

Lean Startup Method (LSM) and Agile for Initial Project Planning (IPP)

Interactive Workshop

“Getting it Right, Right From the Start!”

Copyright © 2021 by Michael E. Pafford.

Hello, Everyone.

Thanks for attending this Interactive Workshop on, “Using Best Practices From the Lean Startup Method (LSM) and Agile (Agile SE, SWE, and PjM) for Initial Project Planning (IPP)”.

I’m Mike Pafford for those I haven’t met yet. For the next three hours (with Breaks) I’ll be going through with you a hybrid IPP approach that I’ve facilitated several times to help ANY project get going. That is, help them: “Get it Right, Right From the Start!”

LSM & Agile for IPP: Workshop Info

Information and Materials are posted in:

- For INCOSE Members:
 - Incose.org
 - Sign Into 'Connect'
 - Working Groups menu item
 - Object-Oriented SE Method
 - "LSM-Agile for Initial Project Planning" folder
 - "20210226 LSM Agile for IPP" sub-folder
- For Everyone in Dropbox™:

<https://tinyurl.com/558y5cmb>
https://www.dropbox.com/sh/epoly3e9111qed0/AAA_SixqLvPHbB_PhXp8j2W8a?dl=0



** If you're not able to/not allowed to access Either Dropbox™ or Tiny URL, Email me for all the materials. **

February 26, 2021

www.incose-cc.org

Copyright © 2021 by Michael E. Pafford

2

Here's where everyone can immediately get all the materials I use or refer to in this Workshop. Everyone with QR Code Readers can scan this code and go right to the Dropbox™ folder with the materials.

INCOSE members can also navigate to the "LSM and Agile for IPP" folder in the OOSEMWG INCOSE Connect site—and get not only these materials—but All the materials from All my talks, tutorials, workshops starting back in December 2015.

** Anyone not able—or not allowed (some work computers) to access Either the QR code, URL, or Dropbox™, can email me later and I'll get all the materials to you. **

LSM & Agile for IPP: Workshop Info

Here's what is in the Materials folders:

- PDF version of the slides
- PDF version of the slide Notes Pages
- LSM and Agile for IPP flyer
- Memo with links to my LSM/Agile for IPP talks on YouTube
- 2013 Harvard Business article on Lean Startup
- Students 'System Thinking Round Table Guide' (30 minutes)
- Adults 'Systems Thinking Round Table Guide' (60 minutes)
- PDF fillable 'Business Model Canvas (BMC)'
- PDF fillable 'Lean Canvas'
- Briefing: "BMC versus Lean Canvas"
- 2020 Scrum Guide

<https://tinyurl.com/558y5cmb>

https://www.dropbox.com/sh/epoly3e9111qed0/AAA_SixqLvPHbB_PhXp8j2W8a?dl=0



February 26, 2021

www.incose-cc.org

Copyright © 2021 by Michael E. Pafford

3

Here's what is in the Materials folders
(Dropbox™ and INCOSE Connect)...

And, here again are the Regular and Tiny URLs
to the Dropbox™ location.

LSM & Agile for IPP: Administrivia

Other 'Admin' things for this workshop:

- We'll have Breaks, but just come and go as you want.
- All of the materials have already been made available.
- My Zoom Picture today is the Materials QR Code.
 - So, everyone can get to the materials at any time during the workshop.
- We're going to use Chat a lot today; like Flip Charts.
 - Be sure you know how to Save Chat.
- There'll be some Polls.
 - I'll make sure to add all Poll Results to the workshop Materials.
- The workshop will be Recorded.
 - I'll work with the Organizers to see how to make it available.
- There will be a Book Giveaway.
 - I'll work with the Organizers to Randomly Pick a Winner.

February 26, 2021

www.incose-cc.org

Copyright © 2021 by Michael E. Pafford

4

Some more Workshop Administrivia...

We're going to use the Zoom Chat together during this workshop. And everyone can Save the Chat. Click on the three dots and Save Chat. It'll make a .txt file on your computer.

Let's do something in Chat now.

Type into the Chat (only if you want to) Your Name, and Email—BUT DO NOT hit Submit Until I say. That way most/all of the inputs will stay Grouped Together in Chat.

Go Ahead...Now, Submit!



“He said we don’t
have to worry about
not starting projects
right no more.”

“And I said,
That’s Good.
One less thing.”

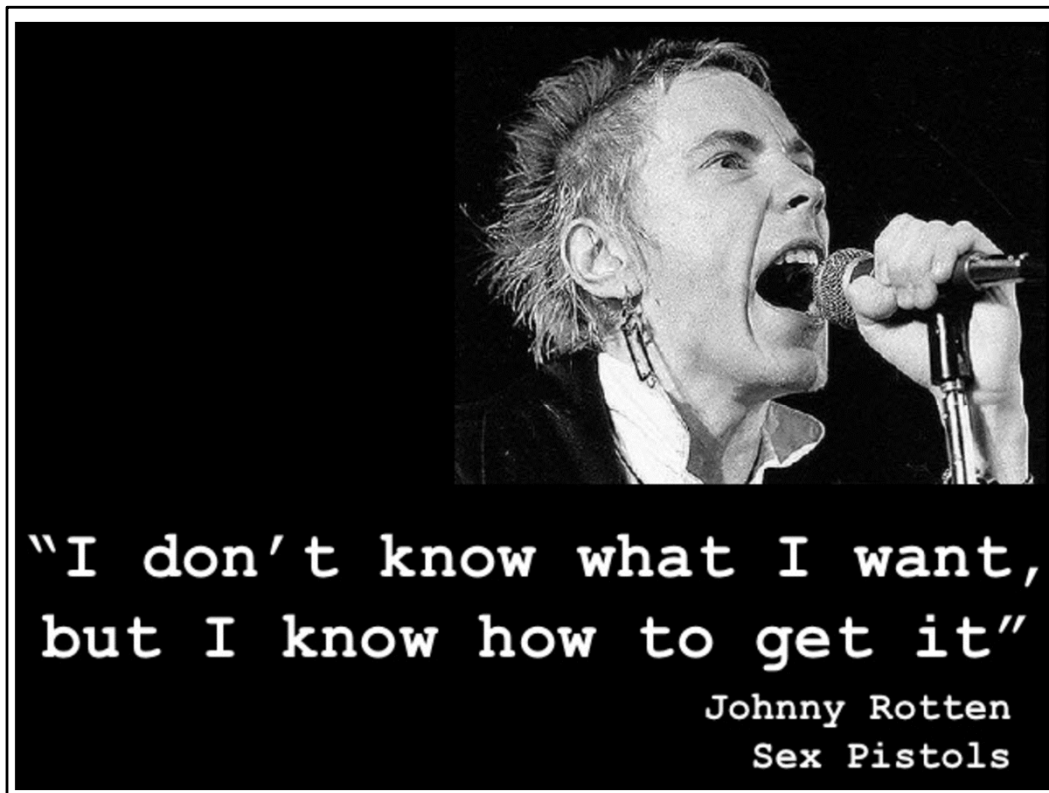
Here’s a kind of “LSM and Agile for IPP”
motivation slide:

This one very much a paraphrase from
one of my all-time favorite movies.

Time for the first Zoom Poll Question:

Why are you here today?

- A. Education
- B. Training
- C. Practice
- D. Review

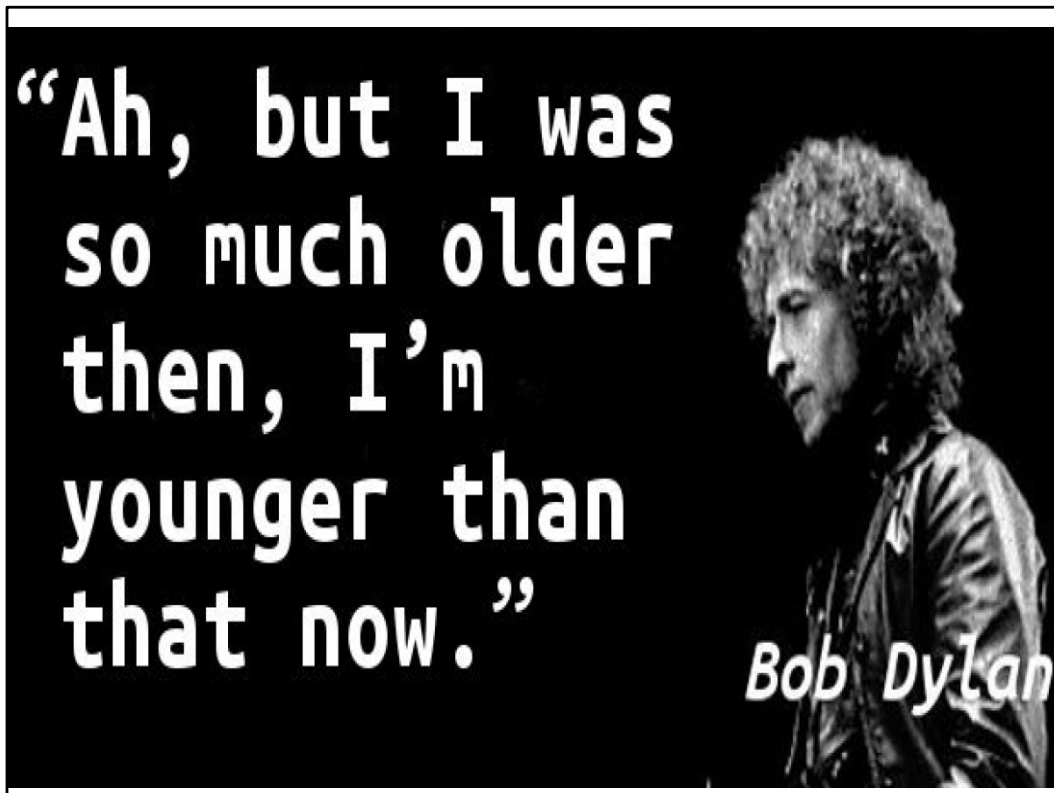


Another “LSM and Agile for IPP” Motivational Slide:

This one from Mr. John Lydon’s 1976 Song, “Anarchy in the U.K.”

I actually took this slide from another Agile Systems Development presentation.

A key Agile principle says, “Getting the Process right, will usually result in getting the product right”.



Another “LSM and Agile for IPP” motivational slide.

This one from Mr. Robert Zimmerman’s 1964 song, “My Back Pages”.

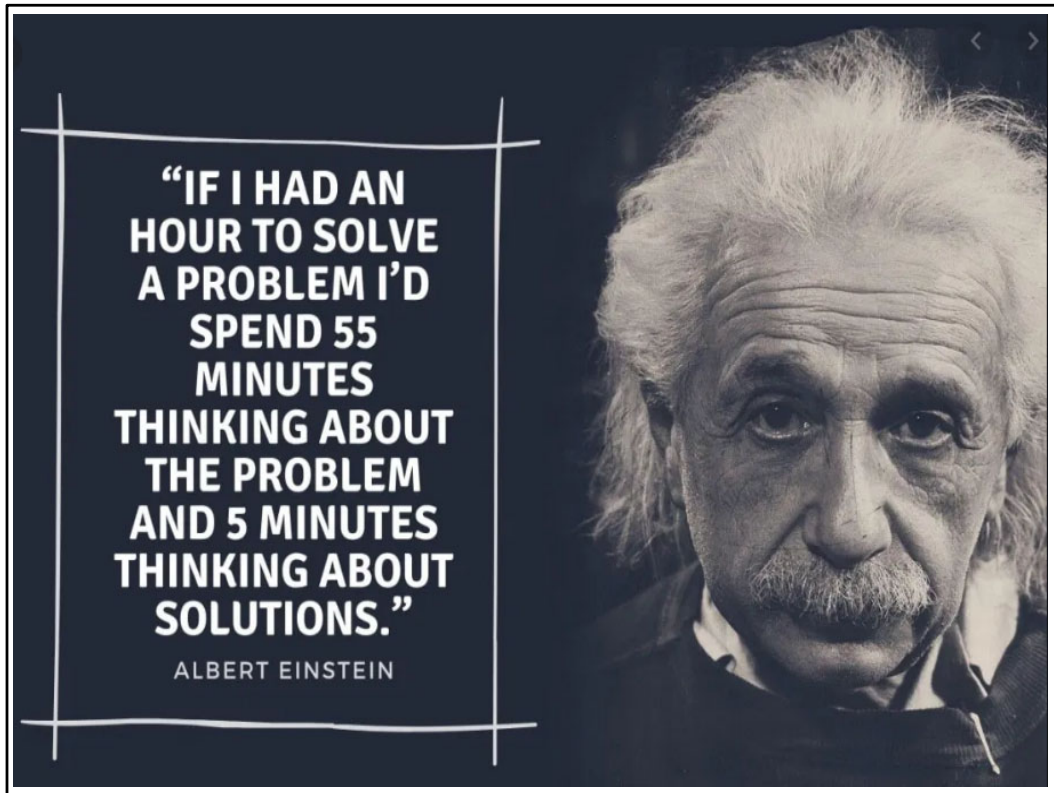
I think it says pretty plainly, how system solution development continues to ‘evolve’ in using current and modern tools and techniques.



Another “LSM and Agile for IPP” motivational slide.

This one from the Rock Group, “YES”, and their 1971 song, “I’ve Seen All Good People”.

In SE, I’ve always tried to live by this admonition. I think it’s becoming increasingly more important as we move into more ‘stakeholder-centric’ system solution development.



Another “LSM and Agile for IPP” motivational slide.

This one from someone who needs no introduction.

It does serve to reinforce the notion of making sure you understand the Problem—before striking off on the development of a system solution.

Gentlemen, we
have run out of
money, now we
will have to think.

Winston Churchill



Another “LSM and Agile for IPP” motivational slide.

This one talks about a primary current and modern problem faced by all engineers and managers.

LSM & Agile for IPP

*So, as
"The Great One"
used to say...*



*"And Awaay
We Go!"*



February 26, 2021

www.incose-cc.org

Copyright © 2021 by Michael E. Pafford

11

As I mentioned. I do have a lot of material to go through today (this is sometimes a days-long workshop).

But, I'd like it to be Interactive also.

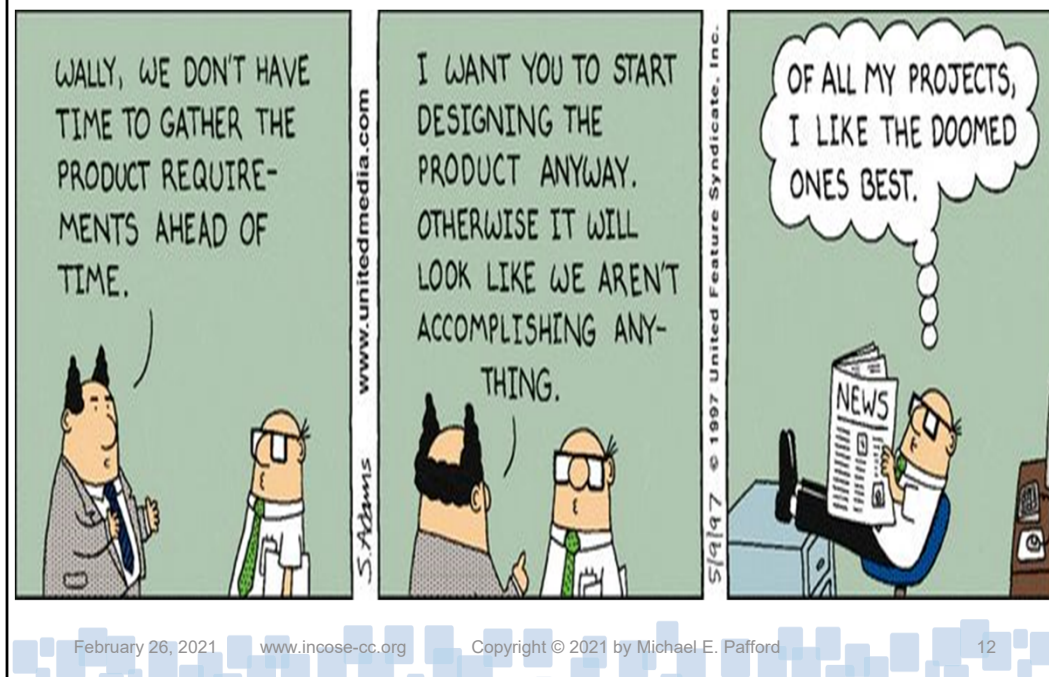
UNMUTE yourselves at any time to ask a question or make a comment. Mute back after each time if you don't mind.

Any Questions right Now?

Note again the QR Code to the Materials in Dropbox.

Okay, let's get into the Workshop!

LSM/Agile for IPP: Right, Right From the Start – Or Else



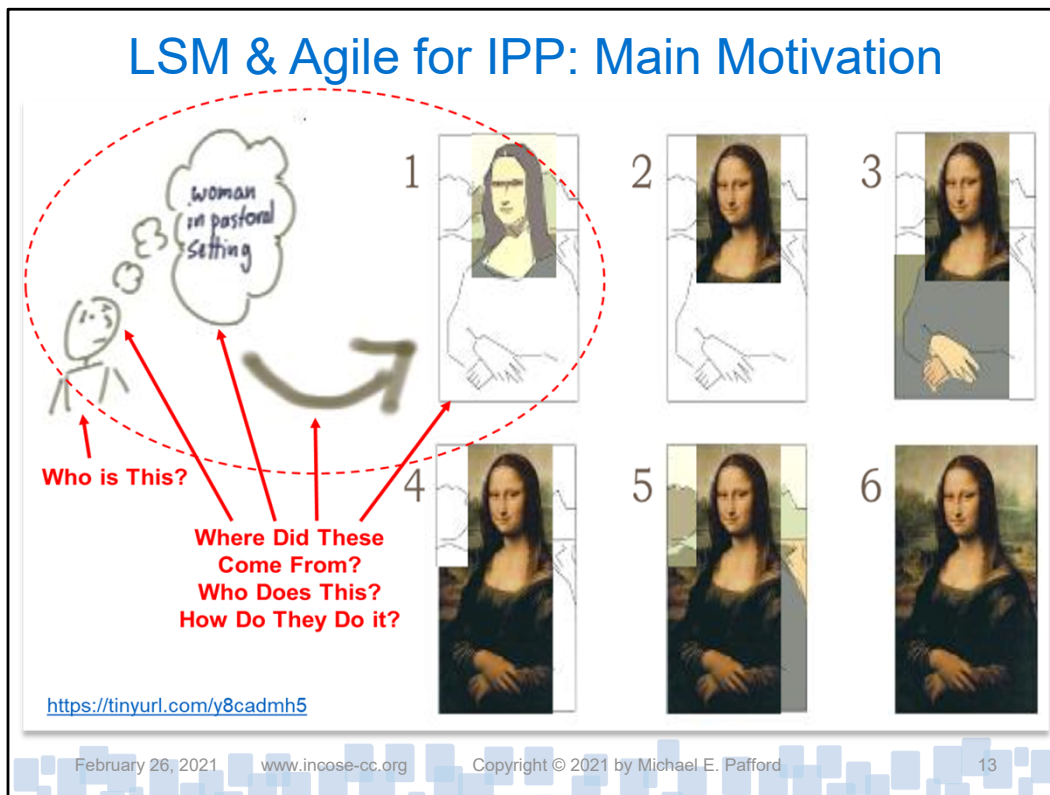
Back to Motivation.

This cartoon sums up my Initial Motivation for researching the subject of Enhancing and Improving Initial Project Planning.

I've used this slide and this cartoon, in all of my talks, tutorials, and workshops starting in May 2015, on the need for, and value of, employing this kind of a hybrid IPP approach for any project to, "Get It Right, Right From the Start".

This cartoon is coming up on Twenty Five Years Old!

Most recently you may have seen it in the INCOSE Handbook v4.



Some more Motivation. This slide shows the Primary Principles of project development using Agile (ex. Scrum): **“Iterative Development for Incremental Delivery of Value” (a basic principle behind Agile development)**. The drawing shows Agile Scrum development iterations or ‘Sprints’ 1-6.

The **Problem/Issue**: Every time I’ve shown this slide to project teams and classes--especially for the first time—someone has always been quick to ask the questions that I’ve noted on this slide:

- Who is **This Person (or Persons)** thinking about taking on this project?
- How did **They** come up with the **Project Idea** in the first place?
- What were **Their Initial Planning Processes (that large curved Arrow between the Idea Bubble and the Agile Scrum Sprints)?** And...
- Where does that **Original Background Drawing in Sprint 1** come from?

I figured there was Value to be added, in helping SEs, SWEs, and PjMs work together on these Initial Project Planning process steps.

LSM & Agile for IPP: Background

- The roles and responsibilities of Systems Engineers (SEs), Software Engineers (SWEs), and Project/Program Managers (PMs) are rapidly evolving.
- The purpose of this LSM/Agile for IPP workshop is to acquaint SEs, SWEs, and PMs with some current and modern tools and techniques that can be used, specifically in the **Initial Project Planning (IPP)** phases, of any System Development Lifecycle (SDLC) project.
- Some of the workshop information is based on information from volunteer project teams starting Model-Based Systems Engineering (MBSE) projects to develop Reference Models for Microgrids and Resilient Hospitals.
- One Objective of the workshop is to highlight the value of using best practices from the Lean Startup Method (LSM), as well as Agile Systems Engineering, Agile Software Engineering, and Agile Project/Program Management to enhance and improve Initial Project Planning.
- An Objective of using this LSM/Agile for IPP approach, is to help any project team develop an actionable set of **Project Focus Mechanisms** that can be easily referenced throughout any solution development project—using any project methodology.

