

25th anniversary
annual INCOSE
international symposium
Seattle, WA
July 13 - 16, 2015



The “V” Model - *Reloaded*

Casey Medina, CSEP

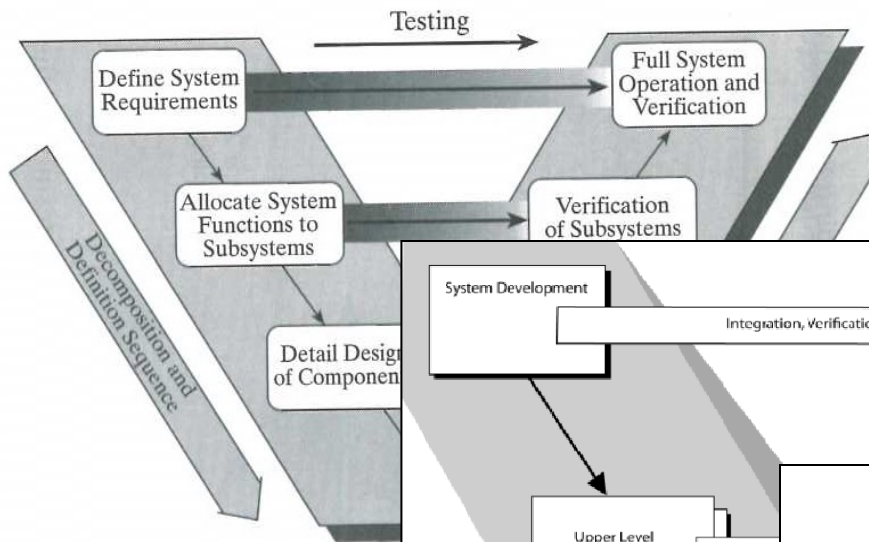


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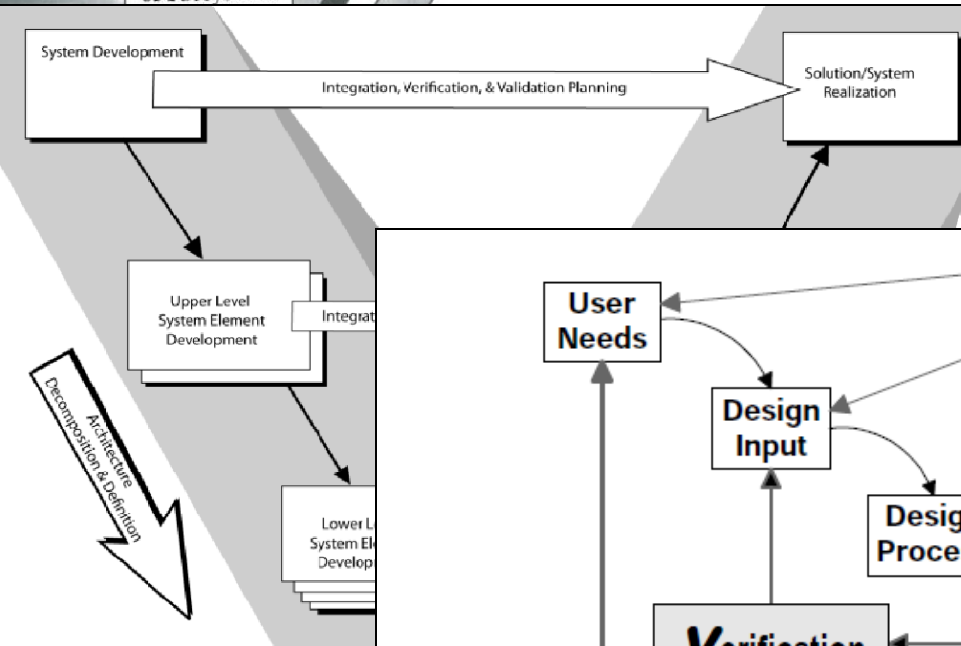


