $1.5 billion in Q4-07, representing a year-over-year growth rate of 21 percent. With 46 percent from US operations and 54 percent from our International business.

- In Q4-07, gross merchandise volume (GMV), the total value of all successfully closed items on eBay's trading platforms, was $16.2 billion. (Total GMV for the full year 2007 was more than $59 billion.)

- eBay users worldwide trade more than $2,039 worth of goods on the site every second.

eBay Inc. Overview (cont)

- There were **637 million** new listings added to eBay worldwide in Q4-07. At any given time, there are approximately **113 million** listings worldwide, and approximately 6.7 million listings are added per day. eBay users trade in more than **50,000** categories.

- At the end of Q4-07, eBay hosted approximately **532,000** stores worldwide, with approximately 46 percent of stores hosted on eBay's international sites.

- eBay members worldwide have left more than **6 billion feedback** comments for one another regarding their eBay transactions.

- The most expensive item sold on eBay to date is a private business jet for $4.9 million.

Velocity of trading

On an average day on eBay…

A Diamond Ring is sold every **two minutes**

Velocity of trading

On an average day on eBay…

More than **3** Watches are sold **every minute**

Velocity of trading

On an average day on eBay…

5 Women's handbags are sold every minute

Velocity of trading

On an average day on eBay…

Over **3600** MP3 players are sold

Velocity of trading

On an average day on eBay…

A makeup product sold every **2 minutes**

Velocity of trading

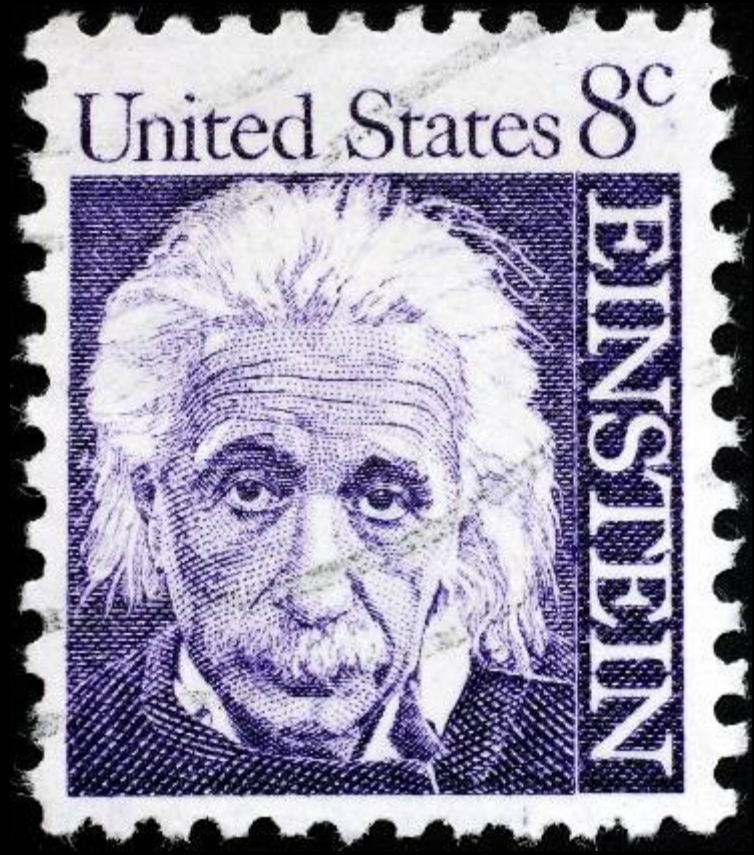On an average day on eBay…

4,827 fragrance products sold per day

Velocity of trading

shampoo

conditioner

On an average day on eBay…

A hair product sold **every second**

Velocity of trading

On an average day on eBay…

Over **300** stamps are sold **every hour**

Velocity of trading

On an average day on eBay…

An automobile is sold **every minute**

Analytics DNA

Embedded in our daily life

Bottoms-up & Tops-down

IMD builds and maintains the business reporting platform for eBay, including the eBay Data Warehouse and Reports like Global Dashboard, GEM and Standard Reports.