February 26, 2021

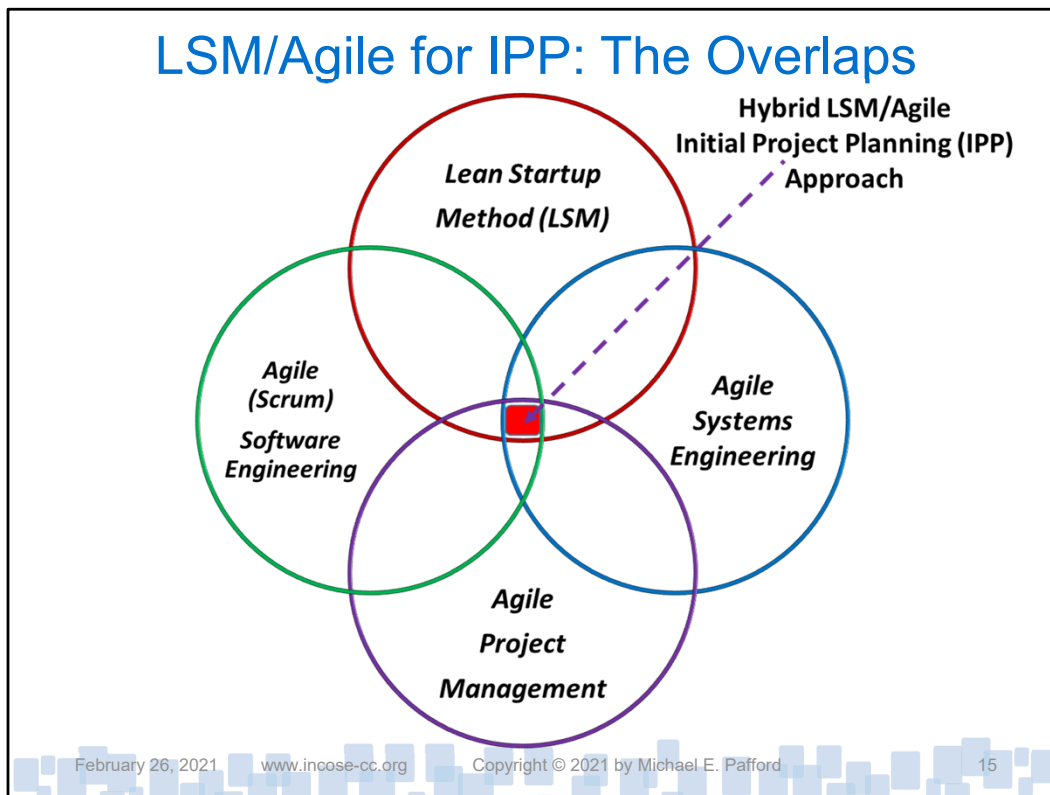
www.incose-cc.org

Copyright © 2021 by Michael E. Pafford

14

Here's some Background on this hybrid IPP Approach that I'll be talking with you about today.

As the slide says, workshop information will be based on IPP process steps used to start a, “MicroGrid (uGrid) Reference Model (RM)” [MBSE] project in 2017, as well as a, “Resilient Hospital Reference Model (RHRM)” [MBSE] project in 2018.



Here's a notional picture of the 'intersection' of current and modern engineering and management methodologies from which I've derived this **hybrid LSM/Agile IPP Approach**.

This picture is not meant to show the amount of 'real' overlap between any of these disciplines.

It's also Important to note (and I'll be repeating this) that **NO** Lean or Agile expertise is needed for Any project to use this IPP approach. The approach **Borrows Best Practices** from each discipline; practices all project planners are already familiar with.

ANY project can use this **IPP** approach—no matter which methodologies are used later for **development**.



Another “LSM and Agile for IPP” motivational slide.

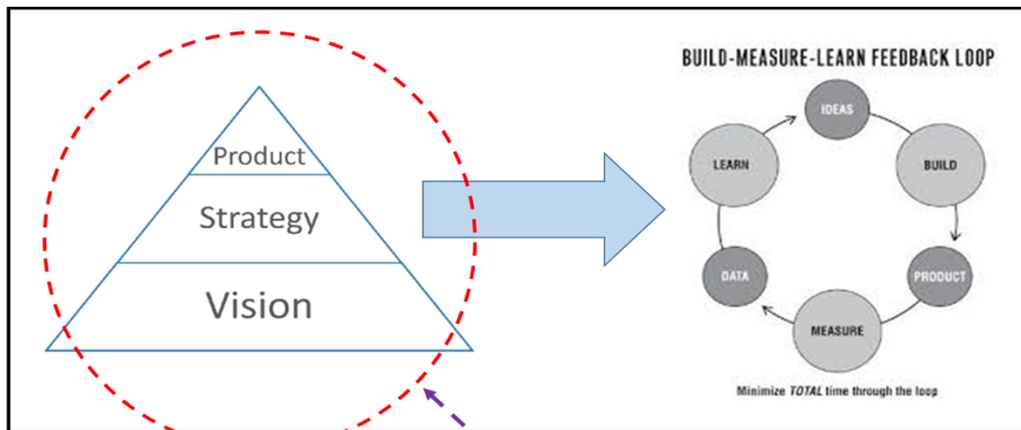
This one talks about a legacy problem still faced by many engineers and managers.

Poll Question: Which one of these do you know most about?

- A. Lean Startup Method (LSM)
- B. Agile SE
- C. Agile SWE
- D. Agile Project Management.

Remember: NO Lean or Agile expertise is needed for Any project to use this IPP approach.

Approach in the Lean Startup Method (LSM)



**Hybrid LSM/Agile
Initial Project Planning (IPP)
Approach**

The Lean Startup; Eric Ries; 2011; ISBN 978-0-670-92160-7; <http://tinyurl.com/y7nvq66c>

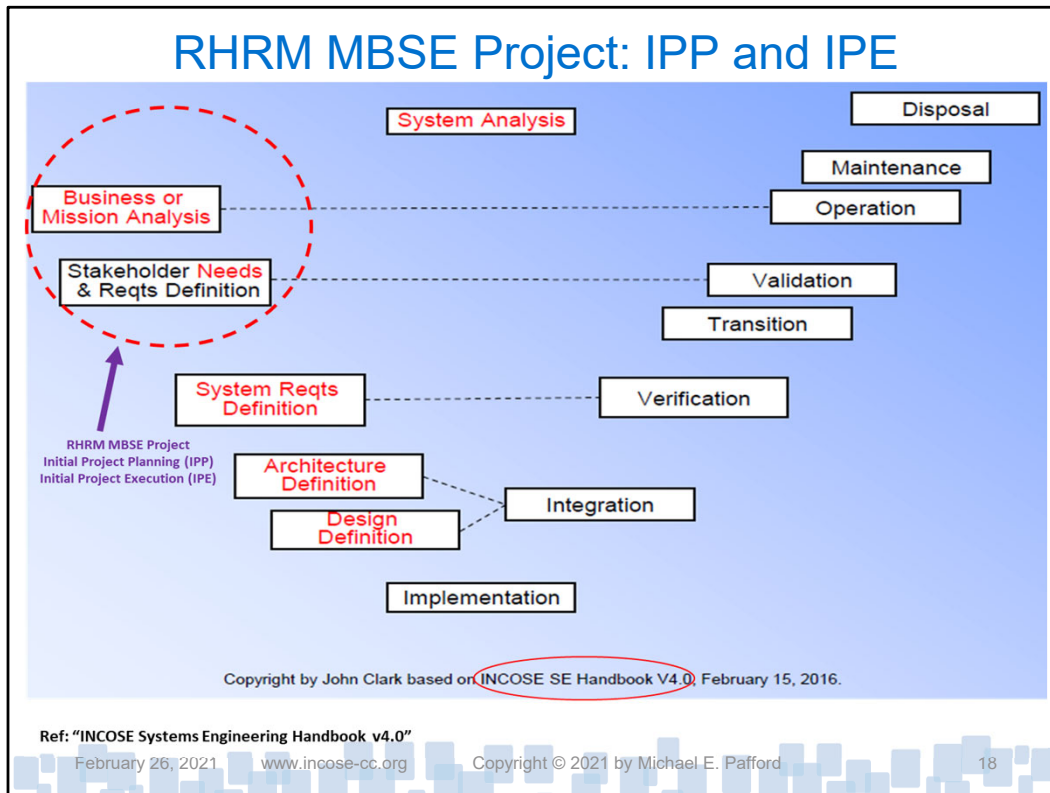
February 26, 2021

www.incose-cc.org

Copyright © 2021 by Michael E. Pafford

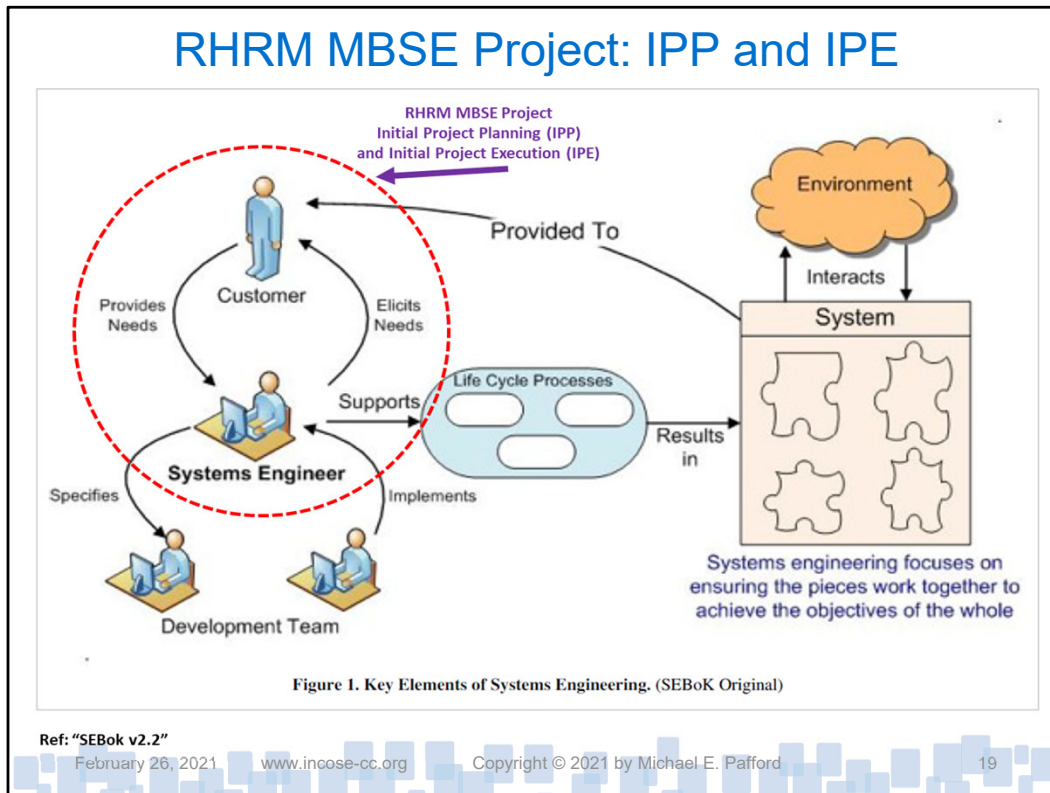
17

Here's where the LSM/Agile for IPP Approach would be used in the Lean Startup Method (LSM) development methodology.



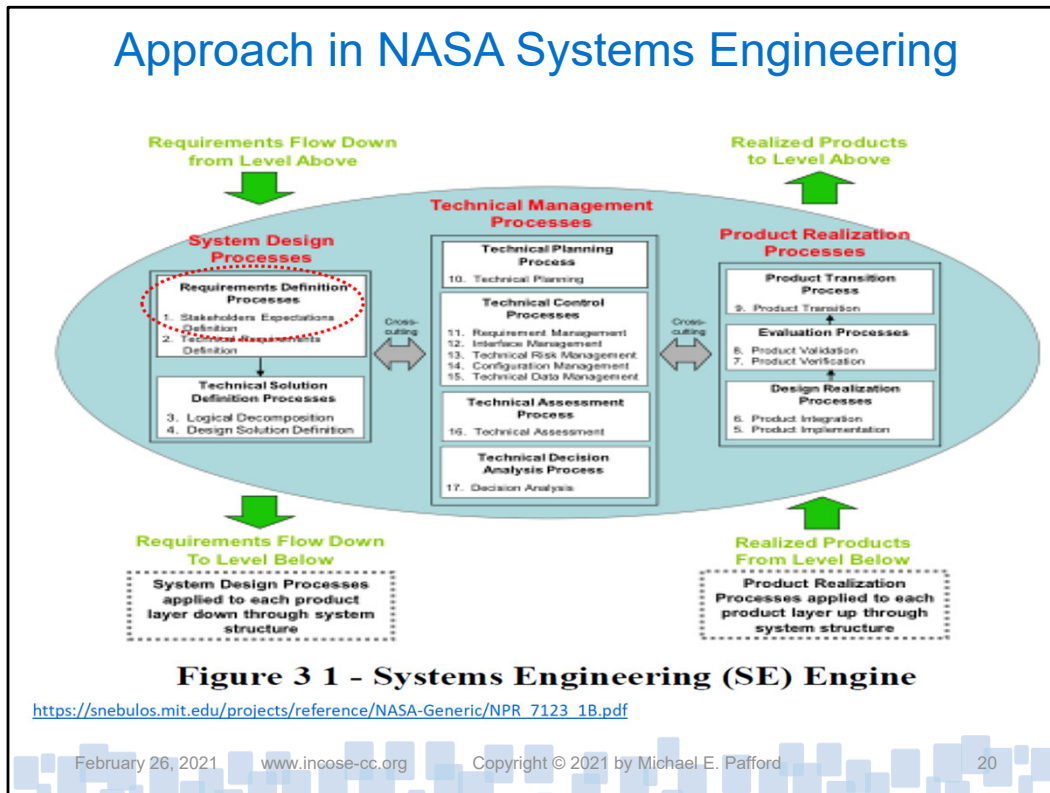
Here's where the hybrid LSM/Agile IPP approach would be used in a Traditional plan-driven waterfall development methodology, as depicted in the SE Vee we're all used to seeing in 15288, the INCOSE Handbook, and the SEBoK.

RHRM MBSE Project: IPP and IPE



Here's how this IPP approach fits into the [SEBok], "Key Elements of Systems Engineering".

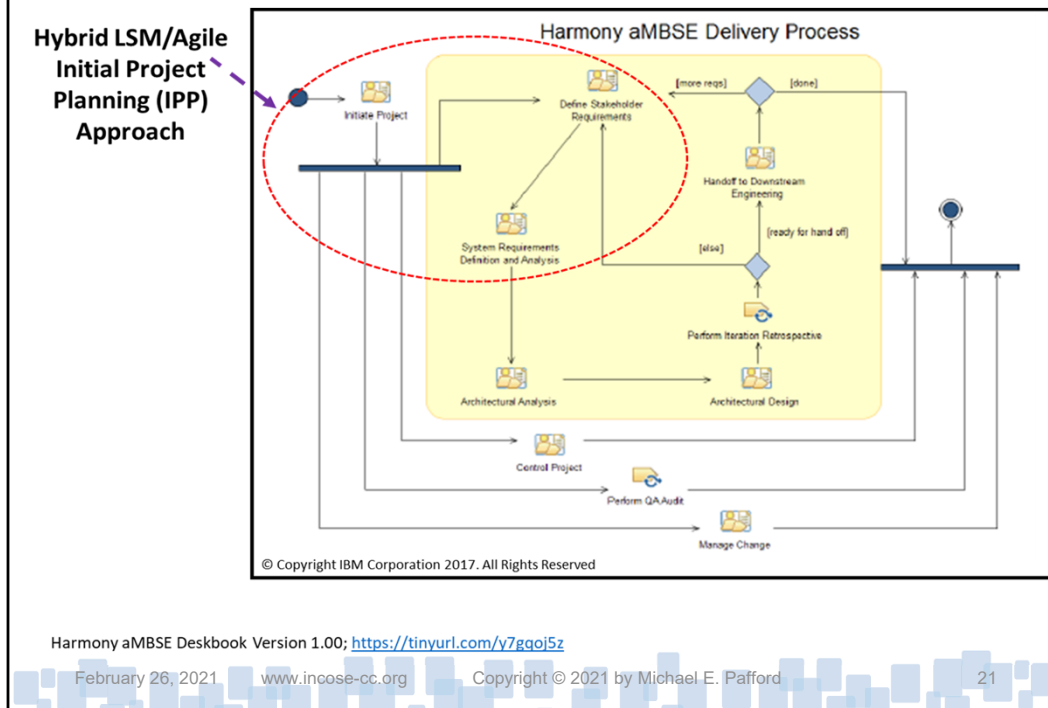
Approach in NASA Systems Engineering



Here's where in the NASA Systems Engineering (SE) Engine that facilitation of this Hybrid IPP approach would be incorporated.

I got this illustration from NASA Procedural Requirements document NPR 7123.1B, "NASA Systems Engineering Processes and Requirements".

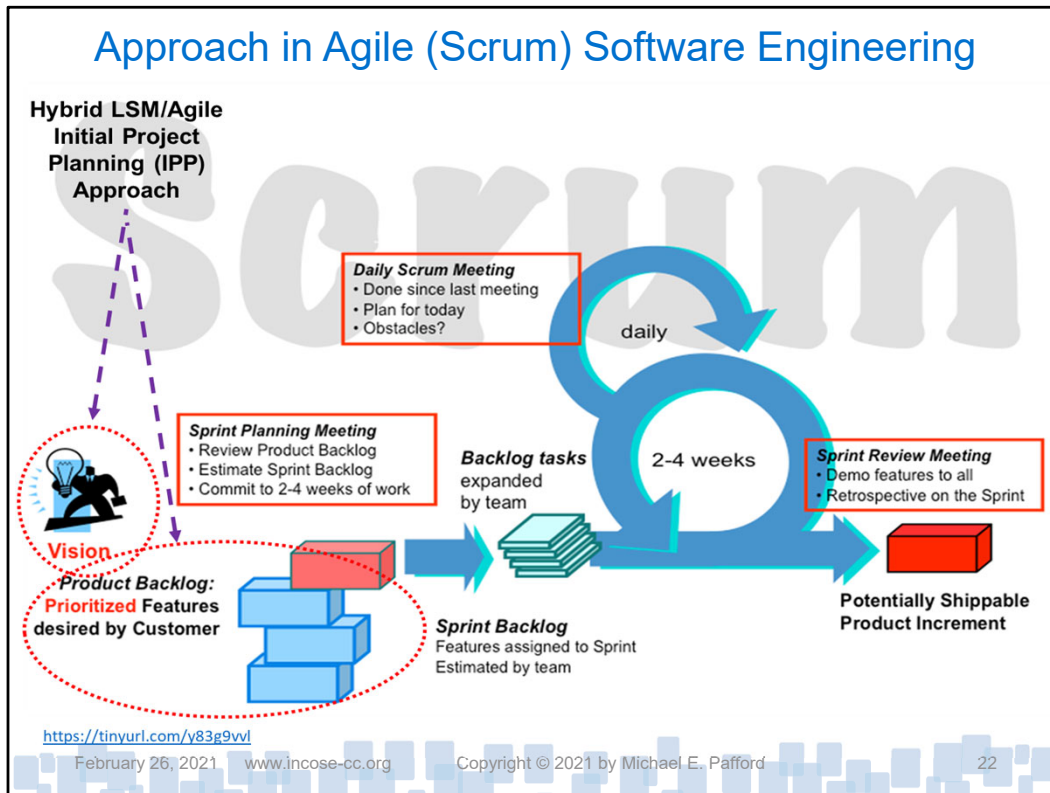
Approach in Agile Systems Engineering



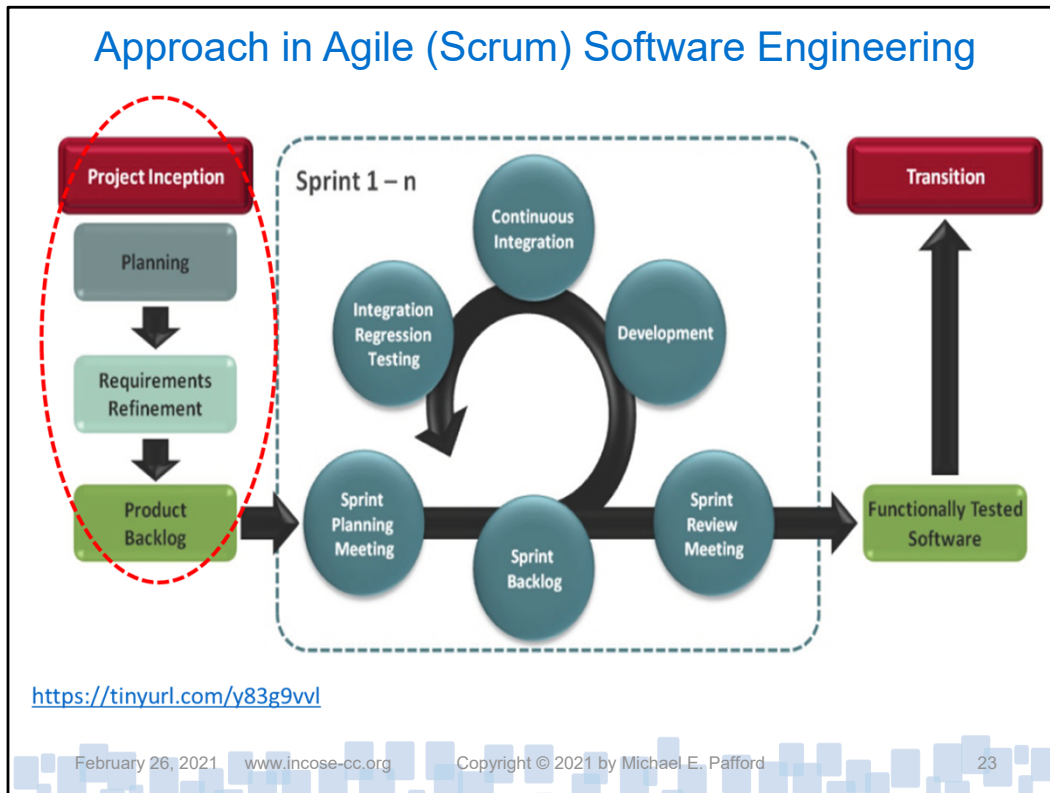
Here's where the Approach would be used in Agile Systems Engineering. That is, SE as applied in Agile Methodologies.

Important Note: The use of the term Agile SE here—means strictly the role of SE in the Agile methodology of 'Iterative Development for Incremental Delivery of Value'.