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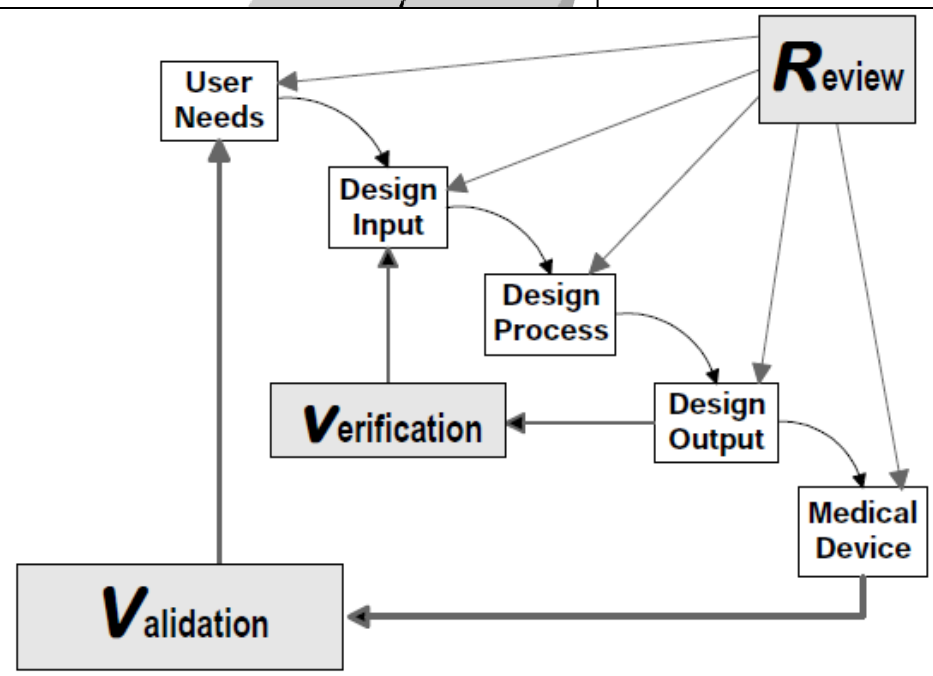
"Vee" Process Model



Blanchard, B. and Wolcott, G. *Engineering and Analysis*



Haskins, C. ed., *SE Handbook With Guide for System Life Cycle Process*



"Design Control Guidance for Medical Device Manufacturers." 1997. United States Food and Drug Administration Center for Devices and Radiological Health (CDRH)

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Design answers questions.



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What do my stakeholders need?

How can I be sure I build what my stakeholders need?

What functions does the system need to perform? What are its essential characteristics?

What is the system's structure? What is the function of each structural element?
How will the structural elements interact?

How do the Product Requirements translate to each system component?

What is the plan for making sure the system's components all fit and work together?

How will each domain contribute to the system's success?



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What is the solution?

How does the market respond to my design?

Did I satisfy the User Needs?

Did I satisfy my system requirements?

How do the subsystems fit and work together?

Did I satisfy my subsystem requirements?

How do the pieces fit together?

Did I satisfy my domain requirements?



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How will each domain contribute to the system's success?

Did I satisfy my domain requirements?

What is the solution?



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Did I build the *RIGHT THING*?