Types of Analytics at eBay

Basically measure anything possible - A **few** examples:

Marketing	Buyer Experience	Finance	Trust & Safety
Technology Operations	Customer Service	Loyalty	Information Security
Infrastructure	Finding	User Behavior	Seller Experience

eBay Trust & Safety (TnS)

- eBay's **Trust and Safety** team is responsible for keeping the marketplace a safe, well-lit place for people around the world to trade with one other.

- Actively working to enable members to trade safely, eBay fosters trust between members through the development and enforcement of rules and policies, the creation of reputation-building programs, and the prevention of fraud.

- eBay also works behind-the-scenes to prevent fraud and, in the event a problem occurs, eBay proactively works with law enforcement and government agencies throughout the world to enforce its policies. Rooted in the values of the marketplace, eBay's policies are aimed at offering a level playing field, encouraging open, honest, and accountable transactions, and creating economic opportunities for everyone.

- Trust & Safety

TnS Data Infrastructure Program Since Dec. 2007

Improve Time To Market of TnS Analytics

- **Hours**/Days vs Weeks/Months

Enable TnS business to do **agile** prototyping

Enable the users to **"Fail Fast"** - Make it easy to try out new ideas

Eliminate TnS stray Data Mart

Why Traditional Waterfall Would Not Work?

- **Requirement** was unclear
  - Even the customer didn't know what the final product would be like
  - It would be meaningless to create a thorough requirement document upfront, if possible, as we all believed it would be dramatically changed later anyway

- **Technology** was unfamiliar
  - Legacy code containing business logic were all on TnS users' data mining platform
  - No one in the team had any data mining tool skills to read/understand such code
  - Complex data presentation requirements need advanced BI tool mastery, which the team didn't have