It is not meant to reflect the methods being used to make SE more agile, or SE in agile development environments; one of the main themes of the INCOSE Agile SE WG.



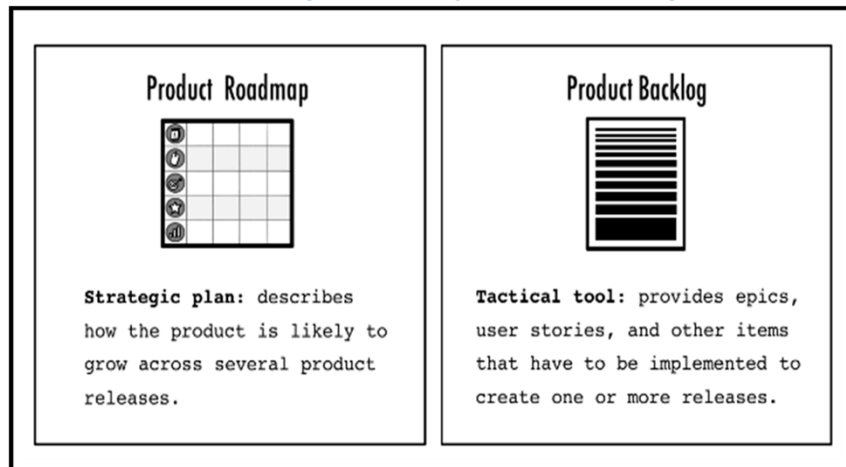
Here's where in the normal Agile (Scrum) life cycle development this Hybrid IPP approach would be incorporated.



Here again where in the normal Agile (Scrum) life cycle development this Hybrid IPP approach would be incorporated.

Specifically, Project Inception and Planning.

Approach in Agile Project Management



<https://www.romanpichler.com/blog/product-roadmap-product-backlog/>

Hybrid LSM/Agile
Initial Project
Planning (IPP)
Approach

February 26, 2021

www.incose-cc.org

Copyright © 2021 by Michael E. Pafford

24

Here's where the Approach would be used as part of Agile Project/Product Management.

Note the URL and QR Code with a link to more information on Agile Project Management.

LSM/Agile for IPP: The Basics

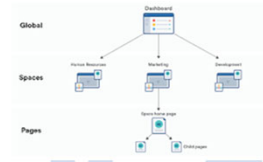
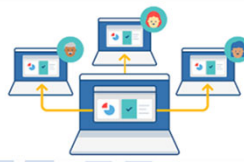
“Meetup”



“Clean Up”



“Post Up”



February 26, 2021

www.incose-cc.org

Copyright © 2021 by Michael E. Pafford

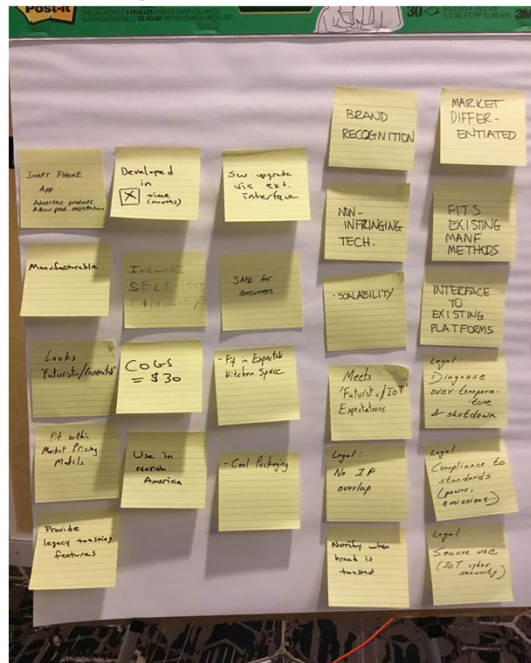
25

Okay, into the Approach itself.

This **hybrid LSM/Agile IPP approach** is meant to be accomplished in three main stages: **Meetup**, **Clean Up**, and **Post Up**.

I'll talk about all three phases, but the bulk of the workshop will emphasize the **Meetup** stage.

LSM/Agile for IPP: 'Meetup'



February 26, 2021

www.incose-cc.org

Copyright © 2021 by Michael E. Pafford

26

Here's just a Quick Example of an LSM/Agile for IPP 'Meetup' artifact.

You can easily see, that it's the product of Affinity Mapping and Brainstorming we all already know how to do very well.

LSM/Agile for IPP: 'Clean Up'

RHET PFM3 (Product Vision Board Extended) from merging work from Meetup1, Meetup2, and Meetup3 (Mike de Lamare)

THE PRODUCT VISION BOARD EXTENDED

<p>VISION <small>To enable essential hospital capabilities under long-term loss of power. Enable hospital administrators and other stakeholders to determine how best to prepare for long-term loss of power scenarios.</small></p> <p>What is your purpose for creating the product? Which positive change should it bring about?</p>			
<p>TARGET GROUP</p> <p>Which market or market segment does the product address? Who are the target customers and users?</p> <p><small>Hospital: 1. Facilities Manager 2. Emergency Manager 3. Administrator 4. Chief Operations Officer 5. Chief Medical Officer</small></p>	<p>NEEDS</p> <p>Which problem does the product solve? What benefit does it provide?</p> <p><small>Provides a Framework DSS Component Guide Component Solves Fragmented Views Identify Capabilities & Weaknesses Resolves Unclear Resource Requirement Bound hospital scope</small></p>	<p>PRODUCT</p> <p>What product is it? What makes it stand out? Is it feasible to develop the product?</p> <p><small>Adaptable Resilient Hospital Reference Model</small></p>	<p>BUSINESS GOALS</p> <p>How is the product going to benefit the company? What are the business goals?</p> <p><small>Risk reduction and management Improve communications Improve planning Cost Effectiveness Operations continuity/ business Discover Opportunity Consistent with ICS Model</small></p>
<p>COMPETITORS</p> <p>Who are your main competitors? What are their strengths and weaknesses?</p> <p><small>Legacy Methods FEMA/DHS Regulations NIST Community Resilience Guide</small></p>	<p>REVENUE STREAMS</p> <p>How can you monetise your product and generate revenues?</p> <p><small>Emergency Medical Foundations Hotels & Supply Chains U.S. Health & Human Services U.S. Dept. of Defense U.S. Dept. of Energy FEMA U.S. Dept. of Homeland Security U.S. Dept. of Veteran Affairs</small></p>	<p>COST FACTORS</p> <p>What are the main cost factors to develop, market, sell, and service the product?</p> <p><small>Model Maintenance *Training *Marketing Expert Support Tools Labor Compliance * = High Cost</small></p>	<p>CHANNELS</p> <p>How will you market and sell your product? Do the channels exist today?</p> <p><small>Professional Societies Confidential Symposia Media Releases Official Communications Publications Social Media Academia Regulation</small></p>

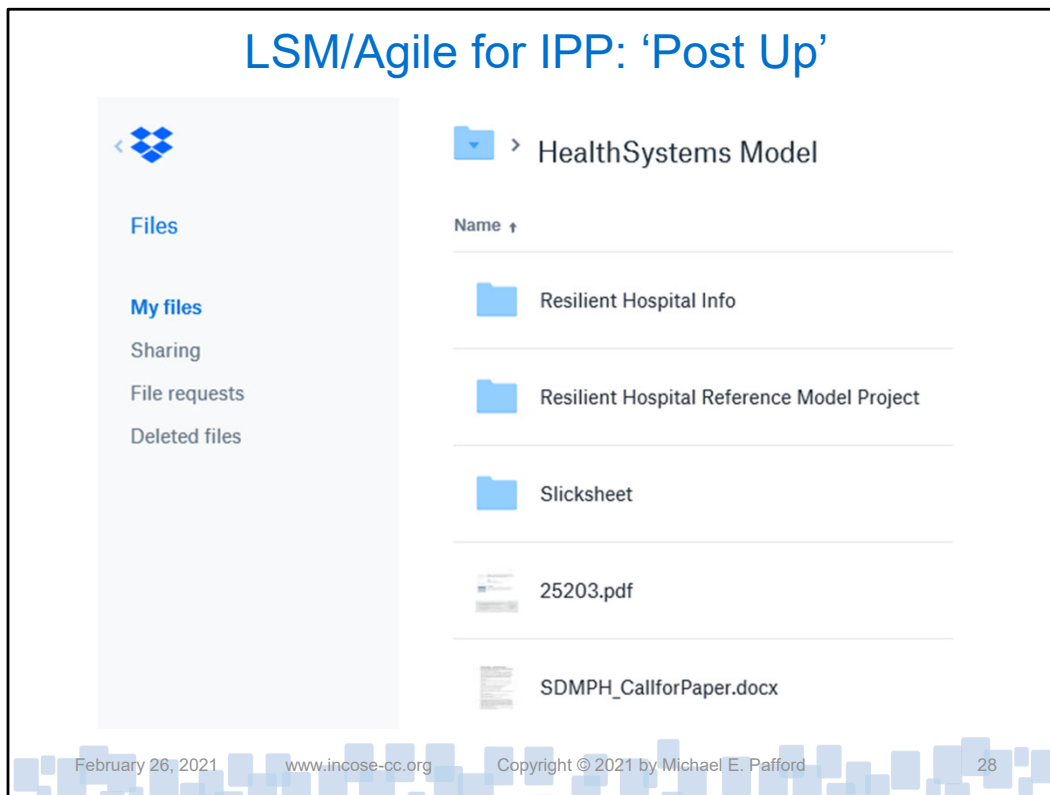
Meetup Attendees
PFM1-HATS
PFM2-Title-Purpose
PFM3-PVBE
PFM4-Persona List
PFM5-Persona Templates
PFM6-Product Canvas
PFM7-Initial Work Items

February 26, 2021
www.incose-cc.org
Copyright © 2021 by Michael E. Pafford
27

Here's an Example of an LSM/Agile for IPP 'Clean Up' artifact (i.e. cleaning up IPP Meetup info from say, stickie notes, into something like a template-based matrix).

More on this later of course.

Just wanted to show you an example of a Best Practice, borrowed from LSM and Agile Project Management—that again uses project planning tools and techniques we're all familiar with.



Here's an Example of LSM/Agile for IPP **Meetup** and **Clean Up** artifacts '**Posted Up**' for Project Sharing in an Example Repository-Based Collaboration Environment like, "Dropbox™".

Other possible 'Post Up' project collaboration environments include Microsoft® Teams, Microsoft® SharePoint, Basecamp™, Atlassian Confluence®, etc.

LSM/Agile for IPP: The Artifacts

During the three phases of this **Hybrid LSM/Agile for IPP Approach**, the following types of artifacts are created:

- **'Meetup' Artifacts include:**
 - Whiteboard Pictures
 - Flip Charts and Flip Chart Pictures
 - Stickie Notes and Stickie Note Pictures
 - Hand-Written Pages and Page Pictures (e.g., Sign-In Sheets, Forms, etc.)
- **'Clean Up' Artifacts include:**
 - Whiteboard Pictures to Files (PDF, Microsoft® Office Tools, etc.)
 - Chart Pictures to Files
 - Stickie Note Pictures to Files
 - Hand-Written Page Pictures to Files
- **'Post Up' Artifacts include:**
 - Files stored, managed, and shared in Repository-Based Collaboration Tools (e.g., Microsoft® Teams, Microsoft® SharePoint, Dropbox™, Confluence™, etc.)

February 26, 2021

www.incoose-cc.org

Copyright © 2021 by Michael E. Pafford

29

Here's a list of examples of Artifacts created during the Meetup, Clean Up, and Post Up stages of this hybrid LSM/Agile for IPP Approach.

It's important to repeat, that NO special tools are needed to conduct a successful LSM/Agile IPP Meetup.

All of the steps can be accomplished using Brainstorming and Affinity Mapping tools and techniques, and software tools we're all already used to using.

LSM/Agile IPP: Project Focus Mechanisms (PFMs)

LSM/Agile IPP 'Meetup' Phase	Project Focus Mechanisms (PFMs)	Best Practice From Discipline:
IPP Meetup Attendee Selection/Confirmation	PFM1: IPP Meetup 'Hats' (i.e., Roles)	Agile Scrum 'Product Owners', and Project Managers
Initial Project Outcome Discussions	PFM2: Project 'Title' and 'Purpose' Statements	Agile SE (Systems Thinking)
Project 'Problem Validation'	PFM3: 'Product Vision Board Extended (PVBE)'	Lean Startup Method (LSM) and Agile Project/Product Management
Project 'User Validation'	PFM4: Project 'Persona List'; List of Stakeholder Groups	LSM and Agile Project/Product Management
Project 'User Validation'	PFM5: Example Project 'Persona Cards' or 'Persona Templates'	LSM and Agile Project/Product Management
Project 'Solution Validation'	PFM6: 'Grouping or Binning' of Persona Groups	LSM and Agile Project/Product Management
Project 'Solution Building Blocks'	PFM7: Initial Set of 'Title Level' Project Capabilities.	Agile (Scrum) SWE 'Product Backlog Item' Development

February 26, 2021

www.incose-cc.org

Copyright © 2021 by Michael E. Pafford

30

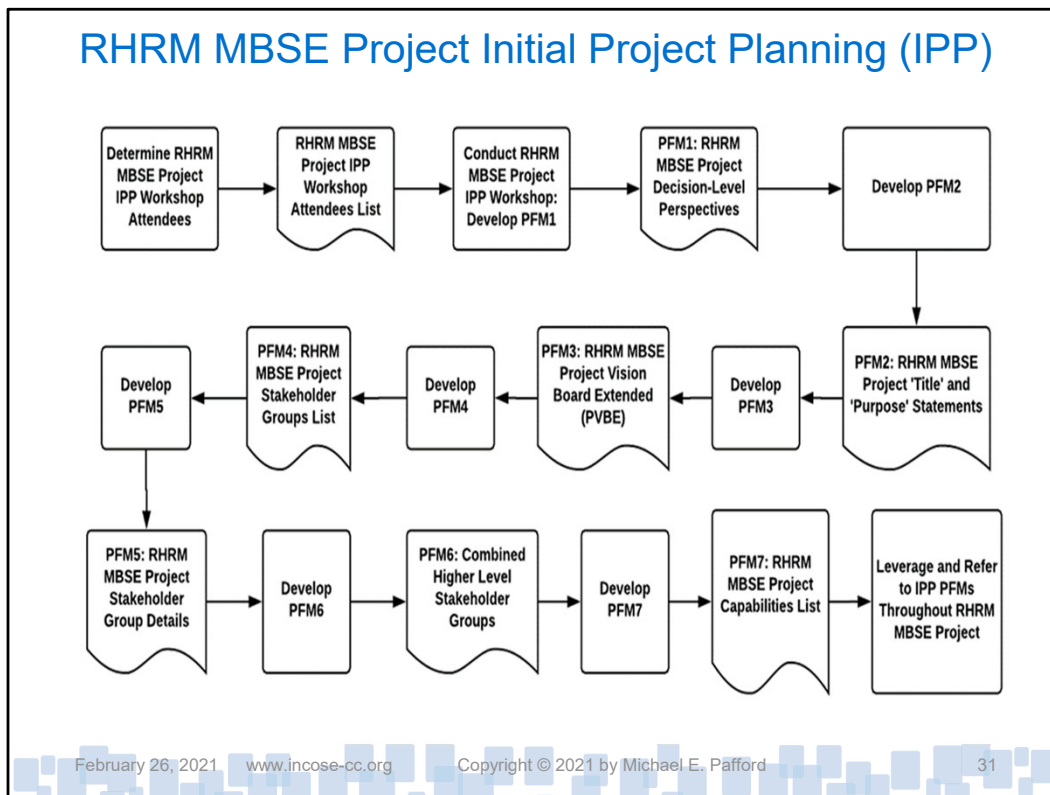
Foot Stomp Main Takeaway from this Workshop...

Here's what the hybrid LSM/Agile IPP approach is all about.

The **stakeholder-centric collaborative development** of these Seven Project Focus Mechanisms (PFMs).

This slide provides a one-page explanation of all seven LSM/Agile IPP PFMs.

Collaboratively create these—then proactively refer to them throughout project development—and you can be assured of a successful project life-cycle.

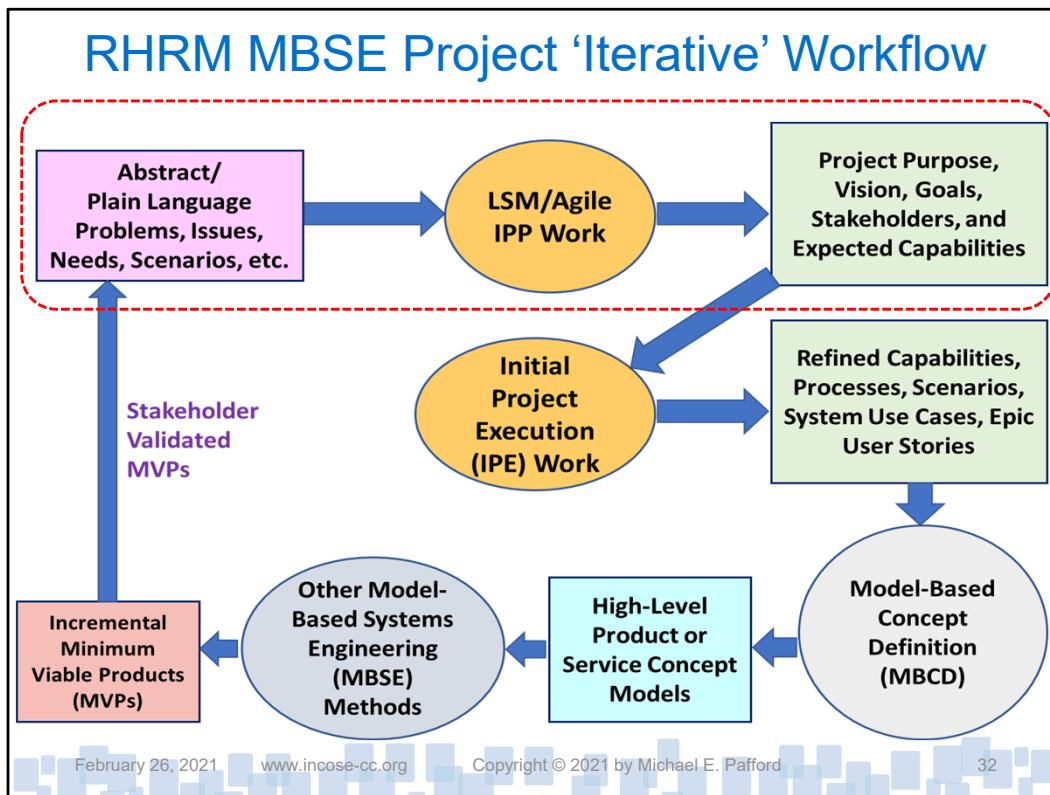


This slide shows a Workflow for how the LSM/Agile IPP Meetups steps were accomplished for the [RHRM MBSE] project.

Shameless plug here for the free online tool, “Lucid Charts”.

The [uGrid RM] and [RHRM] [MBSE] projects both were proactive in trying to use free online tools, since they found out early on from their uGrid and Healthcare stakeholders, that budgets were very tight for buying and learning any ‘for-fee’ software tools.

****** Another important point: During stakeholder-centric IPP, use what the stakeholders use, or use tools that are the most easy for them to get and use. During development you can use whatever tools you’re most comfortable with.



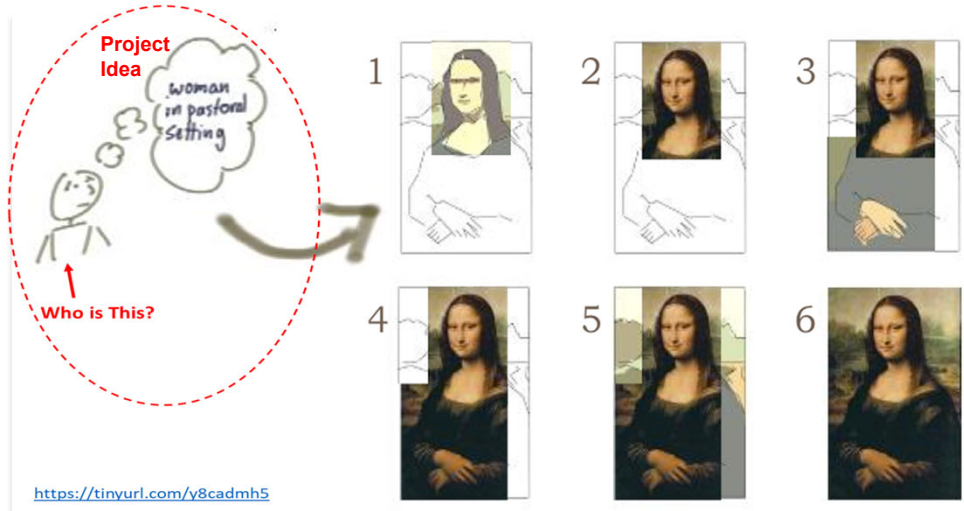
The red dotted area on this slide shows a very simplistic view of what's being accomplished with this hybrid IPP Approach:

- At the IPP 'Meetup', a **Facilitator** leads a small team of Project Decision Makers through the **LSM/Agile IPP Process** of capturing, vetting, and recording—at an abstract high level—data and information about the project and its expected **outcomes**.
- The captured, vetted, and recorded project outcomes data and information (the primary **Outcomes** of the IPP Meetup) will be codified into a set of **Seven Project Focus Mechanisms**.
- The Meetup Seven Project Focus Mechanisms will later be **Cleaned Up**, then **Posted Up**, as actionable and traceable **References** for the duration of the project lifecycle development effort.

The rest of this slide shows ways the OUTPUT from the LSM/Agile for IPP Meetup/Clean Up/Post Up process, might be used as INPUT for further MBSE work.

Approach: Who Should Attend IPP Meetups?

- Like any Project Planning, there are always “**Initial Conditions**”.
- For this Hybrid **LSM/Agile for IPP Approach**, those Initial Conditions include identifying **Who Should Attend the IPP Meetups**.



February 26, 2021

www.incose-cc.org

Copyright © 2021 by Michael E. Pafford

33

Back to the Agile process steps slide I showed earlier.

