

Lean Implementation of Organizational Process Focus (OPF) and Risk Management (RSKM) CMMI® Process Areas in Agile Environment

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Prerequisites

Basic background about:

- Agile Values & Principles (www.agilemanifesto.org)
- CMMI version 1.3 (www.sei.cmu.edu/cmmi)

Feasibility of Agile and CMMI

- "The two methods are certainly compatible" Mike Konrad, Senior Member of Technical Staff Software Engineering Process Management Program
- "It was an opportunity for us at SEI to dispel some myths and 'apologize', in a sense, to some people in the Agile community" Mike Konrad
- Why Not Embrace Both technical report by SEI
- Jeff Sutherland Recommends Combining Scrum with CMMI Level 5 Jeff Sutherland is one of scrum inventors
- And Others ... (www)

Feasibility of Agile and CMMI (Cont'd)

- Our Own Various Implementations
- One of the successful companies that applied Agile CMMI in the same team & project with light-weight processes is:

Raya Information Technology, Egypt
(<http://www.rayacorp.com>)



Feasibility of AGNs and CIVIL (Cont'd)

They are Synthetically welded?



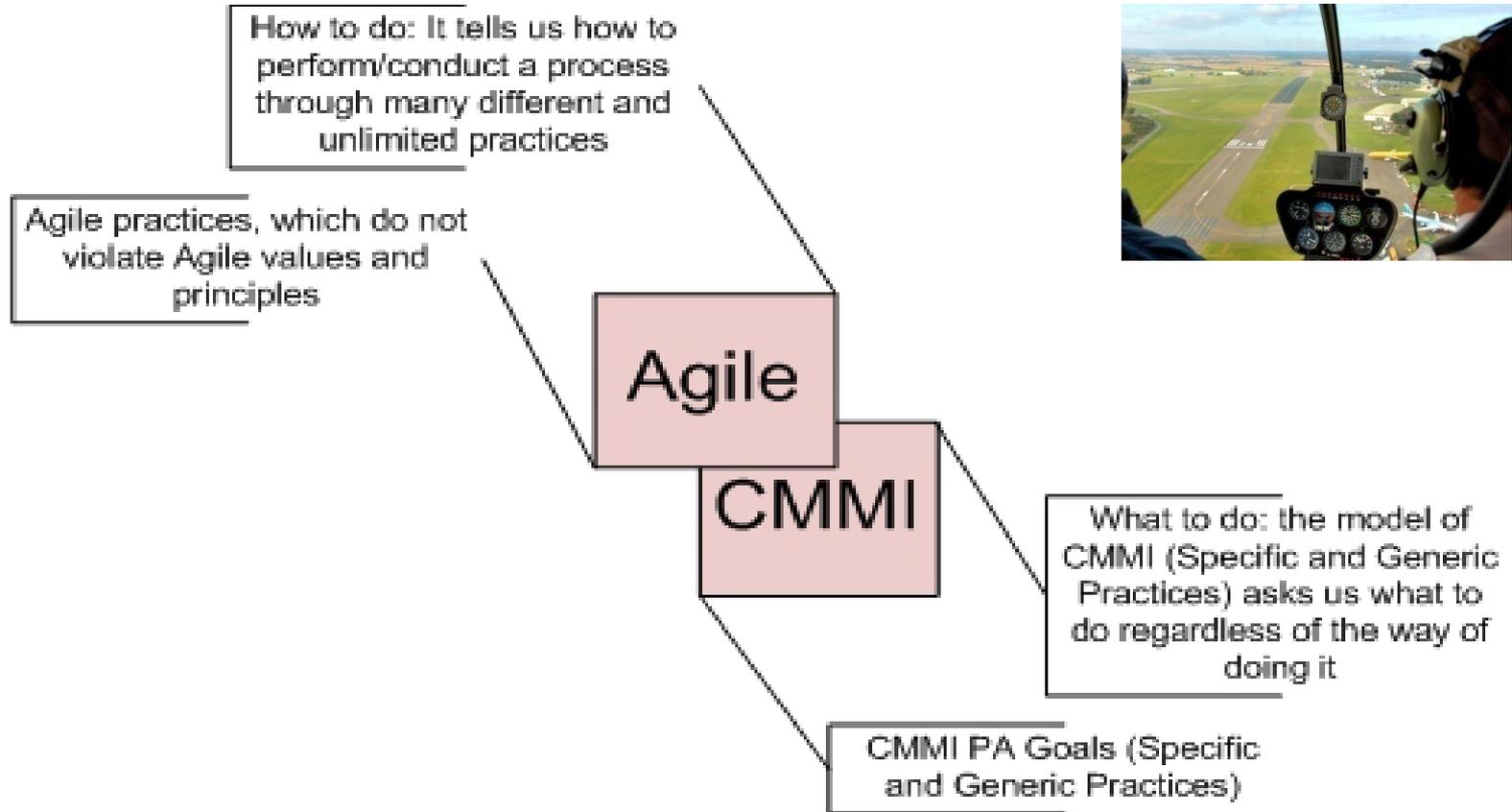
Mohammad Abou-Basha

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Feasibility of Agile and CMMI (Cont'd) But, they are



How do we look at Agile CMMI?



Brief Relationship between Agile and CMMI from Implementation perspective

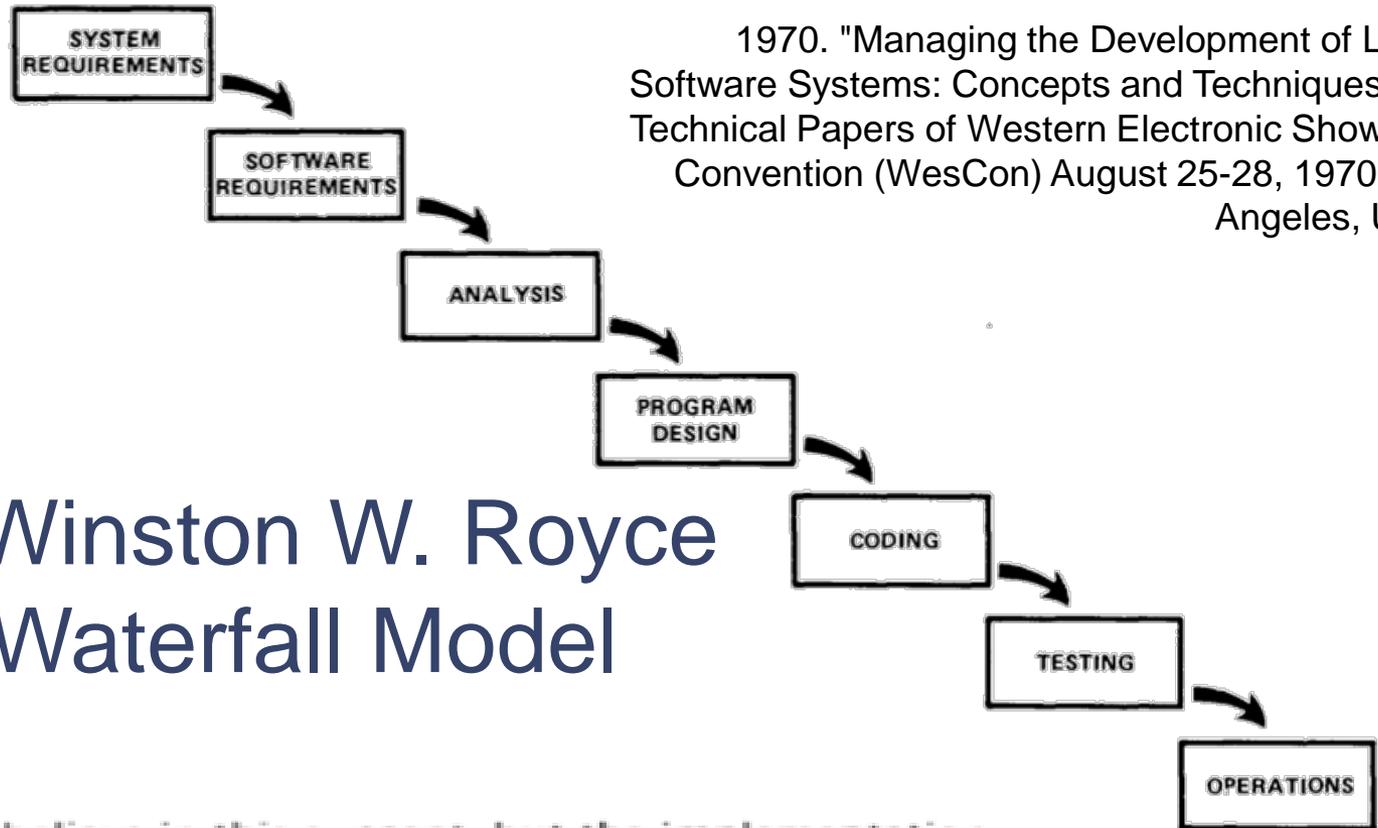
Why Agile CMMI ?