- **Risk** was high
  - Even without hearing about Agile/Scrum, we all agreed from the beginning that an iterative approach is more appropriate.
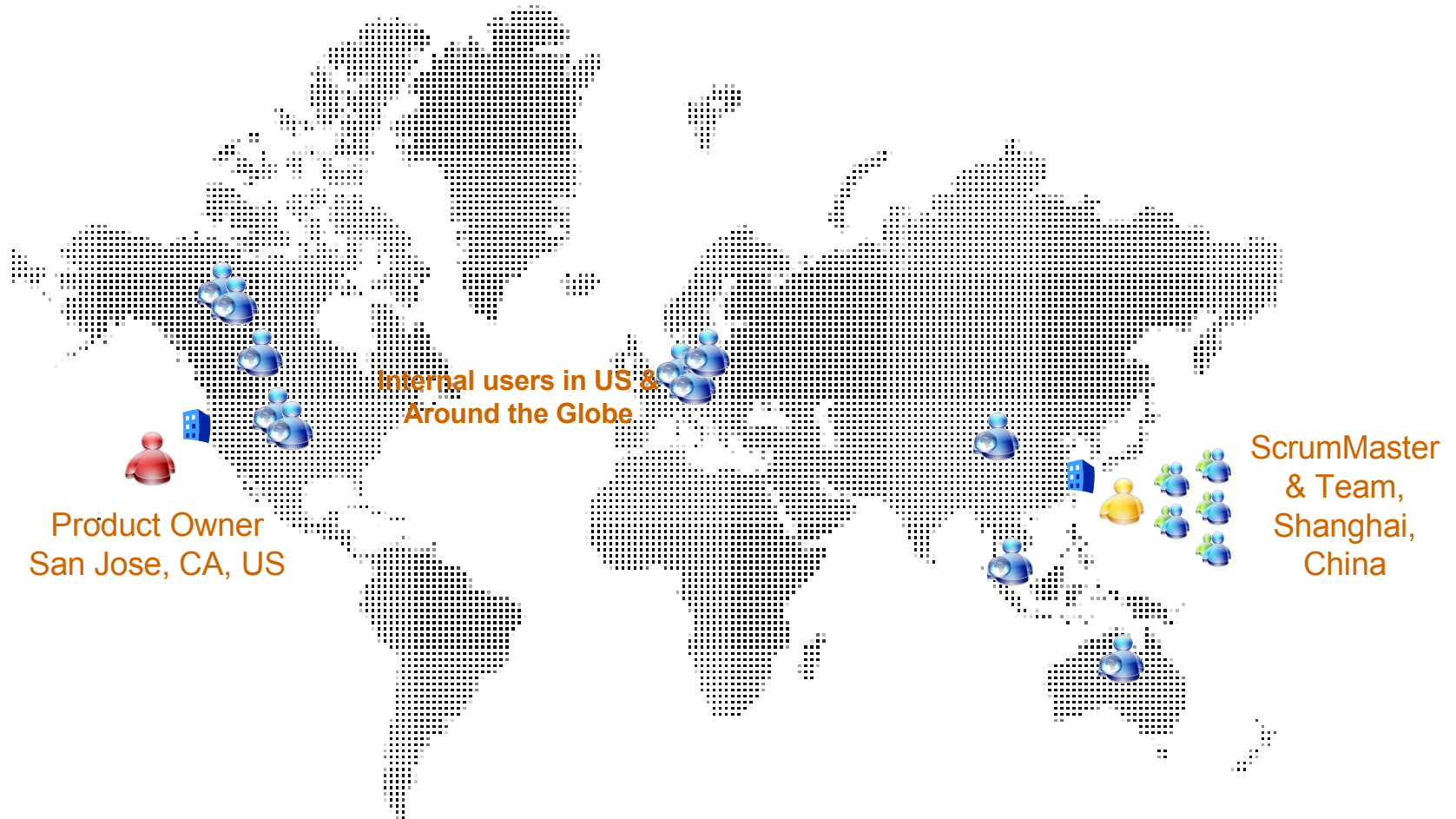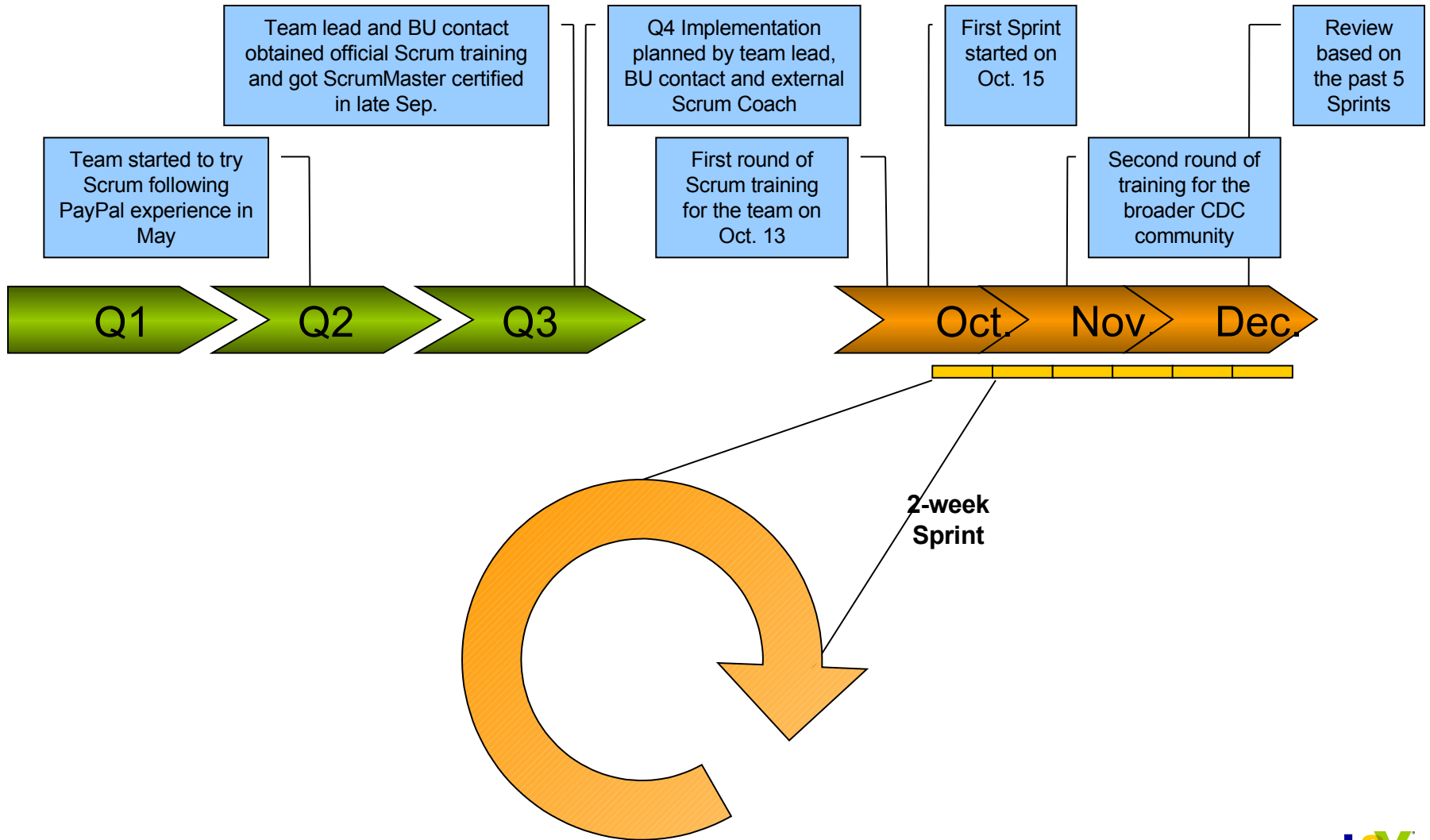
The Spectrum of Process Complexity
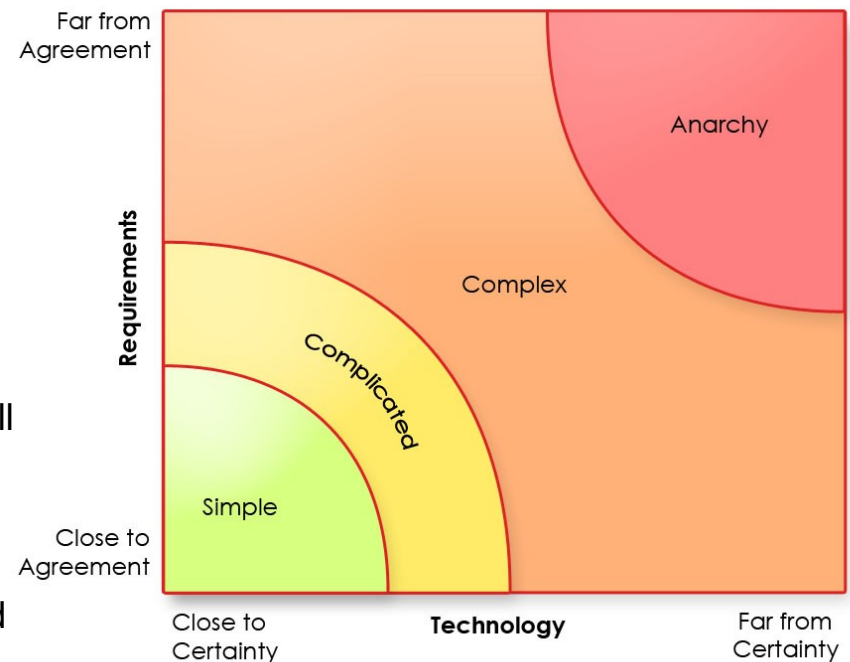
Why Try Scrum In IMD TnS Program?