As part of this hybrid LSM/Agile IPP approach, it's important to bring together at the **IPP Meetup**, as many project '**perspectives**' as possible, as the **Initial Project Planning (IPP) Team**.* I'll call them the "**IPP Team**" from now on.* The IPP Team is shown here as the character inside the Red Dotted Circle who has the **Idea for the project**.

The organization thinking about taking on a project, should begin by trying to identify ahead of time **The Right IPP Meetup Attendees**, or **IPP Team** members.

The **Project Idea** should also be **Socialized** among these potential IPP Team members.

The **Project Team** and **Project Idea** will be 'fleshed out' during the IPP Meetup, as the First Two of Seven Project Focus Mechanisms.

Approach: Who Should Attend IPP Meetups?

- **IPP Meetup Attendees (IPP Team)** should be people who can:
 - Speak about the **Project Idea** and **Expected Project Outcomes**, and
 - Identify **Stakeholder Groups** who will have 'equities' in project resourcing, work, and outcomes.
- It is possible that some IPP Team members will also be leaders or members of Stakeholder Groups.
 - That will be determined in approach steps at the IPP Meetups.
 - It is important that the IPP Team be able to talk at the very abstract '**Outcomes**' or '**Expected Capabilities**' level for the project.
- If possible—Before the first IPP Meetup:
 - Identify Potential IPP Team members, and
 - Socialize the Project Idea among potential IPP Team members.
- At the first IPP Meetup:
 - **IPP Team** can be confirmed or refined, and
 - **Project Idea** will be refined into the Project Title and Purpose.



February 26, 2021

www.incoase-cc.org

Copyright © 2021 by Michael E. Pafford

34

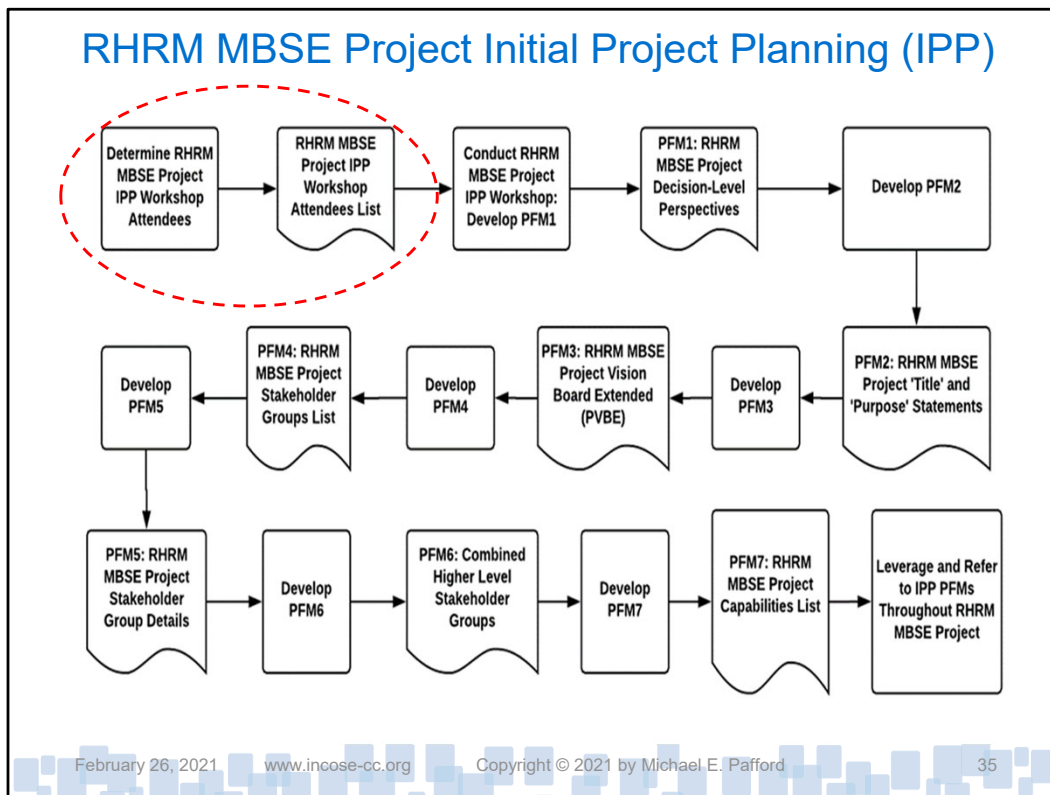
Here's more information about choosing the right IPP Meetup Attendees....

To get the Right Number of IPP Meetup Attendees, you Might use the Jeff Bezos and Amazon, "Two Pizza Rule".

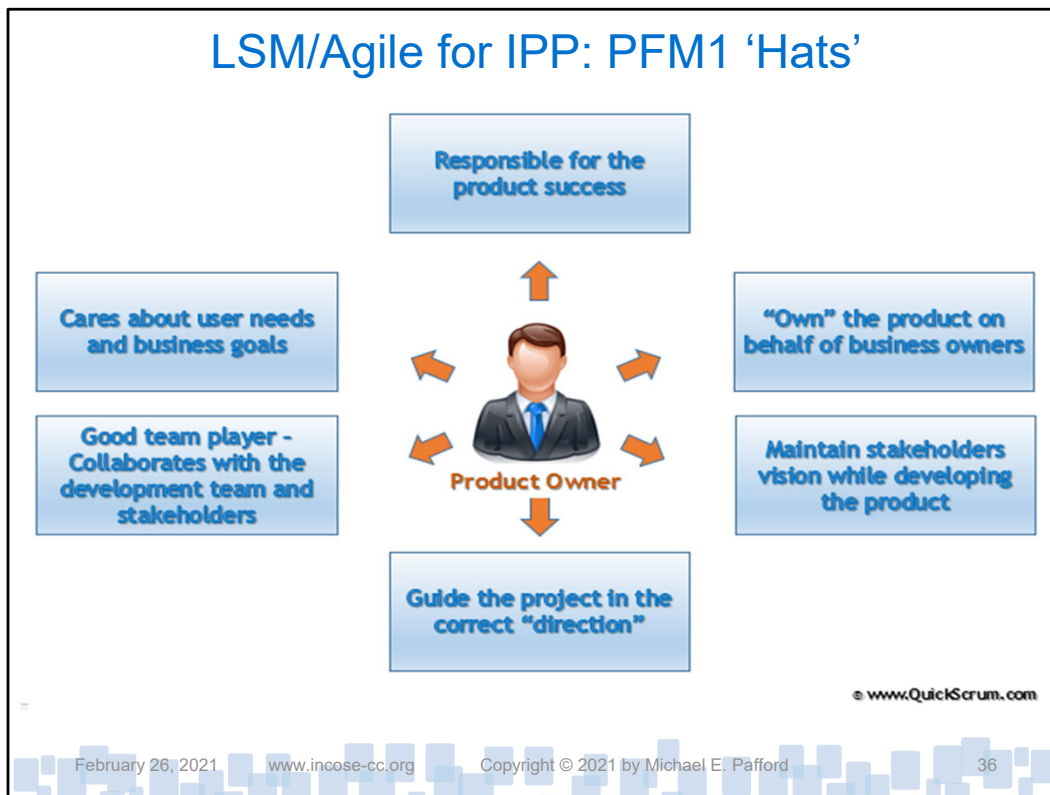
<http://blog.idonethis.com/two-pizza-team/>

Basically, it's the same as the old, "Seven, plus or minus two rule" we all already know about.

The **QR Code** links to some info about the Bezos Two Pizza Rule.



We're talking about this part of the LSM/Agile IPP Workflow I showed before.



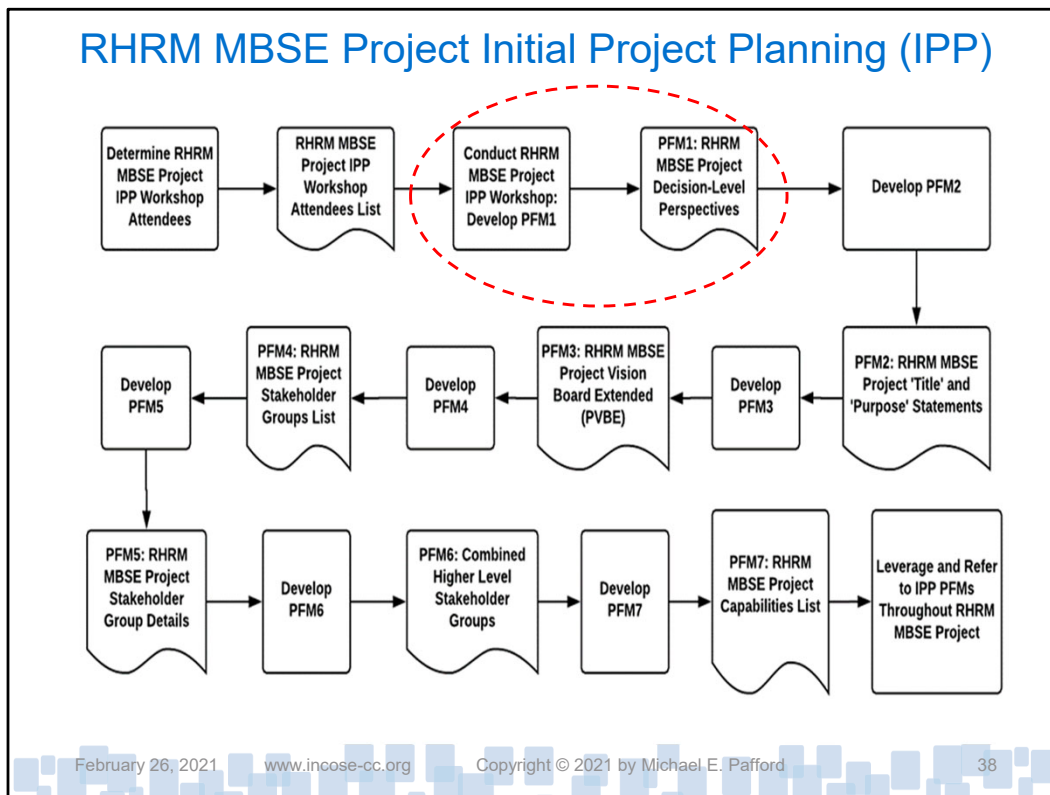
One way to arrive at the 'right' level for **LSM/Agile IPP Team Members**, borrows from **Agile (Scrum) Product Owner** roles and responsibilities, as shown on this slide, and the URL shown at the lower right.

LSM/Agile for IPP: PFM1 'Hats'



Another way to arrive at the 'right' level for **IPP Team Members** borrows from the [PMBok] and the roles of **Project Managers** (Program Manager roles can also be used).

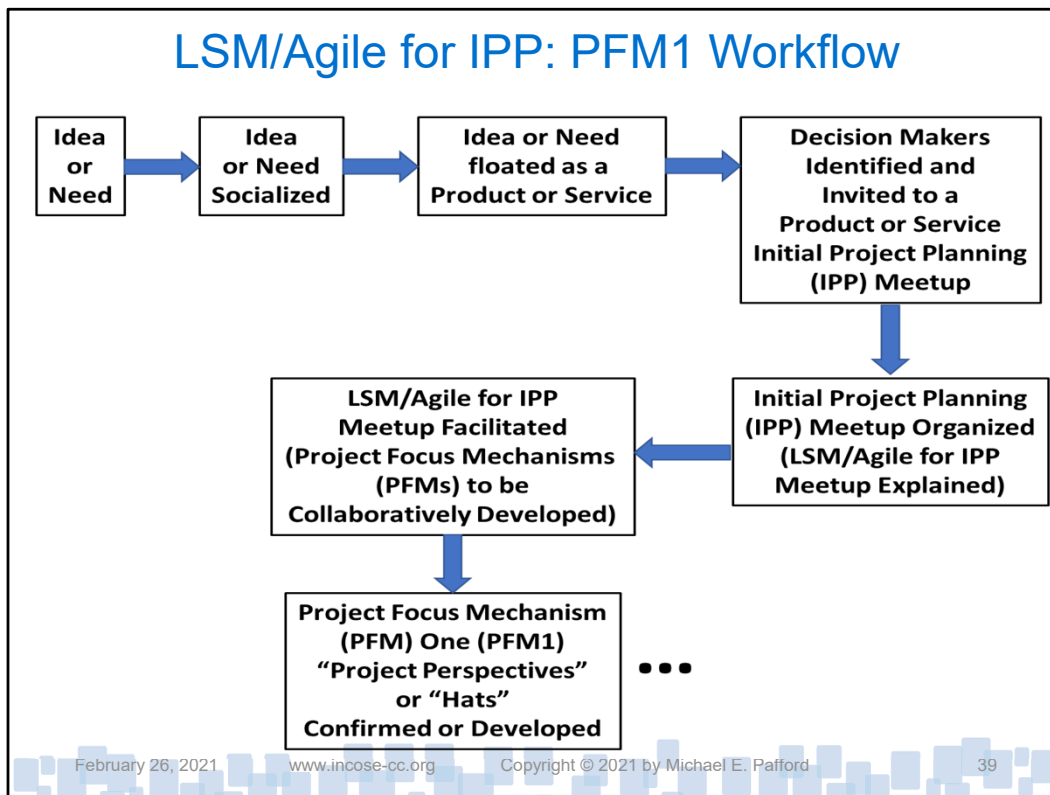
Lead Engineers can also be part of any IPP Team—as long as part of their Regular Roles and Responsibilities includes working directly with Stakeholders to transform Needs, Problems, and Issues, into Expected Outcomes and Expected Capabilities (not potential solutions).



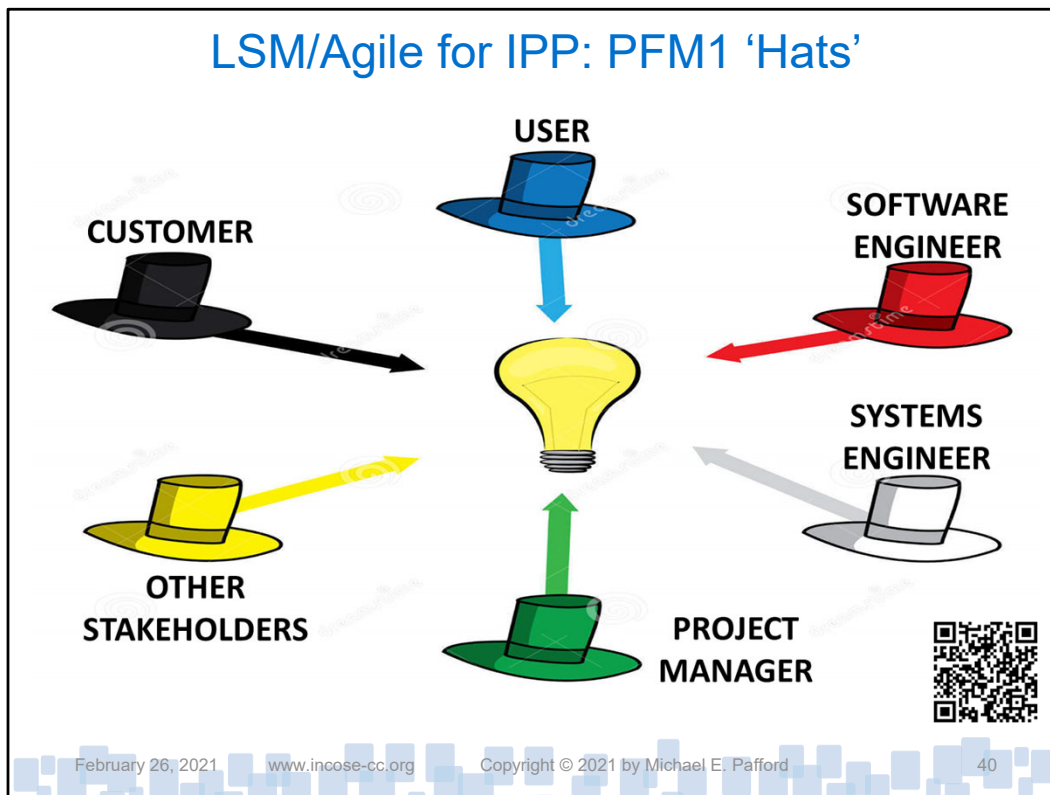
Okay. Time for the IPP Meetup to take place, and for the attendees to develop together, or confirm, the first Project Focus Mechanism (PFM1), **Project Perspectives**, also referred to as, **‘The Hats’**.

TIP: The most successful LSM/Agile IPP Meetups will be the ones that are **Facilitated**. It really does detract from IPP Meetup Productivity, Efficiency, and Effectiveness to have any of the IPP Team (who should all be participating) try to facilitate the IPP Meetup. **FWIW**, I’ve found we Senior Engineers and Managers are also very good at Facilitation. It’s one reason I joined the International Association of Facilitators (**IAF**). It’s okay if the Facilitator later is on the Development Team. Just try to avoid them being part of the IPP Team during IPP Meetups.

At the start of the IPP Meetup, the **Facilitator** will lead the **Meetup attendees** in a flip chart exercise to determine if the right IPP Meetup ‘Hats’ are in fact in attendance, or if the ‘Hats’ need to be modified in any way.



This slide shows in Workflow form, how LSM/Agile IPP Meetup Attendees might be identified and chosen.



LSM/Agile for IPP Meetup “Project Focus Mechanism #1: ‘Hats’ or IPP Perspectives. You heard me use the term ‘Hats’.

For this Hybrid LSM/Agile IPP approach, it’s important to bring together at the IPP Meetup, as many project **‘perspectives’** as possible, as the **Initial Project Planning (IPP) Team**.

One way to do this is a Very Loose derivation of the “Six Thinking Hats” exercise designed by **Edward de Bono**.

When assigning these ‘Hats’, some people might be asked to ‘stretch’. That is, to choose a Hat that might not be their exact real-life role. The Objective is to make sure as many **Primary Project Perspectives** as possible are represented throughout the IPP Meetup.

Here’s some examples of the ‘Hats’ for a cross-discipline system solutions project IPP Meetup.

** Note the QR Code to ‘Six Hats’ Wiki info.

LSM/Agile for IPP: PFM1 ‘Hats’

Eight uGrid RM Project “HATS”

Project Lead

System Integrator

Consumer

(Hospital, etc.)

Producer

Customer

(County, etc.)

Infrastructure

Engineers

(Systems, Software, etc.)

Ops Manager

(County, etc.)

uGrid: Micro-Grid
RM: Reference Model
Ops: Operations

February 26, 2021

www.incose-cc.org

Copyright © 2021 by Michael E. Pafford

41

Here’s a **Clean Up** version of an IPP **Meetup Flip-Chart “Hats” Exercise** I facilitated, so that the [uGrid RM] IPP Team could collaboratively confirm they were starting off with project insights from the ‘**right perspectives**’ (i.e., a vetted **PFM1 ‘Hats’**).

Remember: The **IPP Team** is not **All** of the Project Stakeholders. Rather, it is a core team of **Planners**, who can develop consensus insights from potentially numerous other project Stakeholders.

Hence the Offsite or Meetup Nature of these IPP Workshops.

The IPP Team will have already ‘socialized’ their project idea with potential key stakeholders. At the IPP Meetup, these ‘Hats’ will speak to stakeholder expectations.

LSM/Agile for IPP: PFM1 'Hats'

Resilient Hospital Reference Model (RHRM) MBSE Project

Facility Operator (CTO)
Chief Operating Officer (COO)
Chief Information Officer (CIO)
Chief Medical Officer
Hospital Emergency Manager
Hospital Facility Manager
Chief Nursing Officer
Human Resources Manager
Hospital CEO

February 26, 2021

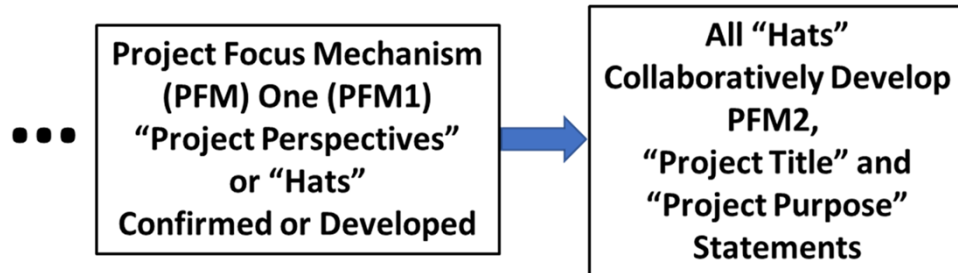
www.incose-cc.org

Copyright © 2021 by Michael E. Pafford

42

Here's a **Cleaned Up** List of **PFM1 'Hats'** or Decision-Level Perspectives collaboratively arrived at (actually, refined) during the three LSM/Agile IPP Meetups for the Resilient Hospital Reference Model (RHRM) MBSE Project Apr – Sep 2018.

RHRM MBSE Project Initial Project Planning (IPP)



February 26, 2021

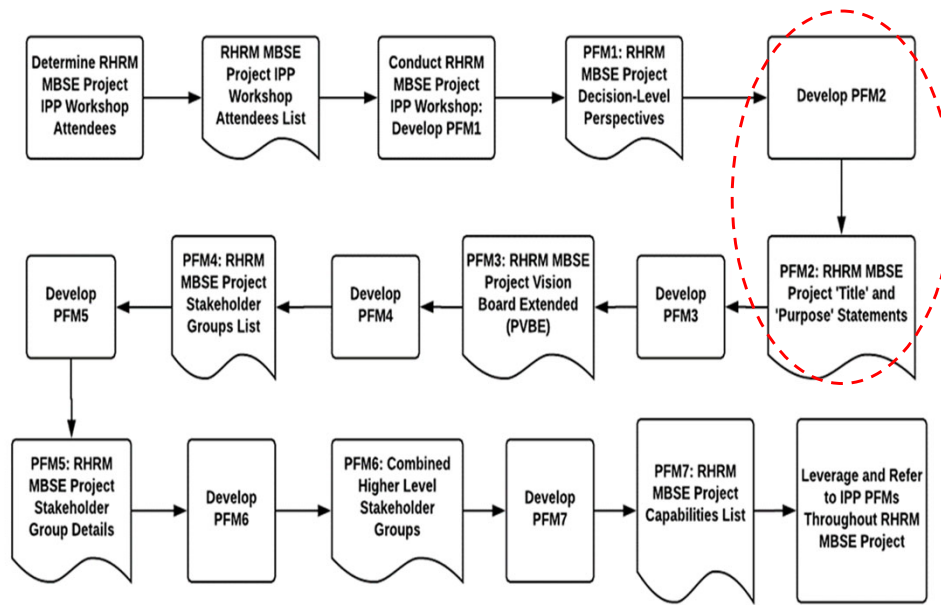
www.incose-cc.org

Copyright © 2021 by Michael E. Pafford

43

The next LSM/Agile IPP Meetup step we'll discuss is where the **'Hats' (PFM1)** use the socialized Project Idea to develop together Project Focus Mechanism 2 (PFM2), the Project **'Title'** and **'Purpose' Statements**.