- Easily understanding of model **intent**,
- Thinking in terms of **valuable** compliance instead of just compliance or filling contract requirement,
- Paying more attention to **people**,
- **Managed** fast deliverables.

Why Agile CMMI ? (Cont'd)

- Heavy-weight processes lead to:
 - a late delivery,
 - an inaccurate assurance of quality,
 - a misleading way to the required value,
 - a more budget,
 - a lot of workarounds by stakeholders to survive!
- **Remember**, there are some competitors over there !

Why Agile CMMI ? (Cont'd)



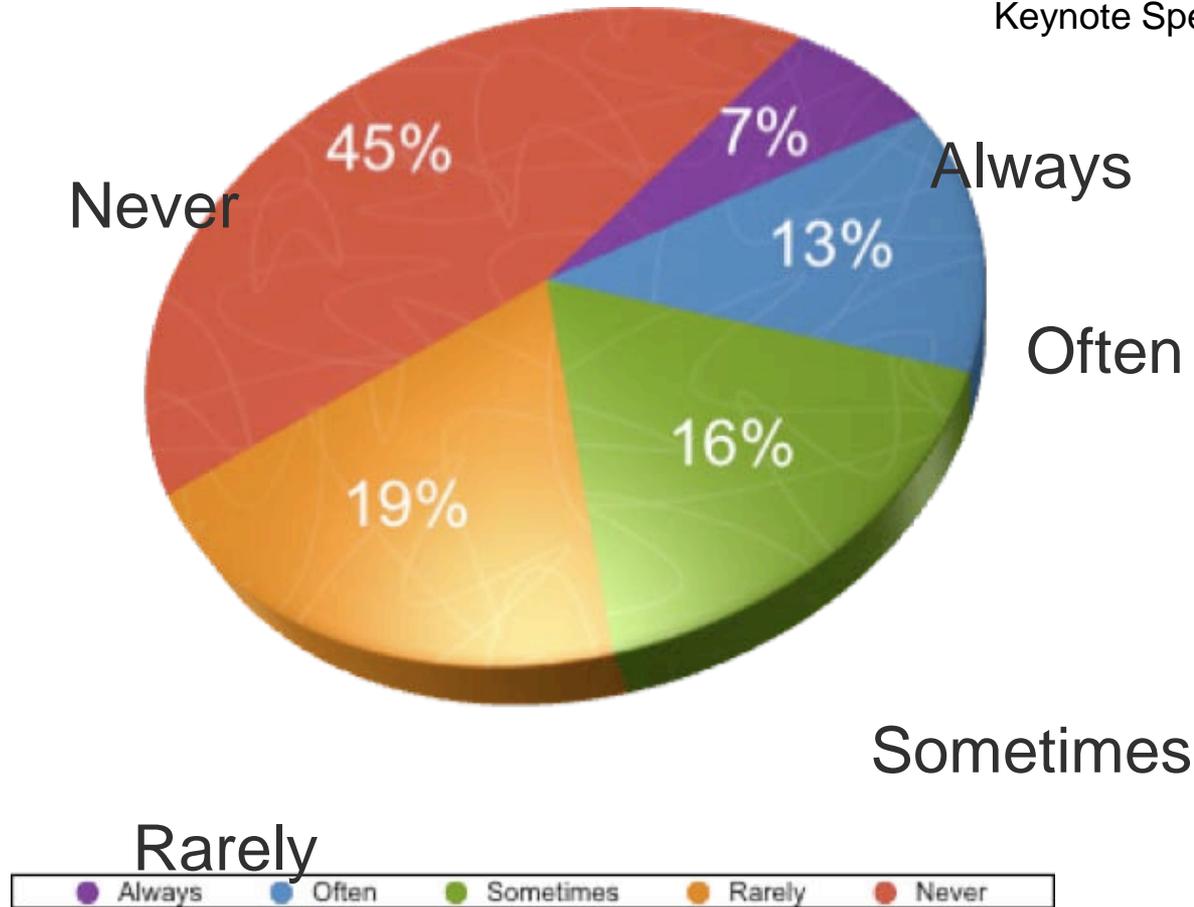
Dr. Winston W. Royce
The Waterfall Model