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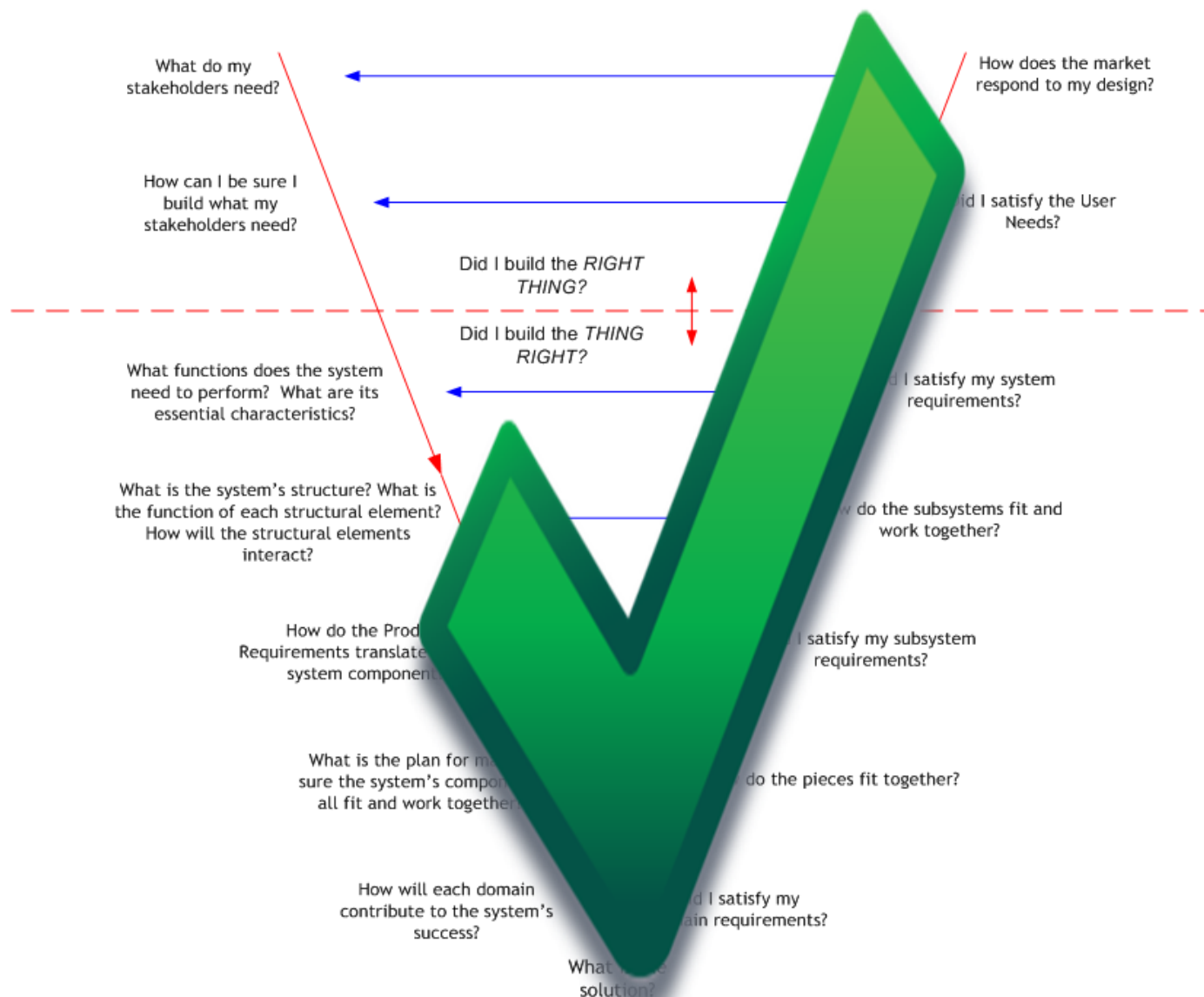
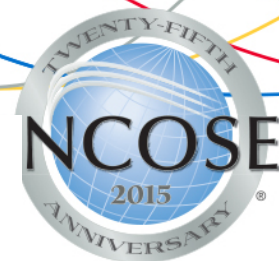
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Did I satisfy my domain requirements?

What is the solution?