RHRM MBSE Project Initial Project Planning (IPP)



February 26, 2021

www.incose-cc.org

Copyright © 2021 by Michael E. Pafford

44

Here's where in the IPP workflow the collaborative development of PFM2 takes place.

LSM/Agile for IPP: PFM2-Project Title & Purpose

Info: sgabriele@gemsllearning.net

SYSTEMS THINKING ROUNDTABLE

FACILITATOR GUIDE (300 words: 2.5 minutes read aloud)

At ___:00 a.m. begin. Don't read words in parentheses.)

1. Welcome, to our Systems Thinking RoundTable (RT). My name is ____, and I am today's facilitator. The RoundTable Guide is in front of you. (Be sure new people have RT Guides). We propose to suspend judgment and experience this together without stopping for 45 minutes today. Let's take one minute and go around the room for initial introductions--about three words: e.g., your first name, **role/title**, **school**. (Cue the person on your left).
2. Thank you and welcome again to everyone. For our reflection today, I'll suggest the topics ____ (see bottom of page) for everyone to comment on. While we each consider the topics for a few minutes, I'll ask for volunteers to read aloud the RoundTable Guidelines on the right. Will ____ read OUR FORMAT?... OUR PURPOSES?... GUIDELINES FOR LISTENING?... GUIDELINES FOR SPEAKING?... GUIDELINES FOR RESPONDING?..

(At ___:05 a.m. please read...)

3. Did anyone come in after the introductions?... Welcome! (Option: Ask for 3-word intro and offer RT Guide).
4. Again, today's suggested topics are: ____*. I would like to hear everyone's thoughts about these topics or anything else that is on your mind. Let's each take about (__) minutes to speak. I will use a timer to help us stay on time. Please speak so that everyone can hear. What you say is important to us. (Options: I will start, or we'll start with __) and continue around the circle. (If time permits: a 2nd, 3rd full round.)
5. (If there is time) Anyone who hasn't spoken who is ready to speak now?

(At ___:45 a.m. please read...)

6. It's time to close.
7. Thank you all for coming today. We hope to see you at a future session. If you have something more to say, ask a colleague to listen to you on your way out.

READINGS: RoundTable Guidelines (300 words: 2.5 min.)

OUR FORMAT. Our unique format is a new best practice in systems thinking. We spend 5 minutes listening to short readings and the suggested topics. We then spend 40 minutes on individual comments, time divided equally among all present (e.g. 22 people = 2 minutes each). Each session is facilitated by a different volunteering facilitator chosen from those in attendance.

OUR PURPOSES. We use a facilitator guide/script and basic readings--RoundTable Guidelines--for many reasons: 1- We pack in a great deal of information in a very short time, thus leaving maximum time for each of us to present our ideas. 2- The result is we hear everyone's point of view on a topic. 3- We experience some new real-time effortless practices in equal participation: including rotating, distributed leadership; equal time; as well as a simple scaffold to facilitate conscious self-guided evolution. 4- We have found that just as we break the sound barrier when we travel faster than the speed of sound, we break the communication barrier when we hear 20 authentic viewpoints in 45 minutes--and a different facilitator at each session.

GUIDELINES FOR LISTENING. Listening to the 5 minutes of readings allows us the opportunity to quiet our minds and silently reflect on the topics, the readings, our inner thoughts, and our work and lives. Listening to each other's comments, we hear a great variety of viewpoints. We consciously shift our attitudes from "evaluation" to "valuation," from critiquing to appreciating, from problem-solving to ideal-seeking -- towards one another and towards ourselves.

GUIDELINES FOR SPEAKING. At your turn, please say your name again. Then say something about today's topic, or anything else that is on your mind. Let's each take only one turn to speak and limit our time, so we can offer everyone a turn. Or, if you prefer, pass your turn and just listen today.

GUIDELINES FOR RESPONDING. The facilitator may say "thank you" after you speak. In the interest of time and purpose, we will save all other responses to each other until after the session. We don't want to divert others, or be diverted, from our own individual learning. If someone says something that you want to build on, you may want to make a note of it so you can do so during your turn.

February 26, 2021

www.incose-cc.org

Copyright © 2021 by Michael E. Pafford

45

To help facilitate IPP Meetup PFM2, I use a current and modern SE best practice, “**Systems Thinking**”; specifically, “**Systems Thinking Round Table Guides**”, developed by Dr. Sue Gabriele and the INCOSE Systems Science Working Group. ** This **Guide** is included in the Workshop materials. **

I facilitate a 2-step Round Table and Flip Chart exercise with the IPP Team for this particular IPP process step.

First, I facilitate a **Systems Thinking Round Table**, with everyone using the **Systems Thinking Round Table Guide**.

The Objective is to give every IPP Team member the same amount of time to express their thoughts on the socialized **Project Idea**.

Tip: I use **otter.ai** to capture all Conversations as a Narrative Transcript.

After completing the Systems Thinking Round Table, I then use the captured narrative to facilitate the IPP Team discussing and capturing on a whiteboard or flipcharts, the consensus **Project Title** and **Purpose**.

LSM/Agile for IPP: PFM2-Project Title & Purpose

LSM/Agile IPP **'Focus Mechanism 2'**: Project Title & Purpose

Project Title:

*“Microgrid (uGrid)
Reference Model (RM)
and Application Process”*

Project Purpose:

*“Use LSM to Produce
Initial Work Items
for uGrid RM Project”*

February 26, 2021

www.incose-cc.org

Copyright © 2021 by Michael E. Pafford

46

Here’s a look at the results of this Round Table Exercise, where the **uGrid RM** IPP Team agreed on **PFM2**, the **Project Title** and **Project Purpose** statements.

LSM/Agile for IPP: PFM2-Project Title & Purpose

LSM/Agile IPP '**Focus Mechanism 2**': Project 'Title' and 'Purpose' Statements

RHRM MBSE Project 'Title'

RHRM MBSE Project 'Purpose'

Adaptable Resilient Hospital
Reference Model Development

To enable (i.e., generically model) essential
hospital capabilities under long-term loss of
power

February 26, 2021

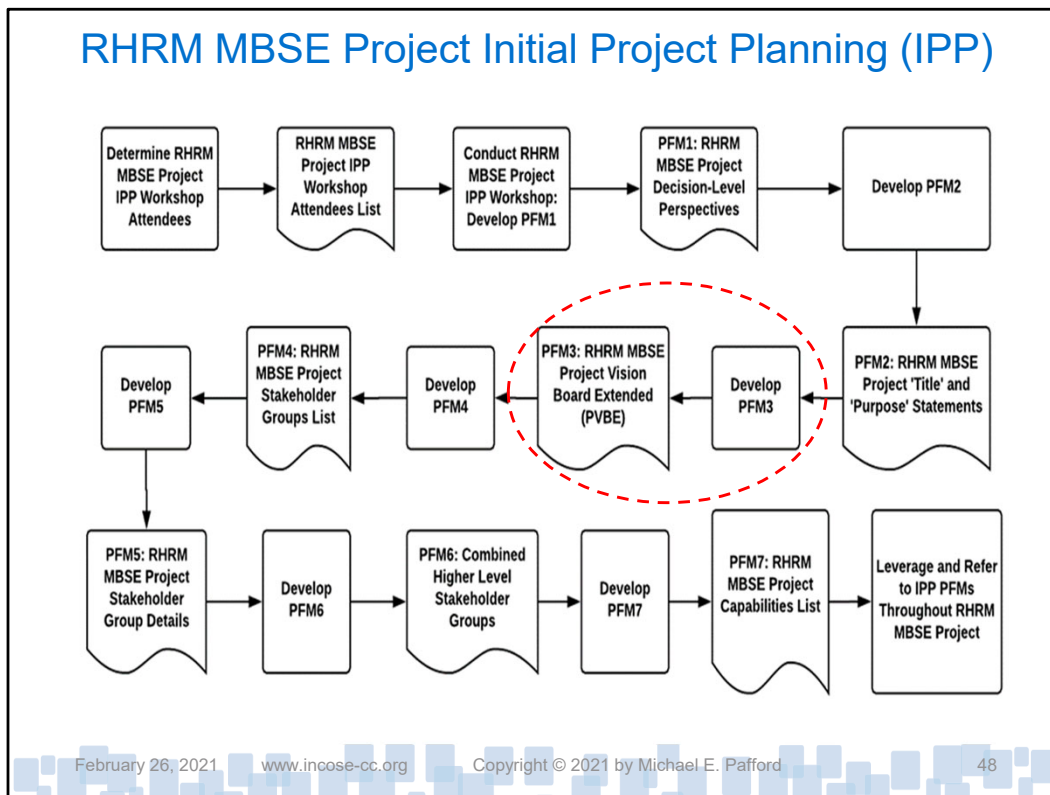
www.incose-cc.org

Copyright © 2021 by Michael E. Pafford

47

Here's a look at the results of this Round Table Exercise, where the **RHRM IPP Team** agreed on **PFM2**, the **Project Title** and **Project Purpose** statements.

I've included an Example Systems Thinking Roundtable Guide in the Workshop Materials.



Now let's move to the **'Problem Validation'** Phase of the LSM/Agile Approach to IPP.

The main Artifact of this Phase is **PFM3**, the **Product or Project Vision Board Extended or (PVBE)**.

This next IPP phase borrows heavily from LSM and Agile Project Management best practices.

But again, the steps I'm going to show you, are planning steps we're all already familiar with.

LSM/Agile for IPP: PFM3-PVBE

- Also called, “**Lean Launchpad**”.
- A philosophy and methodology based on 1980s **Lean Manufacturing**.
- A learnable and shareable **stakeholder-centric** method to quickly and iteratively start to develop a new product or service, or update existing products or services.
- Developed in its current form by American entrepreneur **Eric Ries**, founder and CEO of the Long-Term Stock Exchange (LTSE).
 - A former student of **Steve Blank**, who pioneered the **Lean Startup Movement** with his **Customer Development** concept.

The Lean Startup Method (LSM) is used by many Startup Companies. I've found that LSM is also useful to Start Out any project.

Understanding Stakeholders and Stakeholder Feedback are at the center of successful use of LSM/Agile for IPP.

IPP produces 'Expected Outcomes', not 'Potential Solutions'!

February 26, 2021

www.incose-cc.org

Copyright © 2021 by Michael E. Pafford

49

For those who might not already be familiar with the **Lean Startup Method (LSM)** (aka **Lean Launchpad**) project planning methodology, here's some introductory information.

Remember: The **Lean Startup Method (LSM)** is NOT the same as Lean or Agile Engineering or Management. The LSM approach does 'overlap' with many Lean concepts. But, it's specifically meant as an **IPP** methodology.

The results can most certainly enhance the productivity of any project that decides to follow Lean or Agile methods.

Who's Using LSM?

National Science Foundation (NSF) Innovation Corps (I-Corps)

https://www.nsf.gov/news/special_reports/i-corps/index.jsp

National Geospatial Intelligence Agency (NGA)

<https://federalnewsradio.com/fed-access/2017/10/innovation-at-the-nga/>

National Security Agency (NSA)

<https://www.acast.com/leanstartup/7-season-3-how-lean-startup-co-coaches-support-department-of-defense-innovation>

Office of Naval Research (ONR)

<https://steveblank.com/2017/10/10/office-of-naval-research-onr-goes-lean/>

U.S. State Department

<https://steveblank.com/2016/10/31/the-state-department-gets-schooled-hacking-for-diplomacy/>

NASA (FedTech)

<https://www.fedtech.io/about-us>

Dropbox, Wealthfront, Grockit, imvu, Votizen, Aardvark

<http://theleanstartup.com/casestudies#dropbox>

February 26, 2021

www.incose-cc.org

Copyright © 2021 by Michael E. Pafford

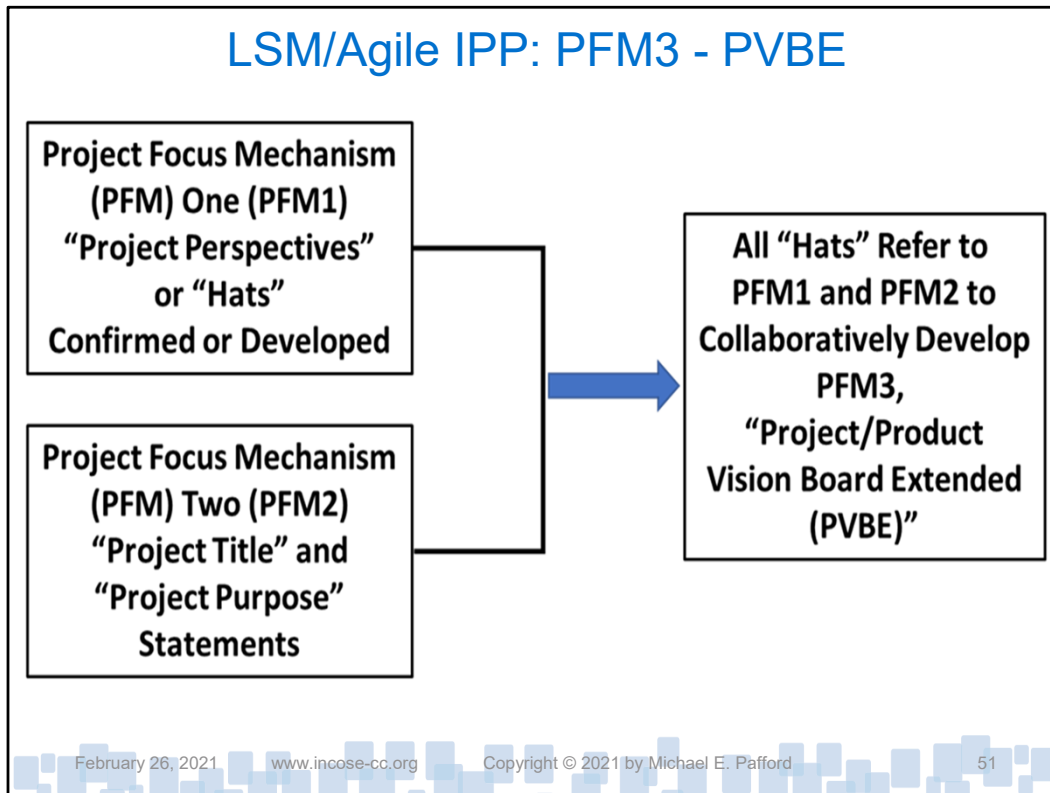
50

This slide lists some URLs for more information on who specifically in Government and Industry is using LSM for initial project planning.

As with anything on the Internet, things have a tendency to become outdated really quickly; meaning some of these URLs may no longer work.

But, as we all know, it's also getting much simpler to do a Search on the terms-and get the latest relevant information.

For example, I think FedTech.org might now be moving to FedTech.io.



Here again is a simple Flow Diagram reviewing how PFM1 and PFM2 are leveraged by the LSM/Agile IPP Team to develop together PFM3, the Product or Project Vision Board Extended (PVBE).

LSM/Agile IPP: PFM3 - PVBE

“PROBLEM VALIDATION”

Product Vision Board Extended (PVBE)

Vision <small>What is your vision, your overarching goal for creating the product?</small>			
Target group <small>Which market segment does the product address? Who are the target users and customers?</small>	Needs <small>How does the product create value for its users? What problem does it solve? Which benefit does it provide?</small>	Product <small>What product is it? What makes it desirable and special? Is it feasible to develop the product?</small>	Business Goals <small>How is the product going to benefit the company? What are the business goals? Which one is most important?</small>
Competitors <small>Who are product's main competitors? What are their strengths and weaknesses?</small>	Revenue Sources <small>How can you monetise your product and generate revenue? What does it take to open up the revenue sources?</small>	Cost Factors <small>What are the main cost factors to develop, market, sell and service the product? What resources and activities incur the highest cost?</small>	Channels <small>How will you market and sell the product to the customers? Do the channels exist today?</small>

www.romanpichler.com



February 26, 2021

www.incose-cc.org

Copyright © 2021 by Michael E. Pafford

52

This **LSM/Agile** IPP process step involves the IPP Team leveraging the first two **Focus Mechanisms (PFM1 Hats and PFM2 Project Title & Purpose Statements)** to develop and validate together the **Problem and Vision** on how to approach the project product or service. ***Outcomes—not Specific Solutions!***

Inputs come from the first two focus mechanisms, and from experience-based insights from all of the various IPP Team perspectives or ‘Hats’.

This is where the team starts full-blown whiteboard-based Affinity Mapping style structured brainstorming.

The main Output of this IPP process step is the **Third vetted IPP Focus Mechanism**; the **Project Vision Board Extended (PVBE)**.

**** ‘Product’ in this workshop, is completely interchangeable with ‘Project’.**

LSM/Agile IPP: PFM3 - PVBE

Facilitate a model-based systems approach to develop microgrids.

TARGET GROUPS: - System Integrator - Customer	NEEDS: - Challenge to reconcile multiple stakeholder concerns & emerging threats - Improved collaborative decision-making for acquisition and development.	PRODUCT - Common Vocabulary - Multiple Views - Decision-making ^{Crit} _{Area} - Scalable Scope - Composable - Configurable	MISSION GOALS 1 Optimize Development 4 Improved Planning 2 Risk Reduction 3 Improved Comms
COMPETITORS: - Legacy Methods (AD HOCERY) - Non-Profits - Commercial Enterprises - Governments	REV. SOURCES: - Governments - Crowd Resources - Non-Profits - Venture Capitalists - Commercial Enterprises	COST FACTORS - Maintenance - Schedule - Training - Tools - Labor (Volts vs Profs)	CHANNELS - Professional Societies (Journals, etc.) - Conferences (ET, etc.) - News Media - Government Comms

February 26, 2021 www.inco.se-cc.org Copyright © 2021 by Michael E. Pafford 53

Here's a picture of the whiteboard-based brainstorming workshop that created the **PVBE** for the **uGrid RM MBSE** project.

Even though this slide is an impossible 'eye chart', I use it to show how quickly (and thoroughly) an IPP Team can actually agree on, then capture, useful-and vetted-- information about a project's **Problem**, and the IPP Team's consensus **Vision** on the 'kind of' solution to address the Problem.

Note: At no point during an LSM/Agile IPP Meetup, do the 'Hats' try to design **'the'** solution (even though as decision makers one or more of them might have one in mind already).

LSM/Agile IPP: PFM3 - PVBE

The whiteboard contains six sticky notes with the following content:

- PVBE - TARGET GROUPS**
 - HOSPITAL-1. FACILITIES MANAGERS
 - " 2. - EMERGENCY MANAGERS
 - 3. - ADMINISTRATOR MGR
 - 4. - COOP ORG CM
 - 5. - CHIEF OPS OFFICER CM
 - 6. - CHIEF MED OFFICER CM
- PVBE BUSINESS GOALS:**
 - RISK REDUCTION / MGMT
 - IMPROVE COMMUNIC.
 - " PLANNING
 - COST EFFECTIVENESS
 - * OPS CONTINUITY / BUSINESS
 - DISCOVER OPPORTUNITY
- PVBE - NEEDS, PROBLEMS, BENEFITS**
 - FRAMEWORK
 - DSS COMPONENT
 - GUIDE COMPONENT
 - FRAGMENTED VIEWS
 - ID-CAPABILITIES / INEFFECTIVE
 - UNCLEAR RESOURCE REQUIRE
 - BOUNDARY HOSPITAL
- PRODUCT:**
 - "ADAPTABLE RESILIENT HOSPITAL REFERENCE MODEL"
- PVBE REVENUE SOURCES: (WHO BUYS THIS?)**
 - EMERGENCY MED. FOUNDATIONS
 - HOSPITALS
 - HHS
 - DoD
 - DEPT. OF VA
 - DoE
 - FEMA / DHS
- PVBE COST FACTORS:**
 - MAINTENANCE * HIGH
 - * TRAINING
 - * MARKETING
 - EXPERT SUPPORT
 - TOOLS
 - ≠ LABOR
- PVBE - CHANNELS**
 - PROFESSIONAL SOCIETIES
 - CONFERENCE / SYMPOSIUM
 - MEDIA RELEASES
 - OFFICIAL COMMUNICATIONS
 - PUBLICATIONS
 - SOCIAL MEDIA
 - ACADEMIA
- Competitors (Alternatives):**
 - Legacy methods
 - FEMA / DHS Regs.
 - NIST Community Resilience Guide

Here's a picture of the IPP Meetup whiteboard-based brainstorming session that created the **PVBE** for the **Resilient RM MBSE** project.

Even though this slide is also an impossible 'eye chart', it shows again how quickly (and thoroughly) an IPP Team can agree on, then capture, useful-and vetted information about a project **Problem**, and the Team's consensus **Vision** on the '**kind of**' solution needed to address the Problem.

LSM/Agile IPP: PFM3 - PVBE

VISION: Facilitate a Model-Based Systems Approach to Develop Micro-Grids

TARGET GROUP

- System Integrator
- Customer

NEEDS

- Challenge to reconstruct multiple stakeholder concerns and emerging threats.
- Improved collaborative decision-making for acquisition and development.