“ I believe in this concept, but the implementation described above is risky and invites failure. ”

Why Agile CMMI ? (Cont'd)

Feature Usage

Source: Jim Johnson of the Standish Group, Keynote Speech XP 2002



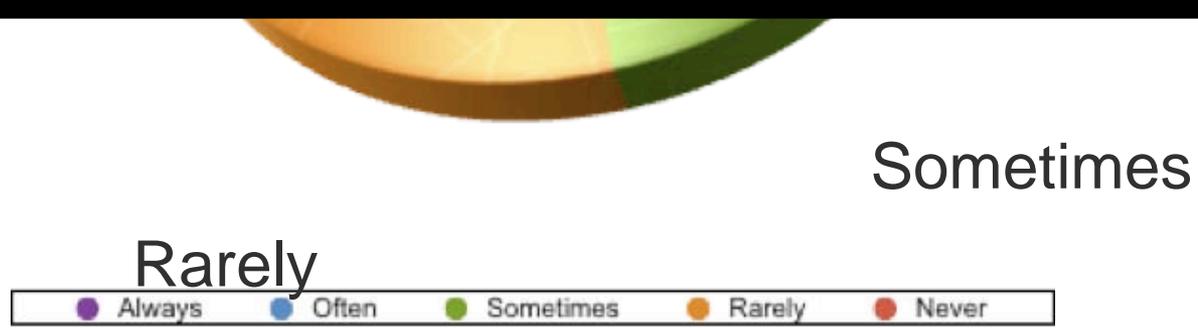
Why Agile CMMI ? (Cont'd)

Feature Usage

Source: Jim Johnson of the Standish Group, Keynote Speech XP 2002



- We need to focus more of prioritizing features and delivering value quicker than focusing on implementing all the features
- We need to focus on the ROI of each feature for your customer with the help of customer
- We need to focus on the ROI of each feature as a product manager



Why Agile CMMI ? (Cont'd)

Challenged Projects

USA : \$80-145 billion per year is spent on failed and cancelled projects

UK :12 out of 18 Large IT projects have failed



Standish Report - 2006

Dr. Sidky: Introduction to Agile

Why Agile CMMI ? (Cont'd)

However,...

Market value of publicly traded shares:

\$NA (31 December 2009 est.)

country comparison for the world

\$34.95 trillion (31 December 2008)

\$64.56 trillion (31 December 2007 est.)

Industries:

dominated by the onrush of technology, especially in computers, robotics, telecommunications, and medicines and medical equipment; most of these advances take place in OECD nations; only a small portion of non-OECD countries have succeeded in rapidly adjusting to these technological forces; the accelerated development of new industrial (and agricultural) technology is complicating already grim environmental problems

Industrial production growth rate:

CIA World Factbook- 2010

Why Agile CMMI ? (Cont'd)

However,...

Market value of publicly traded shares:

\$NA (31 December 2009 est.)

country comparison for the world

- What if we increased our IT profits to both vendor and client ?
- What if we eliminated (or decreased) the challenged , failed and canceled projects?

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Industrial production growth rate:

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What is “Agile CMMI Practice” or ACP?

- Agile CMMI Practice (ACP) is the practice (or way of doing an activity) that achieves the Specific Practice (SP) in CMMI Model given that this practice achieves at least one of Agile Values and Principles without violating any of them.

Given that CMMI model defines the Alternative Practice as a practice that is a substitute for one or more generic or specific practices contained in CMMI models that achieves an equivalent effect toward satisfying the generic or specific goal associated with model practices. Alternative practices are not necessarily one-for-one replacements for the generic or specific practices.

Remember: Agile Values

We are uncovering better ways of developing software by doing it and helping others do it. Through this work we have come to value:

- **Individuals and interactions** over processes and tools
- **Working software** over comprehensive documentation
- **Customer collaboration** over contract negotiation
- **Responding to change** over following a plan

That is, while there is value in the items on the right, **we value the items on the left**

In 7 Steps, how do you achieve ACP?