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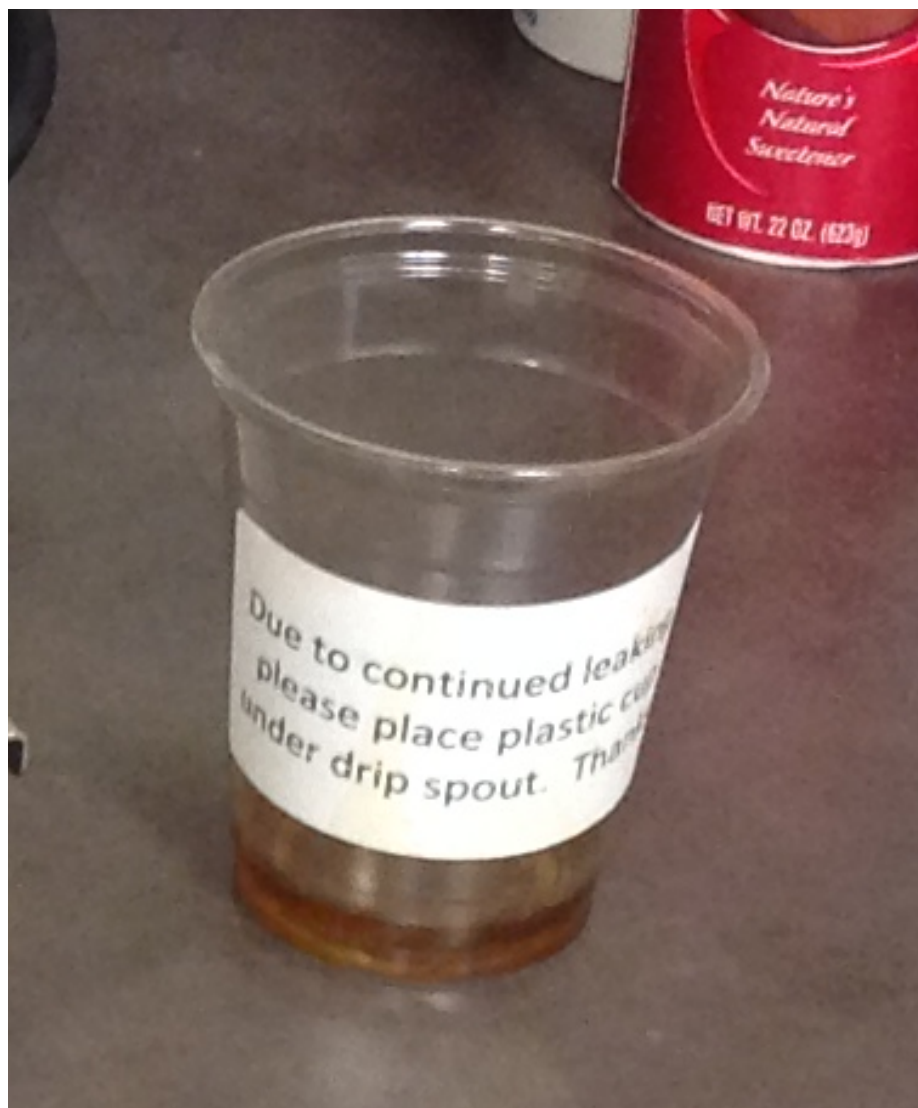
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University of Michigan School of Public Health *Mozambique Program for Healthcare facility waste treatment*
Principal Investigator: Stuart Batterman