Agile values…	TnS Program has…
Individuals & Interactions	Cross-functional team members with different expertise, experience and strengths
Working Software	Requirements in "Complex" area where Scrum handles the best
Customer Collaboration	Close partnership between TnS and IMD and dedicated product owner from TnS team
Responding to Change	Quickly evolving analytic requirements and priorities in TnS team

The 1st Scrum Team of eBay Marketplace Technology

Internal users in US & Around the Globe

Product Owner
San Jose, CA, US

ScrumMaster & Team, Shanghai, China

2008 Scrum Pilot

Team lead and BU contact obtained official Scrum training and got ScrumMaster certified in late Sep.

Q4 Implementation planned by team lead, BU contact and external Scrum Coach

First Sprint started on Oct. 15

Review based on the past 5 Sprints

Team started to try Scrum following PayPal experience in May

First round of Scrum training for the team on Oct. 13

Second round of training for the broader CDC community

Q1 > Q2 > Q3

Oct. > Nov. > Dec.

2-week Sprint

A Less Successful First Try…

- No proper training/coaching to get deep understanding of Agile

- No stakeholder was aware of what we were doing

- An "Agile" process trapped inside a traditional framework

A story about Daily Meeting

- PMP A: "You guys have too much meeting… Do you really need to involve everyone in a DAILY meeting?"

- PMP B: "Let's have the team members come to meeting room one by one, so each of them can report their status then leave. They don't need to waste time listening to others."

Sail Away From Icebergs

- Common icebergs that'll sink your Titanic:
  - Know Agile process but not embrace its spirit
  - Map everything in Agile back to traditional process/structure

- Strictly follow Scrum process in initial sprints to master it before trying tailoring it
  - The predefined meetings/artifacts were developed in real practices and exist for a reason

Hybrid Agile with traditional waterfall is doomed to failure.

Nurture Scrum Adoption

- **Planting the seed is not enough**
  - Agile is NOT a silver bullet that can fix everything automatically for you in a magical way.

- To make it grow and bloom, you need:
  - ✓ Develop a Promising Team
  - ✓ Train and Coach Properly
  - ✓ Facilitate The Team Strongly
  - ✓ Gain Your Management's Bless

Develop a Promising Team

- ## <u>Product Owner</u>

  - Our Product Owner role was took on by a dedicated staff in TnS end user group.

  - **Capability**: possessing great deal of business and technical knowledge.

  - **Authorization**: an individual contributor reporting to a Senior Director, which gives him important authority/objectiveness in his organization to coordinate/prioritize requirements from different teams and move forward user adoption of our product.

  - **Agile-thinking**: He buys in Agile and works with the project team by its principles.

  - **Relationship/Teamwork**: He's remote in US but we tried our best to meet in person as much as possible. The project result is closely tied with his goal. He's willing to work flexibly to increase time overlap with China project team, so that he can be fully involved in Review and Planning meetings.

Develop a Promising Team (cont.)

- ## <u>ScrumMaster</u>

  - A technical manager and a Certified ScrumMaster.

  - A **facilitator**, a **firefighter**, a **problem-solver**. NOT a work assigner.

  - **Soft skills**: coaching, coordinating, communicating, influencing…

  - **True believer of Agile/Scrum**, evangelizing it to different levels whenever there is an opportunity.

Develop a Promising Team (cont.)

- ## <u>Team</u>

  - **Cross-functional** members: Business Analyst, Developer, QA Tester, Report Engineer

  - **Characteristics**: capable, flexible, responsible, work under minimum supervision, have great teamwork spirit

  - As we are not a fully projectized organization, functional managers of team members should commit a fairly stable dedication of the individuals during the project

Train & Coach Properly

- Before formally adopting Scrum
  - Although the process itself looks simple and easy to master, Scrum team and key stakeholders should invest time in training to truly understand the philosophy behind it

- After the beginning of adoption
  - Hire an external coach for a quarter to spend several hours per week with the team: coach/help based on his/her abundant previous experiences and unbiased independent point of view:
    - plan initial backlog and adoption
    - solve practice problems
    - answer questions from different parts of the organization and management
    - remove initial impediments and protect the new team
  - An internal Scrum practitioner with better knowledge of the organization can help the team in:
    - Giving tailored sessions and socializing Scrum, reflecting the reality of the org
    - Supporting the external coach to be more effective in addressing impediments for the team
    - "Relay the torch" after external coach leaves

Facilitate The Team Strongly

- A whiteboard or a piece of wall for task board
  - Highly recommended for newly started team, because it's concrete and intuitive
  - Good visibility to others and a way to socialize Agile/Scrum

- Co-locate team members, and remove communication barriers
  - It's best to have a dedicated room, but a team area is also good and feels less isolated
  - Lower cube panels, while emphasizing it's only for easier communication, NOT for micro-management
  - Set ground rule to minimize IM inside the team and maximize face-to-face communications

- Set up check-points with remote team members
  - As frequent as necessary, with video conf if possible
  - Consider using electronic tool as its benefit greatly overweights the maintenance work and the shortcoming of being less concrete