1. Make sure of your senior management adoption,
2. Discuss the policy and process improvement project vision by reaching consensus with all stakeholders about the vision and goals of this project,
3. Specify the process areas in scope (i.e. what?),
4. Meet the users (actual implementers) of each practice in the selected process areas,
5. Explore ,with the implementers, all possible valuable ways of doing these practices which do not violate any of Agile Values and Principles,
6. Consolidate the output from users to reach the way of implementing the selected process areas and implicitly its practices (i.e. how?)
7. Inspect and adapt (i.e. process improvement cycle is always active)

Difference Between “Convey” and “Preserve” Information

	“Convey” Information	“Preserve” Information
Why?	Transfer information within your team members for alignment and having the same understanding of this information.	Store information for further references, reviews, reuses and organization history.
How?	It depends on the case you have, that’s why Agile is human-centric, you choose the best way for conveying information in your case. And do not forget that one of Agile principles is “the most efficient and effective method of conveying information to and within a development team is face-to-face conversation”, however, if there are rigid constraints in achieving this way, move to the next communication way which invites interaction within team members. This encourages you to achieve the first step of SAMI (Sidky Agile Measurement Index), it is a 5-step value-based roadmap to agility and designed to help guide organizations seeking to become more agile. Each of SAMI’s 5 steps (Collaborative, Evolutionary, Integrated, Adaptive and Encompassing) aims to instill a new value in teams and organizations.	Also, it depends on the case. Usually, people prefer using different types of documentations project management tools, document management systems and we prefer using a system that supports your files’ configurations such as version history details.
When?	In every time the team members communicate any information regarding the project	In all legal and formal communications. And when you want to ensure commitment and understanding of any information or responsibilities with either the customer or project team members.

What is the worst thing you can do for your organization?

Wrong implementation of CMMI, an implementation that leads to appraisal satisfaction or compliance regardless of the values and benefits that CMMI intends to provide, is the worst thing you may ever give to your business or organization.



Organization Process Focus (OPF)

- **Purpose:**

The purpose of Organizational Process Focus (OPF) is to **plan, implement, and deploy** organizational process improvements based on a thorough understanding of current strengths and weaknesses of the organization's processes and process assets.

Organization Process Focus (OPF)

- Is it an Agile process ? Does it support any of Agile Principles?

Yes!