PRODUCT

- Common vocabulary
- Multiple views
- Decision-making criteria
- Scalable scope
- Composable
- Configurable

MISSION/GOALS

- 1 Optimize Development
- 2 Risk Reduction
- 3 Improved Comms
- 4 Improved Planning

COMPETITORS

- Legacy Methods
- Non-Profits
- Commercial Enterprises
- Governments

REVENUE SOURCES

- Governments
- Crowd Resources
- Non-Profits
- Venture Capitalists
- Commercial Enterprises

COST FACTORS

- Maintenance
- Schedule
- Training
- Tools
- Labor (Vols vs Professionals)

CHANNELS

- Professional Societies
- Conferences
- News Media
- Government Communications

February 26, 2021

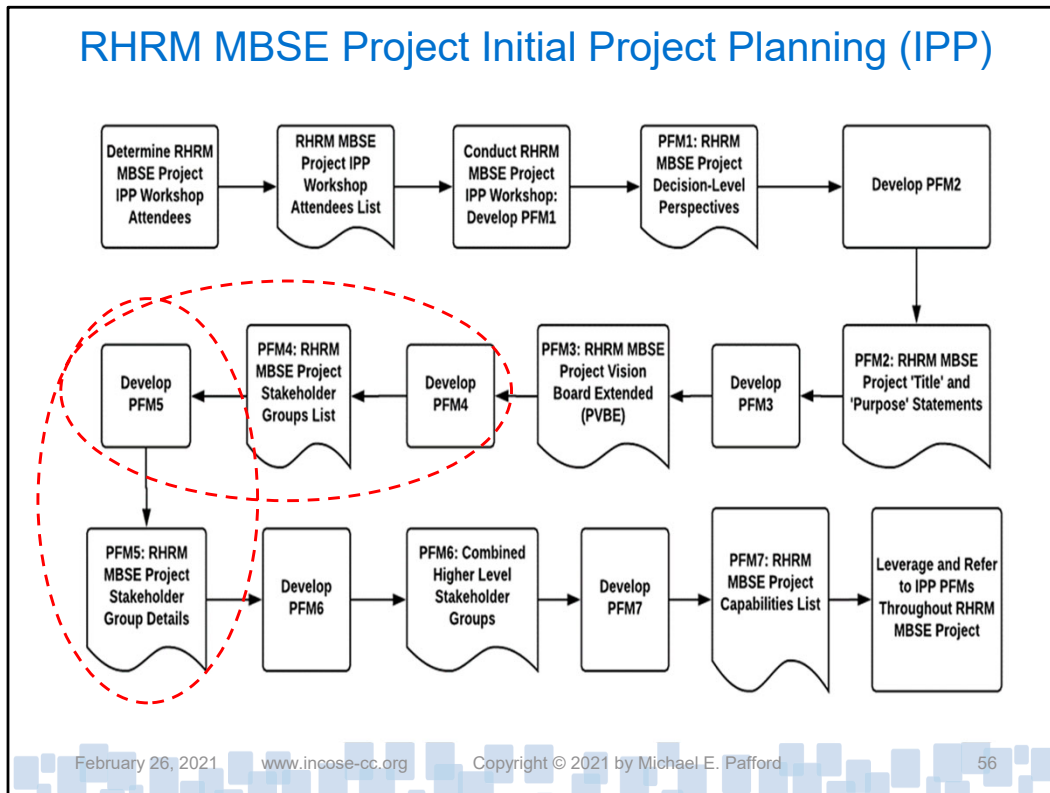
www.incose-cc.org

Copyright © 2021 by Michael E. Pafford

55

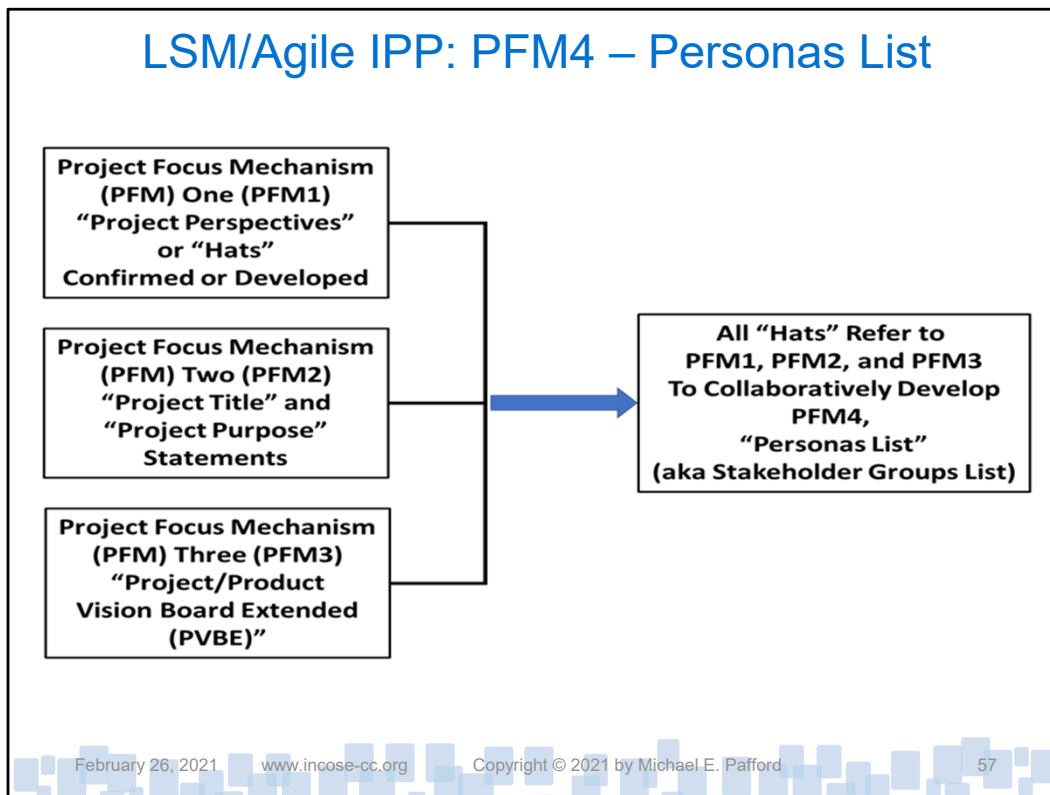
Here's a 'Clean Up' version of the **uGrid RM MBSE Project PFM 3, Product/Project Vision Board Extended (PVBE)**.

I've included an example Fillable PDF PVBE in the Workshop Materials.



Next, let's move from the IPP Meetup **'Problem Validation'** phase, to the **'User Validation'** Phase.

The main Artifacts of this IPP Phase are **PFM4**, the **Personas (i.e., Stakeholder Groups) List**, and **PFM5**, Example Persona Templates or Cards.



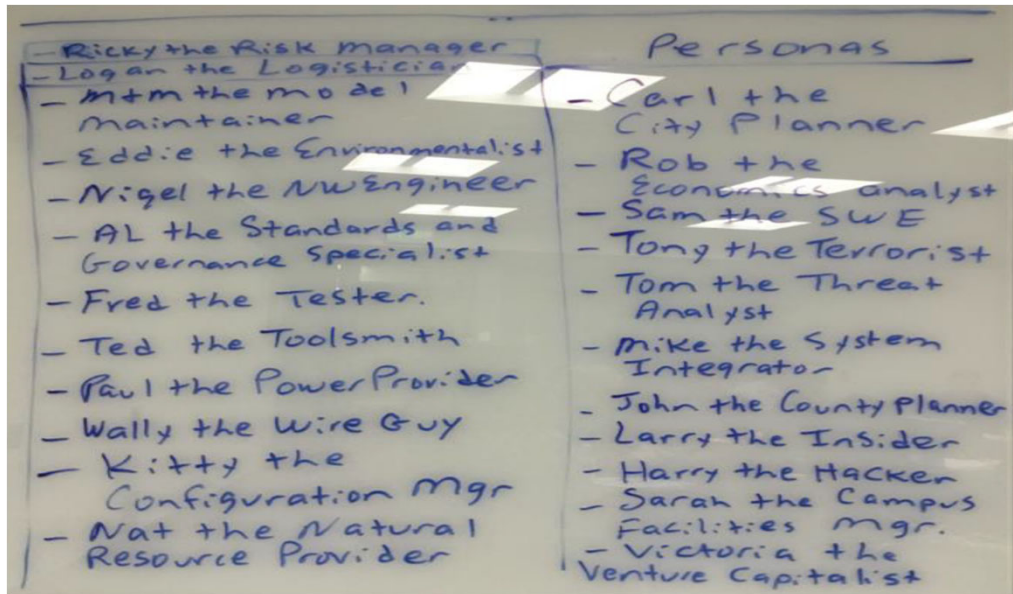
This slide shows a continuation of the LSM/Agile IPP workflow, where PFM1, PFM2, and PFM3 are used as ready references to streamline the development of **PFM4, the Personas List**.

First the IPP Team will develop a PFM4 Personas List, then use the PFM4 List to develop Example(s) of PFM5 Persona Templates or Cards.

At the IPP Meetup the IPP Team is expected to develop a Complete **PFM4 Personas List**—but only **Example PFM5 Persona Templates or Cards**.

The rest of the PFM5 Template/Card Set will be part of Initial Project Execution (IPE); using IPP Meetup PFM5 Examples as guides.

LSM/Agile IPP: PFM4 – Personas List



February 26, 2021

www.incose-cc.org

Copyright © 2021 by Michael E. Pafford

58

This eye chart slide shows the results of the **uGrid RM** IPP Team's **PFM4 Personas List** development whiteboard brainstorming workshop.

In this IPP step, each IPP Team member used their experience to come up with project **Stakeholder Groups**, or **Personas**.

During this step, each Persona '**Role and/or Responsibility**', is actually given a **Fake Name**.

Many current project planning and management studies continue to show that project development team members are actually more productive when focusing their work toward a **Named Persona or Stakeholder Group**. This is referred to as, '**Personalization of Work**'.

LSM/Agile IPP: PFM4 – Personas List

uGrid RM Personas (Stakeholder Groups)	
Ricky the Risk Manager	Carl the City Planner
Logan the Logistician	Rob the Economics Analyst
Mike the Model Manager	Sam the Software Engineer
Eddie the Environmentalist	Nigel the Network Engineer
Alan the Standards & Governance Specialist	Tony the Terrorist
Fred the Model Tester	Marty the Systems Integrator
Ted the Toolsmith	Tom the Threat Analyst
Paul the Power Provider	John the County Planner
Wally the Wire Guy	Larry the Insider (Threat)
Kitty the Configuration Manager	Harry the Hacker
Nat the Natural Resource Provider	Sarah the Campus Facilities Manager
Victoria the Venture Capitalist	Rita the Systems Engineer

February 26, 2021

www.incose-cc.org

Copyright © 2021 by Michael E. Pafford

59

Here's a 'Clean Up' version of the results of the **uGrid RM IPP Meetup Team's PFM4 Personas List** development whiteboard brainstorming workshop.

You can see that even for the relatively small **uGrid RM MBSE** project, the IPP Meetup Team was able to fairly quickly brainstorm and Name quite a list of Personas or Stakeholder groups.

LSM/Agile IPP: PFM4 – Personas List

Ricky the Legal Department Staffer
Logan the Materials Manager
Alan the Hospital Compliance Officer
Marty the Systems Integrator
Harry the Hospital Emergency Manager
Sarah the Facilities Manager
Phil the Hospital Security Officer
Charlie the Hospital COO
Charlene the Hospital CFO
Craig the Hospital CIO
Mandy the Chief Medical Officer
Sally the Hospital HR Lead
Nancy the Chief Nursing Staffer

February 26, 2021

www.incose-cc.org

Copyright © 2021 by Michael E. Pafford

60

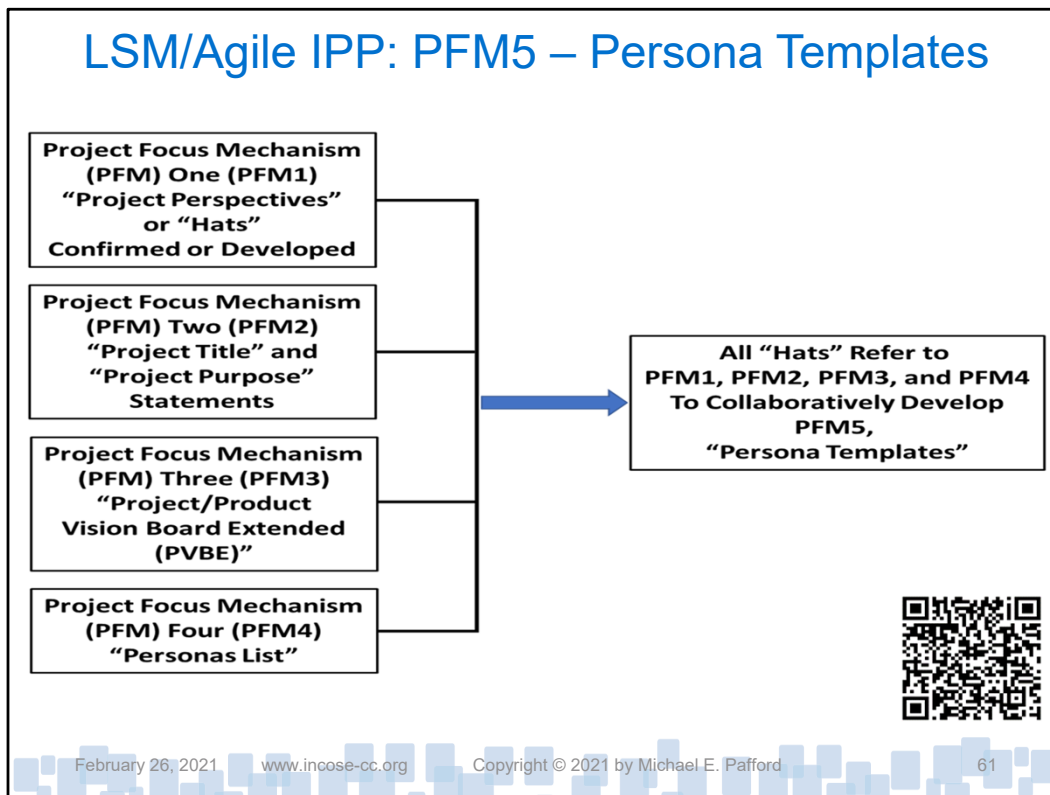
This slide shows the PFM4 Personas List collaboratively developed by the 'Hats' at the IPP Meetup for the Resilient Hospital Reference Model (RHRM) MBSE project.

Important Note About PFM1 'Hats' versus PFM4 'Personas':

PFM1 'Hats' are Decision Makers, Supervisors, and other high-level Managers, involved mainly in Project Planning.

PFM4 Personas are Stakeholder Groups involved mainly in Project Development.

PFM4 Personas are Groups that 'usually' directly or indirectly support PFM1 'Hats' and their Expected Outcomes.






This slide is another continuation of the LSM/Agile IPP workflow, showing how the previously developed Project Focus Mechanisms, are again leveraged by the IPP Team to collaboratively develop at least one **Example PFM5 Persona Template or Card.**

Note the QR Code here that points to more information about Personas and Persona Templates and Cards.

LSM/Agile IPP: PFM5 – Persona Templates

“USER VALIDATION”

Persona Templates

 PICTURE & NAME	 DETAILS	 GOAL
<p>What does the persona look like? What is its name?</p> <p>Choose a picture and a name that are representative, and that allow you to develop sympathy for the persona.</p>	<p>What are the persona’s relevant characteristics and behaviours?</p> <p>Consider demographics, job, lifestyle, spare time activities, attitudes, and common tasks, for instance.</p>	<p>Why would the persona want to buy or use the product?</p> <p>What problems should the product solve?</p> <p>What benefits does the persona want to achieve?</p> <p>If there are multiple problems or benefits, identify the main one and put it at the top.</p>

<http://www.romanpichler.com/>



February 26, 2021

www.incose-cc.org

Copyright © 2021 by Michael E. Pafford

62

In the first part of this IPP Meetup ‘User Validation’ phase, the IPP Team worked together to develop a **PFM4 Personas List**.

In this second part of the ‘User Validation’ phase they will work together to develop at least one Example PFM5 Persona Template or Card.

** Each one of the PFM4 Personas will sooner or later have their own PFM5 Persona Template or Card. **

LSM/Agile IPP: PFM5 – Persona Templates


Using their knowledge about the Named Example PFM4, the IPP Meetup Team now accomplishes three process steps to make each Example PFM5 Persona Template:

1. Assign a 'Fake' PICTURE or Icon to the 'Fake' NAME given to an Example PFM4 on the PFM4 Personas List
- (PFM5 Template left column)
2. Brainstorm 'Real' DETAILS about the Example PFM4 (Details means Resume/Job Description items)
- (PFM5 Template middle column)
3. Brainstorm 'Real' GOAL for that Example PFM4 (Goals means system level (aka Goal Level) things the Example PFM4 plans to use the PFM2 Project Title Product or Service to do.
- (PFM5 Template right column)

Here's an explanation on how the IPP Team leverages all previous PFMs to develop together an Example set of PFM5 Persona Templates or Cards.

LSM/Agile IPP: PFM5 – Persona Templates

Example Persona Template

Picture/Name/ Title/ Role	Details	Goals
Sandy  Ugrid Rm Modeler	<ul style="list-style-type: none">- Expert MBSE Modeler.- Systems Engineer- SE Tool(s) Expert- Highly motivated- (see Resume/CV)	<ul style="list-style-type: none">- Demonstrate Value of MBSE in General and Ugrid Rm particular.- Promote using Models for Decision-making.- Convey thinking and give direction to Modeling Team.- Demonstrate a real Potential Solution for real-world Problems.

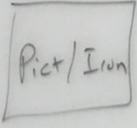
February 26, 2021 www.incose-cc.org Copyright © 2021 by Michael E. Pafford 64

Here's a picture of the glassboard session in which **One Example PFM4 Persona from the uGrid RM PFM4 Personas List** was further detailed into what would become an **Example PFM5 Persona Template or Card**.

You can see where a **set of Persona Templates** for the uGrid RM MBSE Project-or any other project-could easily become pretty large. Only Example PFM5s are developed at IPP Meetups.

Each Example PFM5 Persona Template/Card has a 'Named Representation' of a distinct **Stakeholder Group (PFM4)**. Each one also has a 'real' set of **Details** (i.e., actual Resume Type Skills), and **Goals** (i.e., what each stakeholder group actually expects to use the project deliverables to help them do). The full set of templates or cards helps 'focus' decisions about functionality and design throughout any project.

LSM/Agile IPP: PFM5 – Persona Templates

Picture + Name:	Details	Goals
Harry  Hospital Emergency Manager	<ul style="list-style-type: none">- Understands Emergency Scenarios- Knows Hospital Resources- Meticulous Planner- Knows facility capabilities- Effective Communicator- Bit paranoid-but fearless	<ul style="list-style-type: none">- Develop and update EM Plans (ex. DRP)- Recommend Hospital Capability enhancements


February 26, 2021 www.incose-cc.org Copyright © 2021 by Michael E. Pafford 65

This slide is a picture of one Resilient Hospitals RM project IPP Meetup glassboard session where one **PFM4 Persona List Name**, was further detailed into an example **PFM5 Persona Template or Persona Card**.

Remember: The **Picture** and **Name** column of the **PFM5** Template/Card is a 'made up' PFM4 Name and Icon.

The **PFM5 Details** and **Goals** columns Must contain real information about that PFM4 Stakeholder Group, and its 'equities' in the project.

LSM/Agile IPP: PFM5 – Persona Templates

PICTURE/NAME/TITLE	DETAILS	GOALS
<p>Samantha</p>  <p>uGrid RM Modeler</p>	<ul style="list-style-type: none"> <li>-- Expert MBSE Modeler <li>-- Systems Engineer <li>-- Systems Engineering Tools Expert <li>-- Highly Motivated <li>-- (See Resume and CV) 	<ul style="list-style-type: none"> <li>-- Demonstrate value of MBSE in general and uGrid RM in particular. <li>-- Promote using models for decision-making. <li>-- Convey thinking and give direction to modeling team. <li>-- Demonstrate a real potential solution for real-world problems.

February 26, 2021

www.incose-cc.org

Copyright © 2021 by Michael E. Pafford

66

Here's a Clean Up **Example PFM5 Persona Template/Card**, that a project team might Post Up in a repository-based collaboration tool or site.