- Book a war room for constant meetings
  - It's a constant pain point for the team to find meeting rooms for their just-in-time necessary meetings that cannot be planned ahead.
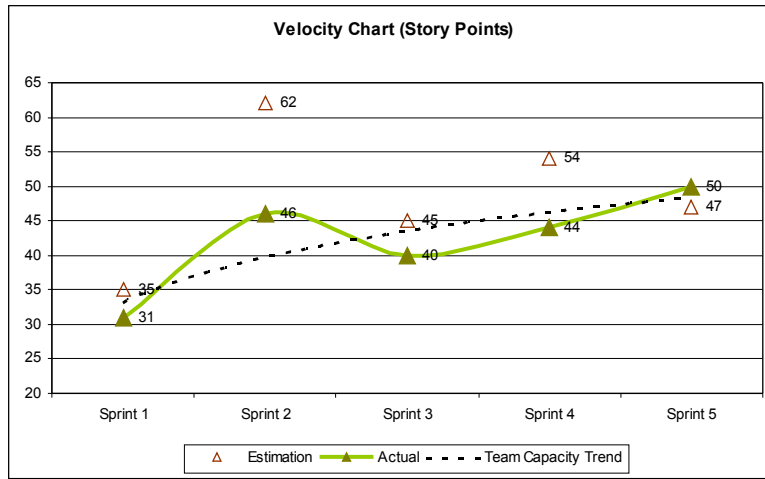
Gain Your Management's Bless

- Communicate, communicate, communicate…
  - Provide more transparency about the process to management/stakeholders to make them feel more involved and understand what they could do to support the process
  - Get from the management of
    - **customer**: commitment of involvement and collaboration
    - **performing team**: commitment of team members' dedication, necessary resource allocation (team co-location area, facility…), necessary risk-taking and management style change, etc.
    - **functions external to the team** (Operation, Release, Architecture…): necessary support/responsiveness to help the team achieve enough agility

- Ensure early and continuous success after adoption begins
  - Define a clear vision of the final product before start: it serves as a north star for the team in the fast-paced process
  - Establish trust from management by delivering high quality product increment
  - Recognize the team's achievement timely
  - Ask for being taken "off the grid" if organizational impediments cannot be removed in a day
  - Get management support of customer side to have enough items in initial Product Backlog
    - The requirements should cover broader enough to get biggest gain from Scrum
    - Possible synergy diminishes when splitting a natural domain into smaller areas
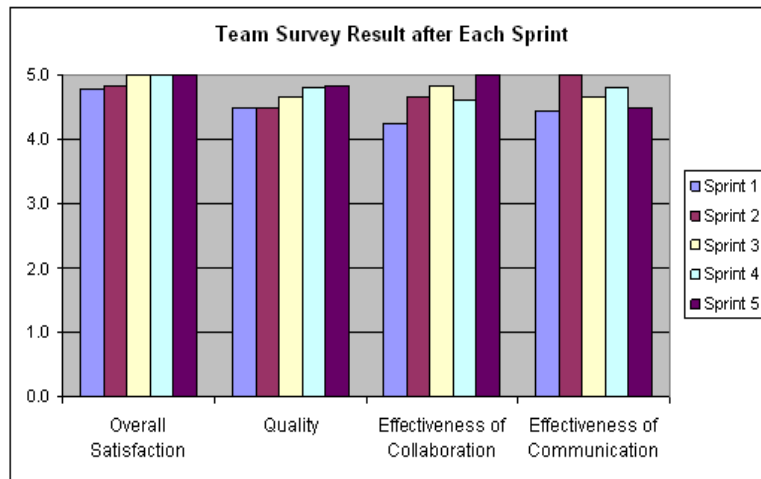
A Natural Change of Team Behavior to Be More Agile

- With a proper environment that truly embraces Agile, team behavior shows positive changes:
  - Tester involves herself at early stage of data analysis, requirement definition and design without waiting for code to be done and "handed over"
  - Although not sitting together throughout coding, business analyst and developer keep a very constant face-to-face communication and iteratively develop the code.