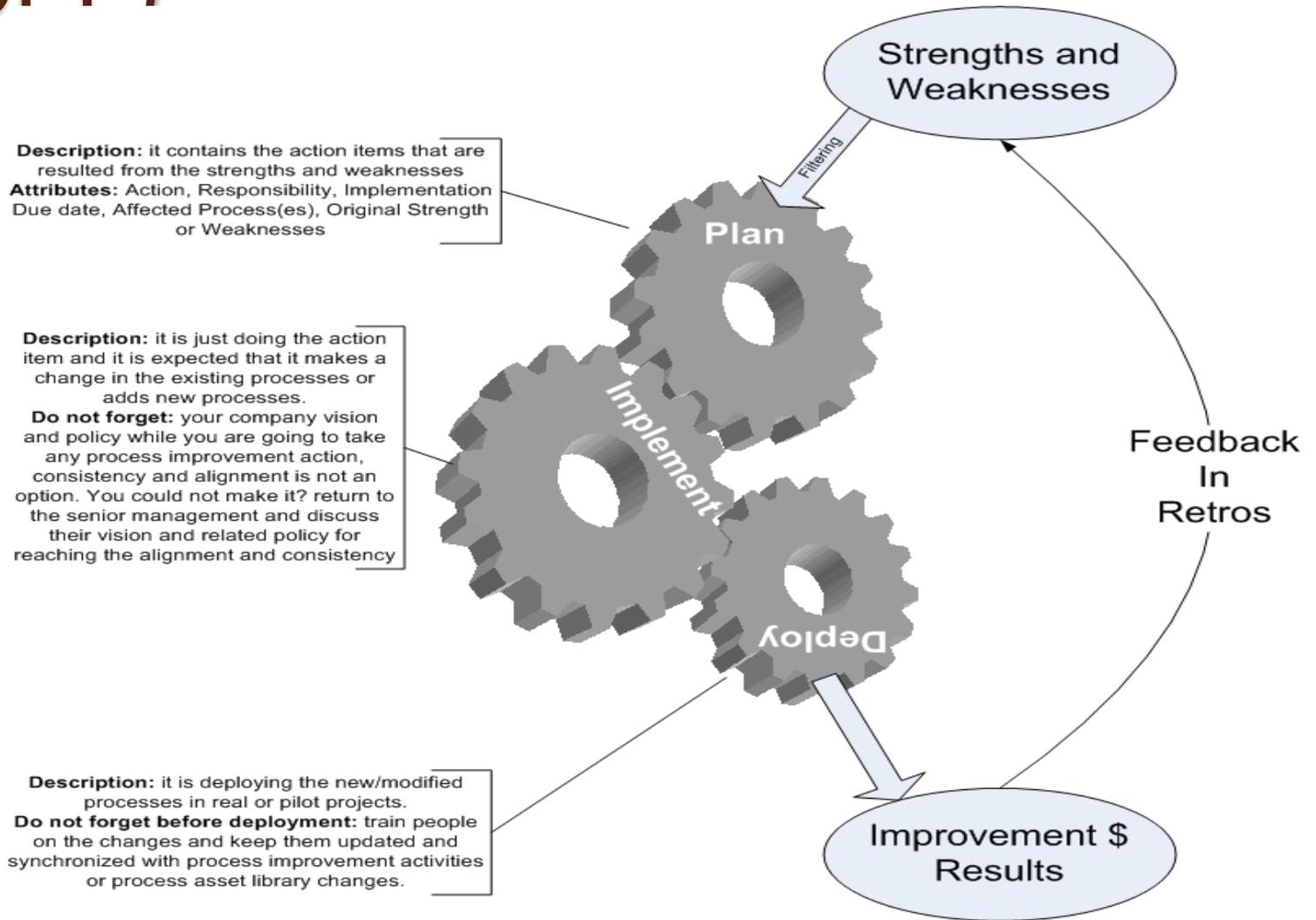
- Agile Principle #12:

“At regular intervals, **the team reflects on how to become more effective, then tunes and adjusts** its behavior accordingly.”

Organization Process Focus (OPF)

- Process Improvement Main Activities
 - Getting feedback from all team members
 - Decide if the feedback will be taken as an improvement request, if not, justify it with the owner of this feedback
 - Include the feedback to Process Improvement Live Plan
 - Update the process asset library with the new changes, and give a training to the teams
 - Deploy the updated processes
 - How you can make it? It is totally yours!

Organization Process Focus (OPF)



Organizational Process Focus (OPF) in Agile organizations

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Organization Process Focus (OPF)

- Feedback Check Points

- Iteration/Sprint Retrospective (freq.1-3 weeks)
 - Positives (or what the team should keep doing?)
 - Negatives (or what the team should stop doing?)
 - Ideas (anything the team wants to say for improvement)
 - Action Items
 - Also, you can give the training of any new change to the team without requesting trainings! That's why we are coaching

Organization Process Focus (OPF)

- Check points (cont'd)

- Release Retrospective (freq. 4-6 weeks)
 - Positives (or what the team should keep doing?)
 - Negatives (or what the team should stop doing?)
 - Ideas (anything the team wants to say for improvement)
 - Action Items (including monitoring previous action items)
 - Also, you can give the training of any new change to the team without requesting trainings!

Risk Management (RSKM)

- Risk Management Activities
 - Identify ownership and responsibility of each activity
 - Identify risk and define its attributes (category, probability, impact, mitigation, owner of this mitigation, status)

Risk Management (RSKM) – Check Points

- Project Team Kickoff
- Client /Project Kickoff
- Release Planning
- Iteration/Sprint Retrospective (freq.1-3 weeks)
 - Negatives
 - Risks (Add new risks, and update the status of previous risks)
 - Action Items of “risk mitigation” type