To Review IPP Focus Mechanisms:

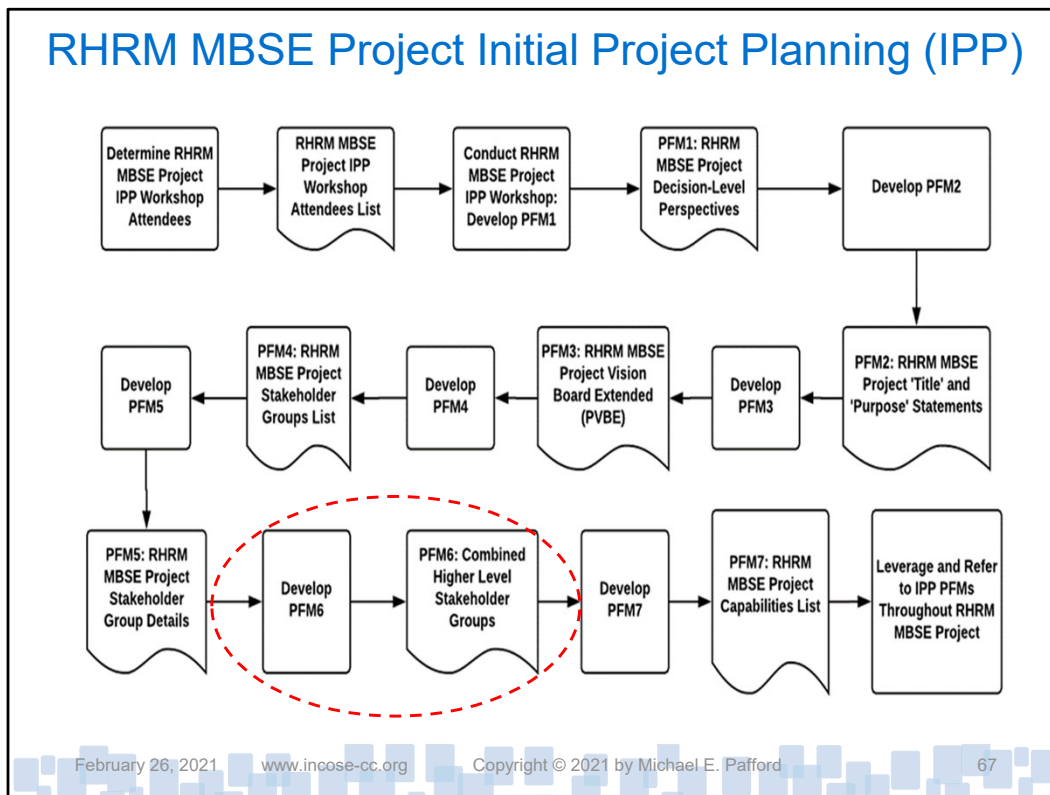
PFM1: Hats (Perspectives)

PFM2: Project Title and Purpose Statements

PFM3: Project/Product Vision Board Extended-PVBE

PFM4: Persona (Stakeholder Group) List

PFM5: Example Persona Template(s)/Card(s)

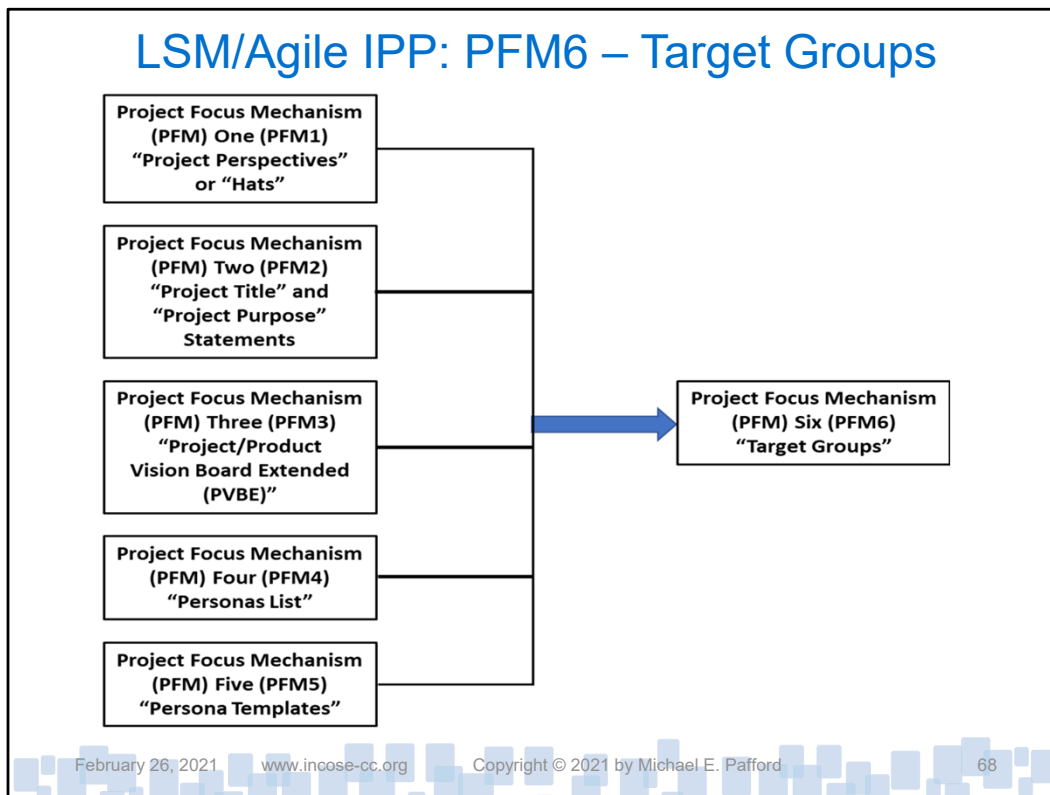


The next LSM/Agile IPP Phase is, **‘SOLUTION VALIDATION’**.

The objective of this IPP Meetup Phase is to continue using LSM and Agile Project Management best practices, as well as all the previous **IPP Project Focus Mechanisms**, to capture and validate together System-Level aspects of the Product or Service the IPP Meetup Team wants to include in any system solution project.

** This IPP phase begins the development of system-level Expected Outcomes or **Capabilities**.

** **Capabilities** are the ‘bridge’ between IPP—and ANY project development methodology. **



This slide is another continuation of the LSM/Agile IPP workflow, that shows again how all previously-developed Project Focus Mechanisms are referred to by the IPP Team to develop together **PFM6, the Target Group and Big Picture parts of the Product (or Project) Canvas (or Template).**

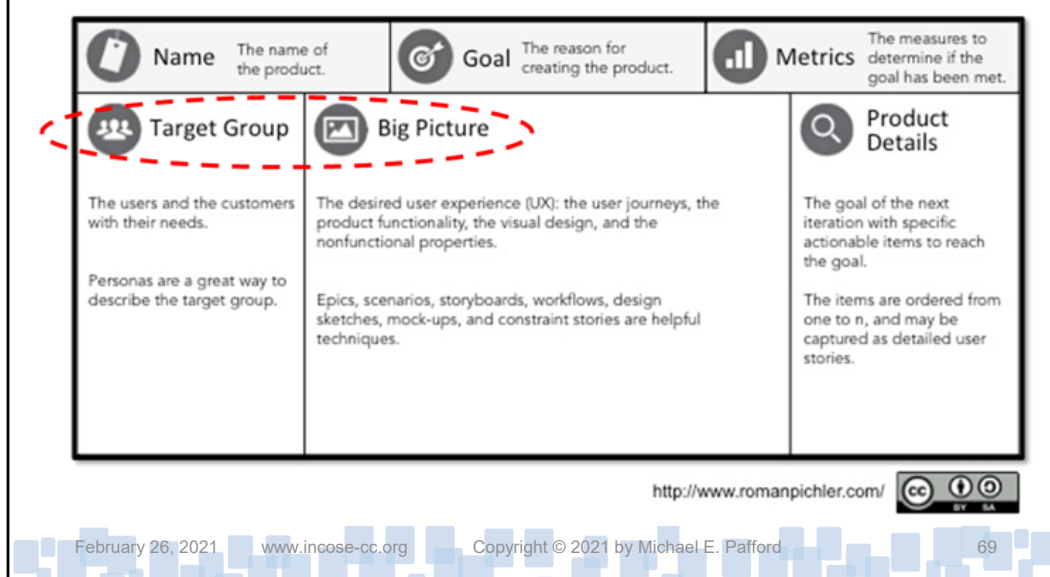
I've included an Example Fillable PDF 'Product Canvas' in the Workshop Materials.

** Again. 'Product' and 'Project' are interchangeable.

LSM/Agile IPP: PFM6 – Target Groups

“**SOLUTION VALIDATION**”

Product Canvas



In this next **LSM** IPP phase, IPP Meetup Team members will use the previous **Five Project Focus Mechanisms**, to now start to narrow down together **PFM6**; the ‘**kind of**’ (not ‘the specific’) product or service the IPP Team (on behalf of Stakeholder Groups) wants the project to create.

‘**Solution**’ here means, ‘High-Level Expected Solution’-not details about any actual potential solution.

In the IPP Meetup, the emphasis for the IPP team is on the **Target Group** and **Big Picture** columns of the **Product Canvas**.

IPP Meetup **PFM6 Target Groups List**, will be derived from the Target Group column of the Product Canvas.

The final IPP Meetup **PFM, PFM7 Capabilities List**, will be derived from the Big Picture column of the Product Canvas.

LSM/Agile IPP: PFM6 – Target Groups

PFM # 4
Personas List

3	A Harry = Hurried Worker/User	1
1	B Paul = Product Mgr (Staff)	1
6	C Jason = Factory Prep	2
6	D Louise = Assembler	2
5	E Dave = App Developers	1
1	F Ira = Industrial Designer	1
3	G Art = Creative Branding	1
1/7	H Karl = Cost Estimator	3
6/7	I Ike = Industrial Engineer	2
1	J Pete = Project Mgr	2
1/5	K Eric = Engineers	

A red dashed circle highlights the personas from C to I, which are grouped together in the original image.

February 26, 2021

www.incose-cc.org

Copyright © 2021 by Michael E. Pafford

70

As the first step in developing IPP Meetup **PFM6**, **Product Canvas**, the IPP Team revisits **PFM4**, Persona List, to ‘bin’ common **PFM4s** into a smaller and more manageable set of **PFM6 ‘Target Groups’** (literally **Groups of Personas or Stakeholder Groups**).

This slide shows an example of how the IPP Meetup team at the INCOSE Great Lakes Regional Conference (GLRC) 2018 binned common **PFM4s** into three **PFM6 Target Groups**.

The Value of PFM6 Target Groups, becomes much clearer, as the full set of PFM5s gets developed.

LSM/Agile IPP: PFM6 – Target Groups

Target Group	Target Group Personas
Helen Hospital Facilitator	- Sarah Facilities Manager - Logan Materials Manager
Harry Hospital Emergency Manager	- Harry Emergency Manager
Howard Hospital Administrator	- Ricky Legal Department Staffer - Alan Compliance Officer - Charlene Chief Financial Officer (CFO) - Craig Chief Information Officer - Sally Human Resources Lead
Charlie Hospital Chief Operating Officer (COO)	- Logan Materials Manager - Marty Systems Integrator - Phil Security Officer - Charlie COO
Mandy Hospital Chief Medical Officer	- Mandy Chief Medical Officer - Nancy Chief Nursing Staffer
Avery	All RHRM Users

February 26, 2021

www.incose-cc.org

Copyright © 2021 by Michael E. Pafford

71

This slide shows how the IPP Team for the [RHRM] MBSE project binned 14 common **PFM4 Personas** into Six **PFM6 Target Groups**.

The PFM6 Target Groups (the Binning or ‘Commonizing’ of PFM4/PFM5 Goals and Roles), helps greatly in managing the traceability and optimizing of Stakeholders and Expected Capabilities.

LSM/Agile IPP: PFM6 – Target Groups

Concerning PFM1 ‘Hats’, PFM4/PFM5 Personas, and PFM6 Target Groups:

- PFM1 ‘Hats’ are Decision Maker level Initial Project Planners.
- PFM4/PFM5 ‘Personas’ are Project Development Stakeholder Groups.
- PFM6 ‘Target Groups’ are ‘Grouped’ or ‘Binned’ Common Project Development PFM4/PFM5 Personas (Stakeholder Groups).

** NOTES:

- It is possible that a **PFM1 ‘Hat’**—might also be a **PFM6 Target Group**— if they also represent a unique **PFM4 Persona** (i.e., they will be leading a group using the RHRM).
- It is also possible that a **PFM4** can also be a **PFM6**—if their Roles & Responsibilities are unique (i.e., they cannot be Binned with other PFM4s under a new PFM6).

February 26, 2021

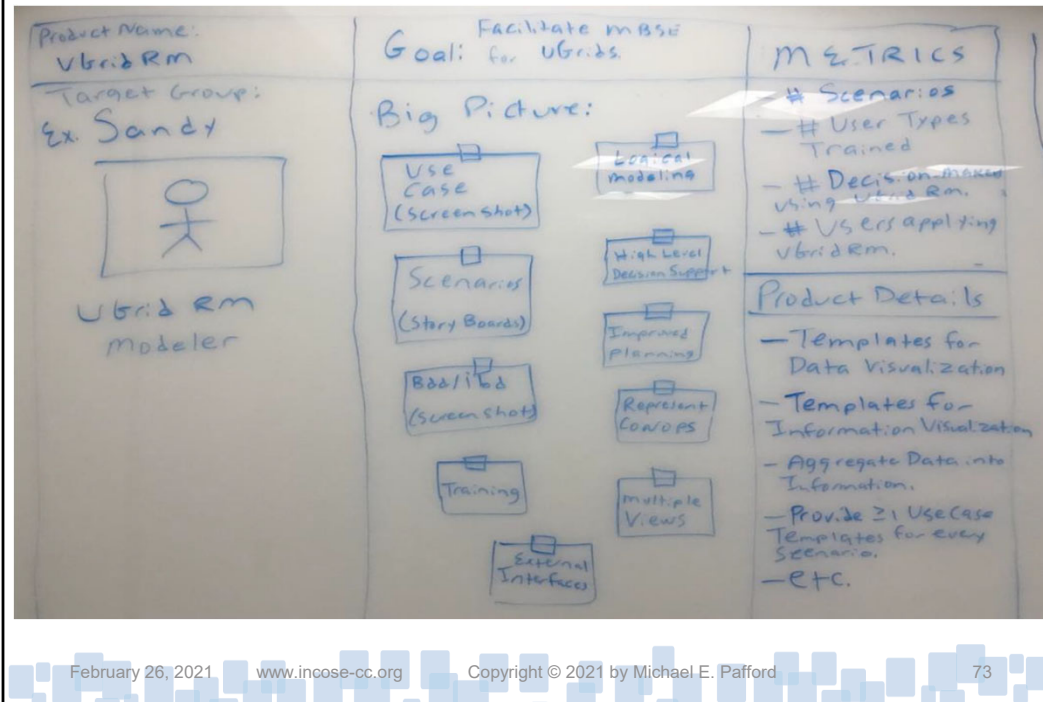
www.incose-cc.org

Copyright © 2021 by Michael E. Pafford

72

This slide contains some Important Review Points about PFM1, PFM4, PFM5, and PFM6.

LSM/Agile IPP: PFM6 – Target Groups





Here's a picture of the glassboard session in which the **uGrid RM MBSE** project IPP Team worked together to build example parts of the **PFM6, 'Product/Project Canvas'**.

As with PFM4 (Personas List), the IPP Team 'Names' each Target Group; continuing the LSM and Agile Software Engineering best practice of 'Personalizing' work.

As with PFM5 (set of Persona Templates/Cards), the IPP Team develops together Example parts of a **PFM6 Product or Project Canvas**.

The rest of the **set of PFM6 Product Canvases** will again be finalized during initial project execution.

LSM/Agile IPP: PFM6 – Target Groups

Product Name: <i>uGrid RM</i>	GOAL: <i>Facilitate MBSE for uGrids</i>	Metrics:
Target Group: Ex. Samantha  uGrid RM Modeler (Other Personas as decided in this Target Group)	Big Picture: 	-- # of Scenarios -- # of User Types Trained -- # of Decisions Makers using uGrid RM -- # Users Applying uGrid RM Product Details: -- Templates for Data Visualization -- Templates for Information Visualization -- Aggregate Data into Information -- Provide at least One Use Case Template for every Scenario -- etc.

February 26, 2021

www.incose-cc.org

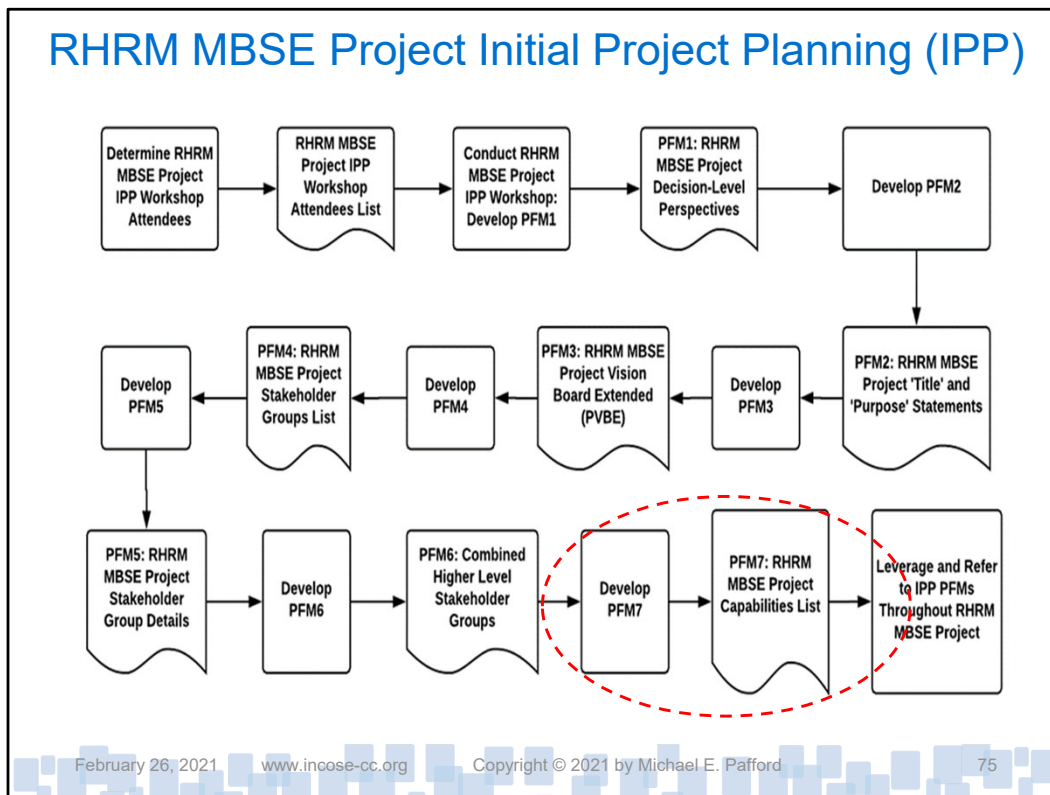
Copyright © 2021 by Michael E. Pafford

74

Here's a 'Clean Up' version of the glassboard and stickie notes sessions in which the **uGrid RM MBSE** IPP Team worked together to build Example parts of a **PFM6 'Product or Project Canvas'**.

Remember: The **PFM6 Target Group** 'Name' is made up.
 The Target Group icon/picture is made up.
 The Target Group Role is Real (Binned PFM5 Details).
 The Target Group Goal is Real (Binned PFM5 Goals).
 The Target Group Big Picture (Solution Ideas) is Real.
 The Target Group Metrics and Product Details are Real.

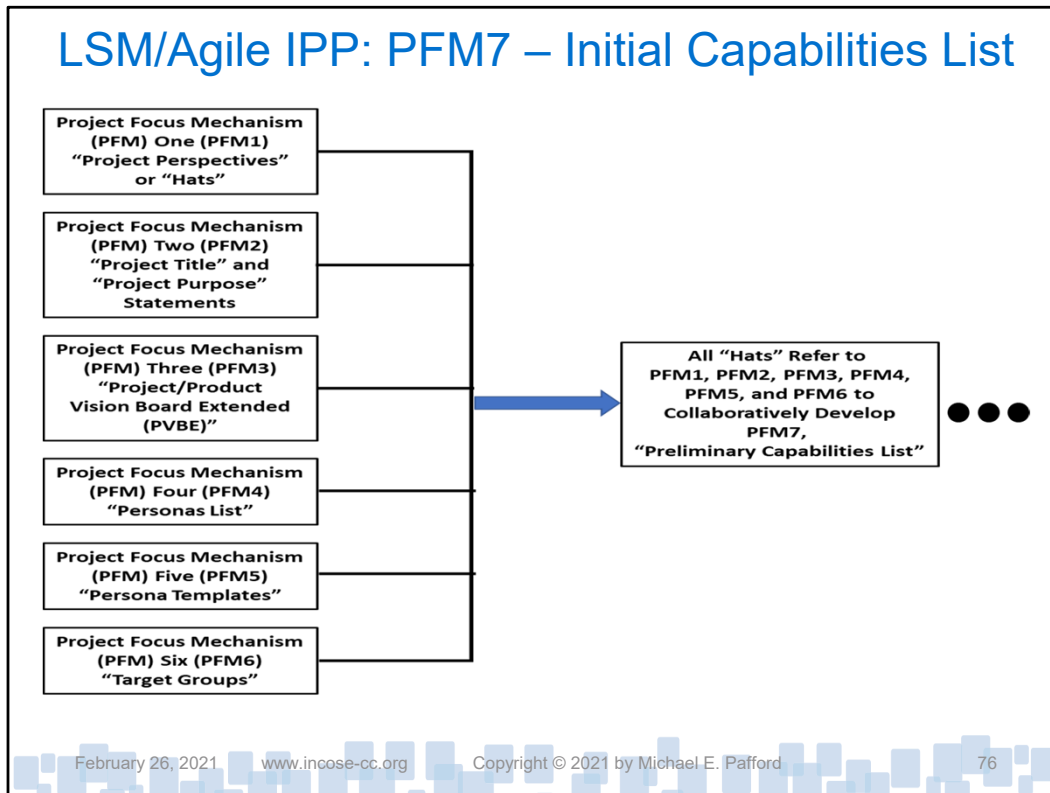
IPP Meetup emphasizes 'Target Group' and 'Big Picture' parts of the Product Canvas.



The next and final phase of IPP is “**SOLUTION BUILDING BLOCKS**”; borrowing Best Practices from Agile SWE and Agile PjM.