- Quality and productivity improved without enforcing any prescribed practices

SCRUM Pilot Result
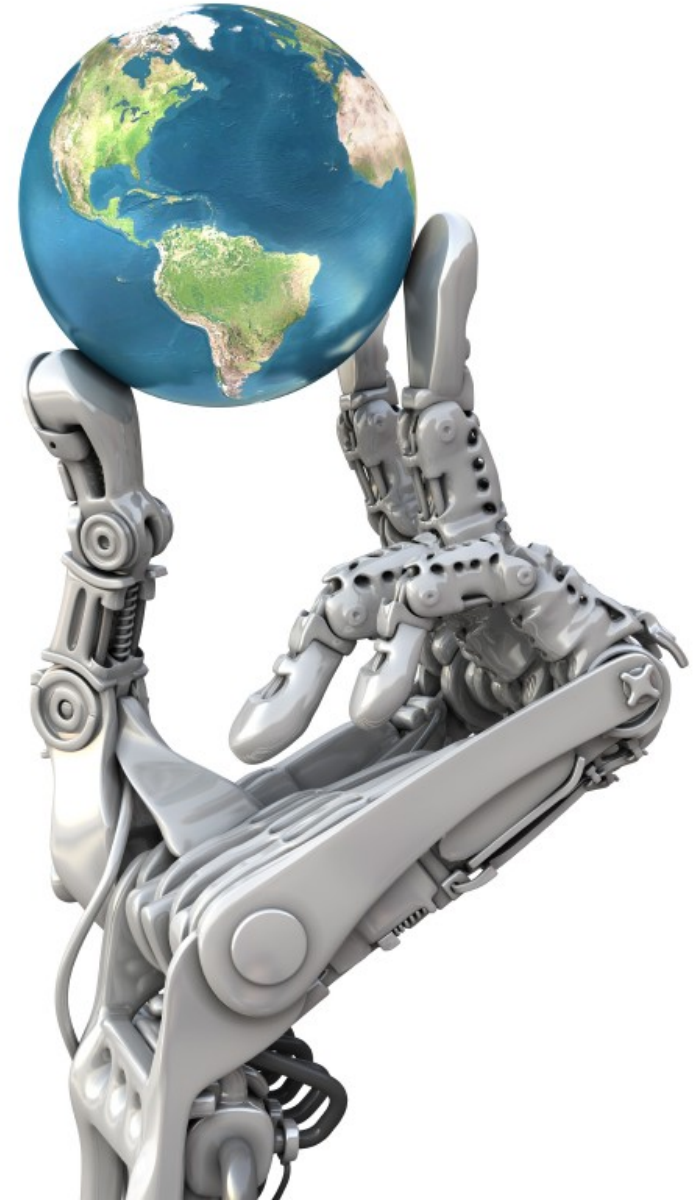# (Data Based on the First 5 Sprints)

Velocity Chart (Story Points)

- 62
- 54
- 50
- 47
- 46
- 45
- 44
- 40
- 35
- 31

Estimation — Actual — Team Capacity Trend

- Better Team Performance

Team Survey Result after Each Sprint

Overall Satisfaction · Quality · Effectiveness of Collaboration · Effectiveness of Communication

Sprint 1, Sprint 2, Sprint 3, Sprint 4, Sprint 5

- Higher Customer & Team Satisfaction

Integration of Agile/Scrum with Company Culture

- Only by integrating Agile Manifesto with our company's culture, possible would it make Agile adoption successful and lasting.

- Agile/ Scrum works perfect with eBay's values & behaviors – they give trust and respect to people believing that will get the innate best out of them.

Our Values

1. **We believe people are basically good**
2. **We recognize and respect everyone as a unique individual**
3. **We believe everyone has something to contribute**
4. **We encourage people to treat others the way they want to be treated themselves**
5. **We believe that an honest, open environment can bring out the best in people**

Our Behaviors

☐ **Lead Completely**
Agile/Scrum inspires us to improve how we work in an innovative way, and of course also requires risk-taking

☐ **Practice Judgment**
Agile/Scrum requires making decisions (quickly) while considering the Scrum team and the customers on the background of the whole eBay and finding balances

☐ **Trust Each Other**
A key factor to successful Agile/Scrum implementation is the trust inside the team built by dedicated team members and the diversity of their thoughts to improve

☐ **Keep It Human**
Agile/Scrum values individuals and the human interactions, rather than treating people as "resources". And it's supposed to be fun!

Question Time

Many of the graphics found at www.istockphoto.com