Risk Management (RSKM) – Check Points

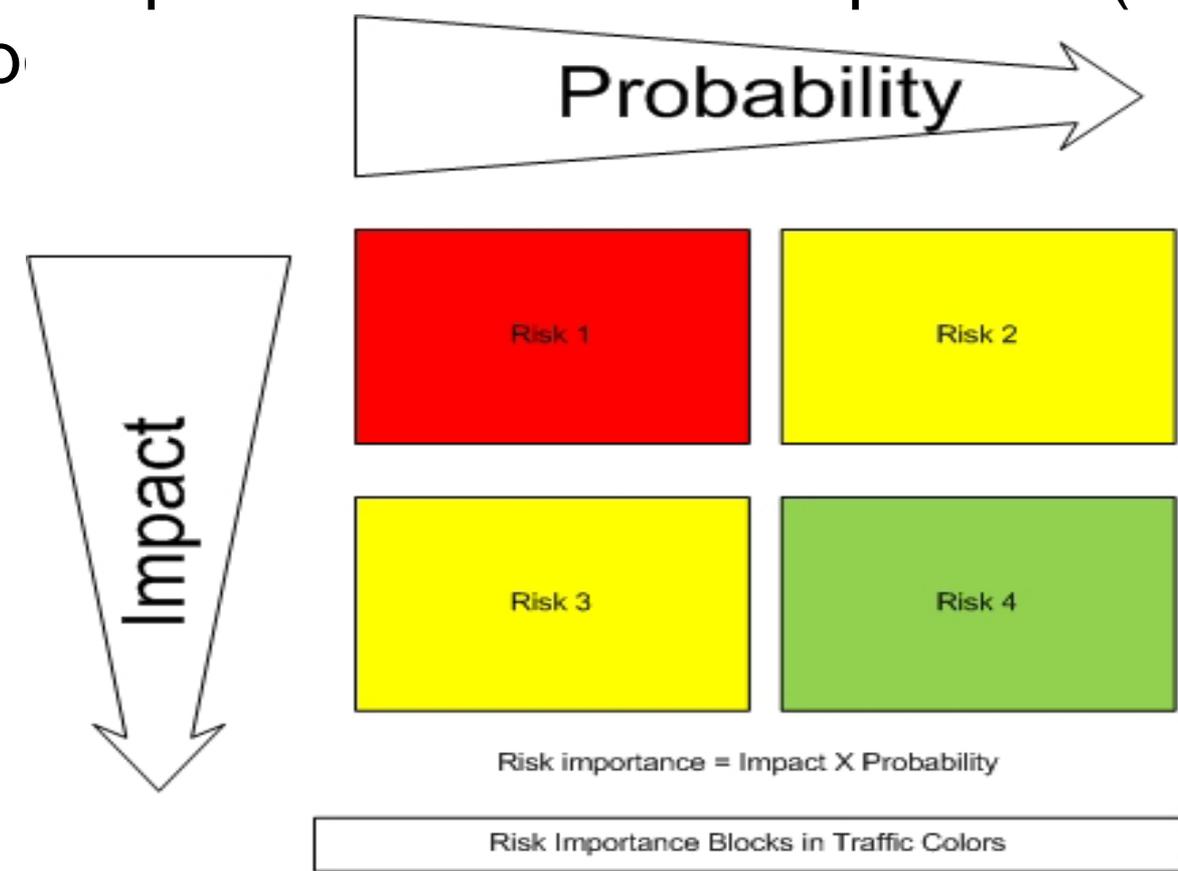
- Release Retrospective (freq.4-6 weeks)
 - Negatives
 - Risks (Add new risks, and update the status of previous risks)
 - Risk mitigation action items

Risk Management (RSKM) – Recommendations

- Use a **tracking system** for managing your project/company risks and related mitigation action items.
- **Radiate**, if possible, project risks and related mitigation action items.
- Use constant colors in differentiating among risks' probabilities or impacts (i.e. importance)

Risk Management (RSKM) – Recommendations

- Use constant colors in differentiating among risks' probabilities or impacts (i.e. Risk Imp



Important! Conclusion

It is not only possible to embrace both agile and CMMI, but also it is easier and proven practically. The presentation is not supposed to show best practices for your organization, the fore mentioned practices may not work in your organization.

However, inspect and adapt to reach the most appropriate practice that adds the **best possible value** to your organization and **your client**. Also, because agile mindset supports CMMI model intent, we found an easy implementation that we cannot work without.



Thank You!

Other Questions...?

Part of the content is a result of contribution from:

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