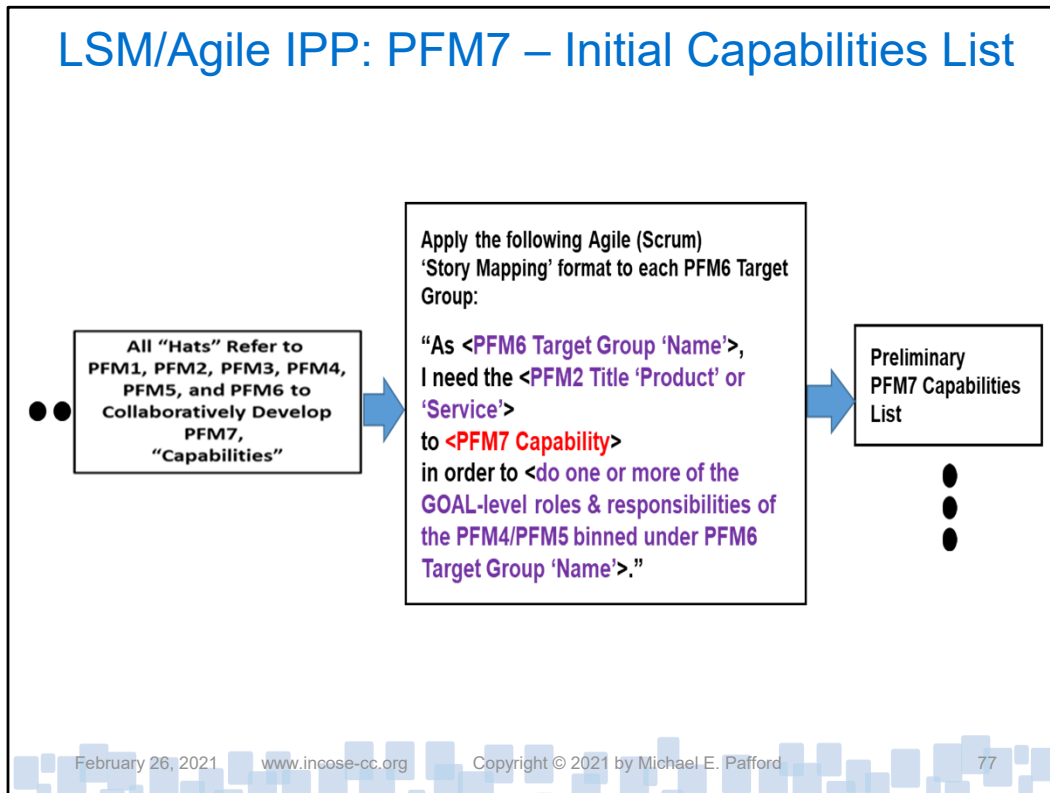
To develop together IPP **Project Focus Mechanism Seven (PFM7), Initial Capabilities List**, the **IPP Team** leverages all previous PFMs, then uses best practices from Agile (Scrum) Product Backlog Item (PBI) Development, to create PFM7, an initial set of Solution-Ready Building Blocks (i.e., **Expected System-Level Capabilities**).

Agile SWE (Scrum) calls this a list of ‘**Epics**’ or Epic User Stories, which are very analogous to a list of ‘**Capabilities**’.



This slide is the final part of the LSM/Agile IPP workflow, showing one more time how all previous PFMs are used by the IPP Team to develop together **PFM7, a Preliminary list or set of System-Level Expected Capabilities.**

LSM/Agile IPP: PFM7 – Initial Capabilities List



This slide is an LSM/Agile IPP Meetup workflow specifically showing the steps the IPP Team would follow to leverage the first Six IPP Meetup PFMs, then use another Agile (Scrum) best practice (EPIC User Story Mapping), to develop together **PFM7, a Preliminary or Initial Set or List of System-Level Expected Capabilities.**

****NO Agile User Story Mapping experience is needed!**

A **Final Capabilities List** is done during project development, in conjunction with completing a **Final Set of PFM5 Persona Templates/Cards**, and a **Final Set of PFM6 Target Group Product/Project Canvases/Templates.**

LSM/Agile IPP: PFM7 – Initial Capabilities List

Apply the following Agile (Scrum) 'Story Mapping' format to each PFM6 Target Group:

“As <PFM6 Target Group 'Name'>, I need the <PFM2 Title 'Product' or 'Service'> to <PFM7 Capability> in order to <do one or more of the GOAL-level roles & responsibilities of the PFM4/PFM5 binned under PFM6 Target Group 'Name'>.”

February 26, 2021

www.incose-cc.org

Copyright © 2021 by Michael E. Pafford

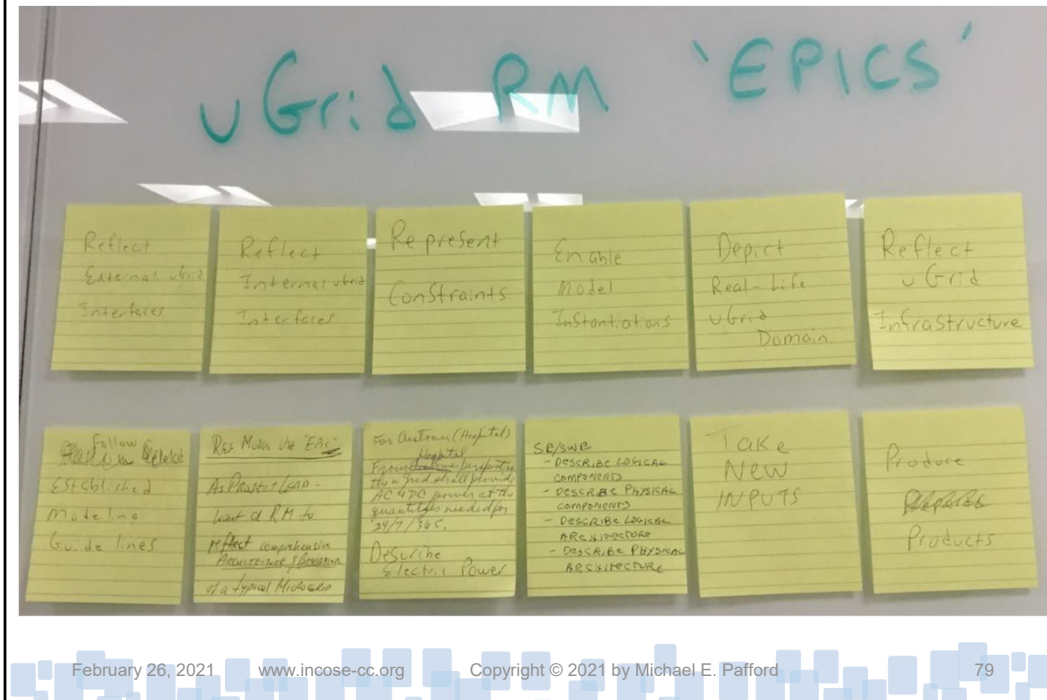
78

Let's go over that EPIC User Story format again—as it Clearly shows how all the IPP Project Focus Mechanisms are tied together...

Here we have a PFM1 'Hat' talking...

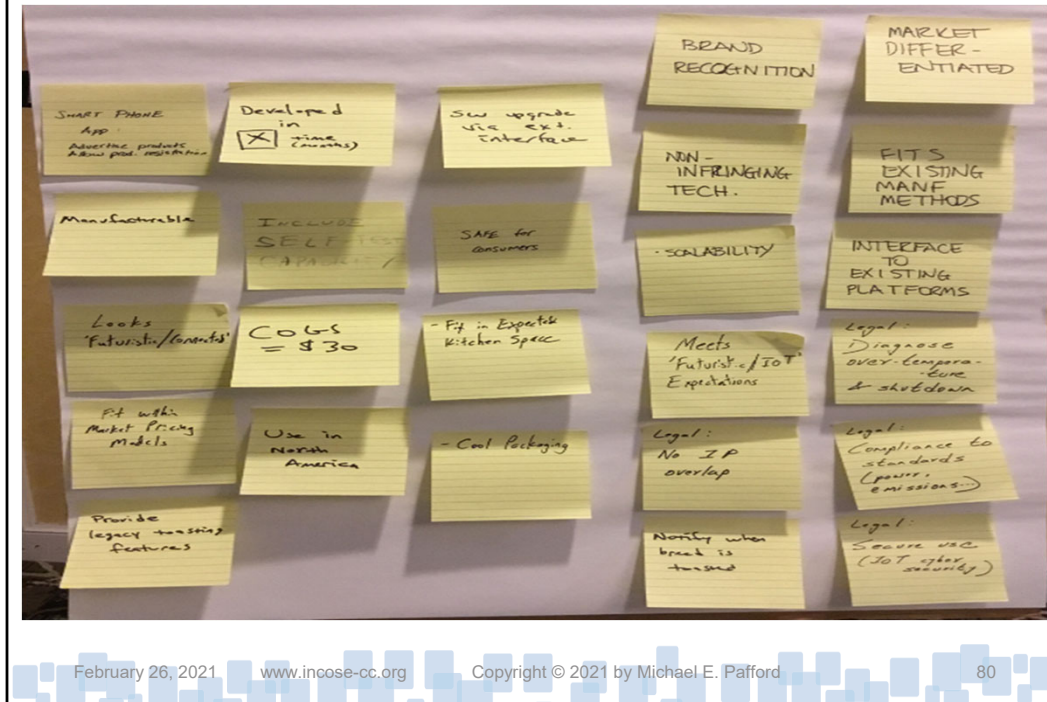
The PFM1 'Hat' is speaking on behalf of the Organization (i.e., Referencing PFM3, the PVBE)—and on behalf of the Stakeholders (Referencing PFM4, PFM5, and PFM6).

LSM/Agile IPP: PFM7 – Initial Capabilities List



Here's a picture of the Affinity Mapping session in which the [uGrid RM MBSE Project] IPP Team (PFM1s) used Agile SWE (Scrum) Epic User Story Mapping to develop a preliminary set of **uGrid RM 'Epics' or System-Level 'Capabilities'**; the **Seventh and Final IPP Project Focus mechanism** during uGrid RM MBSE project IPP.

LSM/Agile IPP: PFM7 – Initial Capabilities List



Here's a picture of the Affinity Mapping whiteboard session where the INCOSE GLRC 2018 "Smart Toaster" IPP Team used Agile Scrum **Epic User Story Mapping** to develop together PFM7; a preliminary set of '**Epics**' or '**Capabilities**'.

LSM/Agile IPP: PFM7 – Initial Capabilities List			
Reflect External uGrid Interfaces	Reflect Internal uGrid Interfaces	Represent Constraints	Enable Model Instantiations
Follow Established Modeling Guidelines	Depict Real-Life uGrid Domain	Reflect uGrid Infrastructure	Describe uGrid Logical and Physical Components

February 26, 2021 www.incose-cc.org Copyright © 2021 by Michael E. Pafford 81

Here's a 'Clean Up' set of Example **Titled Initial Work Items or System-Level Capabilities List** for the [uGrid RM MBSE] project.

These **high-level titled initial work items (aka 'Epic' User Stories)** can later be used as initial project **focus mechanisms** for completing project **User Scenarios, Use Cases, Detailed Capabilities Lists, and more detailed User Stories.**

LSM/Agile IPP: PFM7 – Initial Capabilities List

Reflect External Interfaces	Model Solid Waste Disposal	Family Support	Imaging Support
Reflect Internal Interfaces	Reflect Essential Services	Describe Methods for Family Care On Site or At Home	Adequate Pharmaceuticals
Represent Constraints	Estimate Capabilities and Capacities in Resource-Constrained Environments	Show Situational Awareness	Model Patient Status
Enable Model Instantiations	Save Alternatives	Show Resource Status	Model Patient Intake and Release
Depict Real-Life Resilient Hospital Domains	Reflect Critical Infrastructure	Show Essential Functions	Model Morgue Process
Reflect Resilient Hospital	Estimate Resource Needs	Choose Essential Services for Resilience Scenario	Direct Patient Care Tracking
Follow Established Modeling Guidelines	Depict Range of Scenarios	Realism for Operations	Triage Patients and Determine Alternative Care
Reflect Comprehensive Architecture and Behavior of a Typical Resilient Hospital	Provide Response Checklists	Address a Range of Threats	Enable and Enhance Nursing Staff Function Coordination
Describe Critical Operations	Provide Help Plan Resources	Safety Recognition of Threats as Features and Benefits	Depict Secure Facility Architecture
Describe Relevant Logical Architecture	Support Continuity of Operations	Express and Rate Physical Vulnerabilities	Express Security Procedures
Describe Relevant Physical Architecture	Support Human Resources	Trigger Cessation of All Care (i.e., Close Hospital)	Express Security Interfaces
Describe Relevant Logical Components	Account for Personnel Availability Over Time	Inform About Situational Awareness and Operational Period Goals	Express and Prioritize Physical Security Requirements
Describe Relevant Physical Components	Track Employee Skills	Define and Train for First and Second Order Communications	Address Various Financial Scenarios
Accept New Inputs	Track Employee Specialized Training	Enable Capacity Planning	Address Assumptions About Financial System Availability
Produce Information Products	Track External Candidates	Address and Forecast all Hospital Input and Output	Address the Supply Chain Availability and Depletion
Present Selected Alternatives	Track Locations	Support Logistics and Supply Management	Cost Estimation of Alternatives
Model Water Supply and Consumption	Perform Administrative Functions of an Organization	Manage Equipment and Medical Care Supplies	Estimate Burn Rate
Model Biohazard Disposal	Ensure Minimal Staffing	Model Effects of Supply Support	Estimate Time to Depletion
Model Waste Water Processing		Climate Control	Model Essential Data
Model Laundry		Functional Operating Rooms	Model Information Equipment
		Laboratory Support	Model Information Data
			Model Actions
			Model Information on People
			Execute High-Fidelity Modeling Scenarios
			Archipelago Simulation
			Island Mode Simulation

February 26, 2021

www.incose-cc.org

Copyright © 2021 by Michael E. Pafford

82

This eye chart slide shows the extensive **PFM7 Preliminary Capabilities List** developed by the IPP Team during the three IPP Meetups for the **RHRM MBSE project**.

LSM/Agile IPP: Project Focus Mechanisms (PFMs)

LSM/Agile IPP 'Meetup' Phase	Project Focus Mechanisms (PFMs)	Best Practice From Discipline:
IPP Meetup Attendee Selection/Confirmation	PFM1: IPP Meetup 'Hats' (i.e., Roles)	Agile Scrum 'Product Owners', and Project Managers
Initial Project Outcome Discussions	PFM2: Project 'Title' and 'Purpose' Statements	Agile SE (Systems Thinking)
Project 'Problem Validation'	PFM3: 'Product Vision Board Extended (PVBE)'	Lean Startup Method (LSM) and Agile Project/Product Management
Project 'User Validation'	PFM4: Project 'Persona List'; List of Stakeholder Groups	LSM and Agile Project/Product Management
Project 'User Validation'	PFM5: Example Project 'Persona Cards' or 'Persona Templates'	LSM and Agile Project/Product Management
Project 'Solution Validation'	PFM6: 'Grouping or Binning' of Persona Groups	LSM and Agile Project/Product Management
Project 'Solution Building Blocks'	PFM7: Initial Set of 'Title Level' Project Capabilities.	Agile (Scrum) SWE 'Product Backlog Item' Development

February 26, 2021

www.incose-cc.org

Copyright © 2021 by Michael E. Pafford

83

So, let me review with you, what Project Focus Mechanisms this hybrid IPP Approach gives you...

LSM/Agile for IPP: The Artifacts

This Hybrid LSM/Agile for IPP Approach creates the following artifacts:

- **‘Meetup’ Artifacts (IPP ‘Raw Data’) include:**

- Whiteboard/Glassboard Pictures
- Flip Charts and Flip Chart Pictures
- Stickie Notes and Stickie Note Pictures
- Hand-Written Pages and Page Pictures (e.g., Sign-In Sheets, Forms, etc.)

- **‘Clean Up’ Artifacts include:**

- Whiteboard/Glassboard Pictures to Files (PDF, Microsoft® Office Tools, etc.)
- Chart Pictures to Files
- Stickie Note Pictures to Files
- Hand-Written Page Pictures to Files

- **‘Post Up’ Artifacts include:**

- Meetup and Clean Up Artifacts stored, managed, and shared in Repository-Based Collaboration Tools
(e.g., Microsoft® Teams, Microsoft® SharePoint, Dropbox™, Confluence®, etc.)

February 26, 2021

www.incose-cc.org

Copyright © 2021 by Michael E. Pafford

84

Let’s also review what IPP Artifacts you’ll wind up with, that you can effectively and efficiently refer to—and use—throughout the entire system solution development life-cycle—no matter which development methodology is used!

It’s important to repeat, that NO special tools are needed to hold a successful LSM/Agile IPP Meetup.

All of the steps can be accomplished using Brainstorming and Affinity Mapping tools and techniques, and the software tools we’re all already used to using.

LSM/Agile for IPP: The ‘Main’ Artifact

Here’s another excerpt from the “**IPP Workbook**” for the Resilient Hospital Reference Model (RHRM) MBSE project:

Resilient Hospital Reference Model (RHRM) Project - Project Focus Mechanism Five (PFMS): Persona Templates			
Picture, Name & Title	Details (Needed Job Skills and Qualifications-ex. From Inet Search)	Goals (Roles & Responsibilities (how would use RHRM))	Notes
Adam Admissions and Discharge Lead			
Alan Compliance Officer	<ul style="list-style-type: none"> - Understands performance management, financial management, information systems - Can work within hospital organizational culture and local, state and federal regulatory environment - Understands standardized care delivery through inter-professional teams - Has patient focus - Note: Reference: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3004930/ 	<ul style="list-style-type: none"> - Uses a systematic approach to maintain compliance with applicable laws, regulations and standards. - Performs a systematic approach to maintain and improve the quality of patient care. - Manages risk. - Performs clinical audits. - Monitors staff education and training. - Monitors clinical effectiveness and clinical information. 	
Albert Alert Staffer			
Andy Accounting Staffer			
Carl Communications Director			
Charlene Chief Financial Officer (CFO)	<ul style="list-style-type: none"> - Not necessarily a CPA, but very skilled in accounting - Skilled in financial planning - Effective communicator - Skilled risk manager 	<ul style="list-style-type: none"> - Supervise hospital finances - Serve as chief financial spokesperson. - Serve as primary POC for financial purposes (e.g., with auditors). - Ensure that hospital runs in the most cost effective manner. - Manage financial risks. 	
Charlie Chief Operating Officer (COO)	<ul style="list-style-type: none"> - Understands hospital and ambulatory operations - Understands employment and staffing issues and requirements - Understands facilities and infrastructure planning - Understands responsibilities of medical staff - Familiar with Lean and Six Sigma principles of operational excellence - Understands data and analytics; modeling - Understands PR and communications 	<ul style="list-style-type: none"> - Oversee ongoing hospital operations. - Report to hospital CEO. - Serve as second-in-command to CEO. - Serve as trusted consultant, confidante and partner to the CEO. - Be prepared to serve as CEO, temporarily or permanently. 	

February 26, 2021

www.incoose-cc.org

Copyright © 2021 by Michael E. Pafford

86

Here’s another excerpt from the Main or Primary IPP artifact (the **IPP Excel Workbook**) for the [RHRM MBSE] project...

LSM/Agile IPP: Ballpark Time Estimates

Ballpark Time Estimate (Minutes)	IPP Meetup Process Step	Notes
60-90	Verify/Modify/Assign PFM1 'Hats'	Shorter time if PFM1 'Hats' assigned ahead of the IPP Meetup.
60-90	Develop PFM2 Project 'Title' and 'Purpose' Statements	
120-180	Develop PFM3 Project Vision Board Extended (PVBE)	
60-90	Develop PFM4 Personas List	
60-90	Develop PFM5 Persona Template Example(s)	Final Set of PFM5 Persona Templates completed during IPE.
60-90	Develop PFM6 Target Groups List	
120-180	Develop Preliminary PFM7 System Capabilities List	Final PFM7 System Capabilities List completed during IPE.

February 26, 2021

www.incose-cc.org

Copyright © 2021 by Michael E. Pafford

87

This slide shows some **Very Much Ballpark Estimates** for the Minutes it might take, at Facilitated IPP Meetups, for an IPP Team to accomplish together each of the approach process steps.

These times are based on my experiences facilitating IPP Meetups with various groups of IPP meetup attendees.

The times also show that IPP Meetups are usually facilitated as a **Series** of collaborative workshops.

Both the [**uGrid RM**] and [**RHRM MBSE**] project IPP Meetups were a set of three facilitated 3-6 hour workshops.

LSM/Agile IPP: References

- **Lean Startup Method (LSM):**
 - **WWW:** <http://theleanstartup.com/>
 - **Book:** *The Lean Startup*; **Eric Ries**; 2011; ISBN: 978-0-670-92160-7; <http://tinyurl.com/y7nvq66c>
 - **Blog:** **Steve Blank**; <https://steveblank.com/>
- **Agile Project Management:**
 - **WWW:** <https://www.romanpichler.com/blog/product-roadmap-product-backlog/>
 - **Book:** *Agile Product Management with Scrum*; **Roman Pichler**; 2011; ISBN-13: 978-0321605788; <https://tinyurl.com/y856stnk>
- **Agile Systems Engineering:**
 - **WWW:** SEI CMU - <https://tinyurl.com/yb56mb4g>
 - **Book:** *Agile Systems Engineering*; **Bruce Powel Douglass, Ph.D.**; 2016; ISBN: 978-0-12-802120-0; <https://tinyurl.com/yc7nk2f4>
 - **Group, S.** (2009); "Standish Newsroom – CHAOS 2009"; <https://tinyurl.com/y8zzleyr>
- **Agile (Scrum) Software Engineering:**
 - **WWW:** <https://www.scrumalliance.org/learn-about-scrum>
 - **Book:** *SCRUM: The Art of Doing Twice the Work in Half the Time*; **Jeff Sutherland & J.J. Sutherland**; <https://tinyurl.com/ycp6zs3f>

February 26, 2021













www.incose-cc.org

Copyright © 2021 by Michael E. Pafford

88

Here's a list of Lean Startup Method (LSM) and Agile References I've used in facilitating LSM/Agile for IPP Meetups and other workshops.

LSM/Agile IPP: QR Codes

 Eric Ries LSM	 Steve Blank LSM	 PMBoK Info
 Harvard Business LSM	 "Six Hats"	 Business Model Canvas
 Roman Pichler Agile Project Management	 IAF Info	 Lucid Chart
 Persona Templates Cards	 Agile Scrum Guide	 Agile Systems Engineering

February 26, 2021 www.incose-cc.org Copyright © 2021 by Michael E. Pafford 89

This slide contains several QR Codes pointing to WWW URLs containing more information related to using LSM/Agile for IPP.

If any of these links no longer work, and a quick Search doesn't get you to the right information, get hold of me.

Thank You!

Michael E. (Mike) Pafford
Past President, INCOSE Chesapeake Chapter
International Association of Facilitators (IAF)
mepafford@verizon.net
<https://twitter.com/mepafford>
<https://www.linkedin.com/in/mikepafford/>

Save the Chat!

Thanks a lot again for attending this workshop on LSM and Agile for IPP.

Here's my Contact Info, with some other QR codes pointing to my sites in Twitter, LinkedIn, YouTube, and Dropbox (lower right QR Code).

Happy to take any questions in the time remaining. Don't hesitate to get hold of me later about anything I've talked about, or if you'd like to know more about the approach.

Thanks.