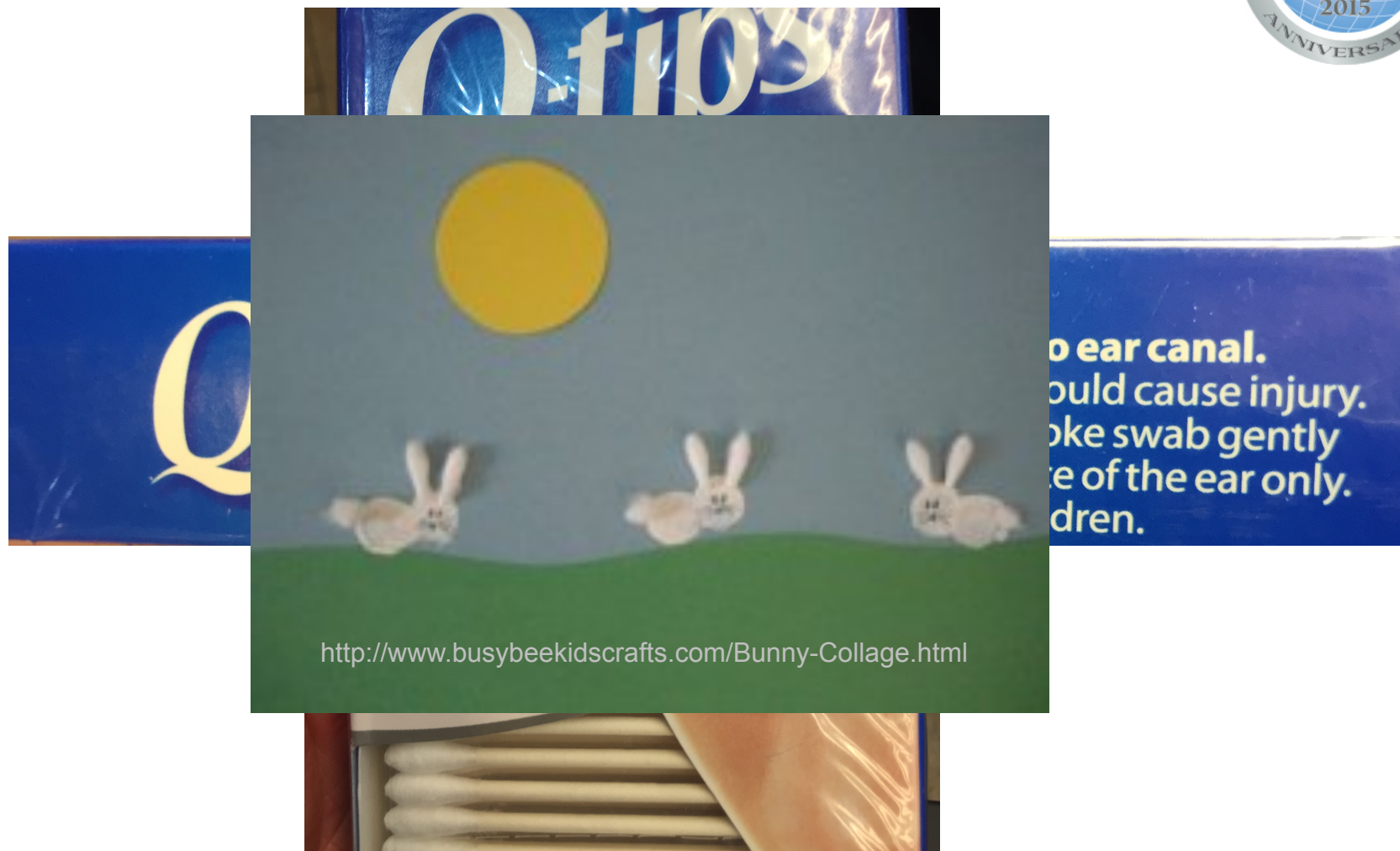


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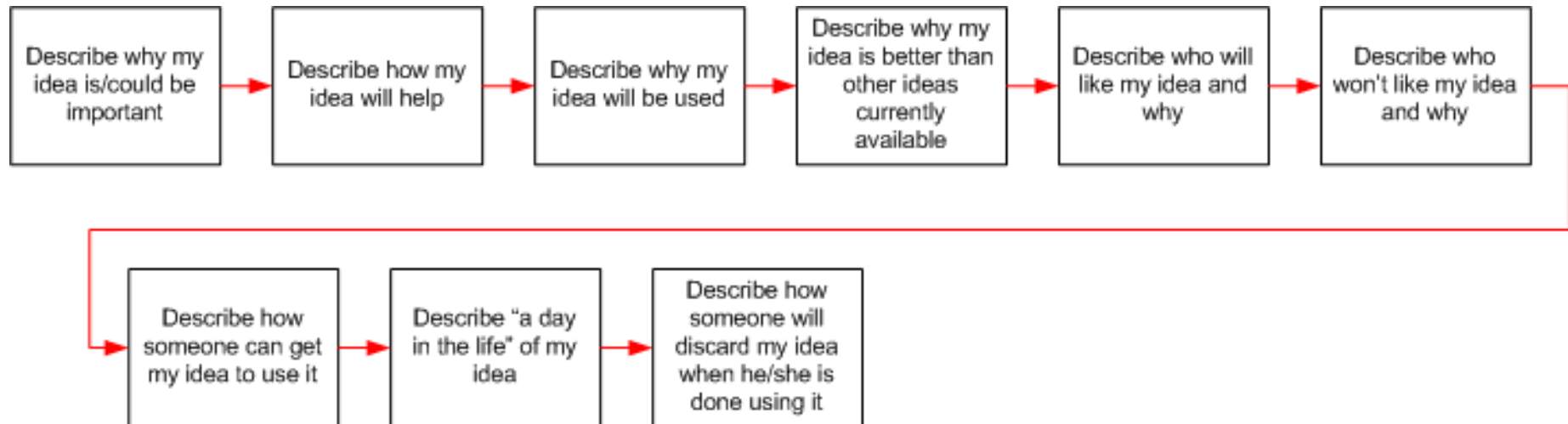






Teams are more
comfortable solving
problems than defining
them.

Tell the Story





Answers are expensive.
Good answers cost the
same. - Rick Griffith



Asking the questions
right is as important as
asking the right
questions.



- Ask questions in a personal, engaging manner
- Listen intently – be present
- Create a safe environment
- Help your team capitalize on opportunities to increase their knowledge of their system

Please Remember:



- What is obvious to an SE is not necessarily obvious to others
- Empower your teams to embrace the process
- Allow your teams time to digest and understand the material

We're only successful if we enable our teams to be successful!



Thank you!

QUESTIONS?