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A Comparison of Six Sigma, Lean, and DFSS

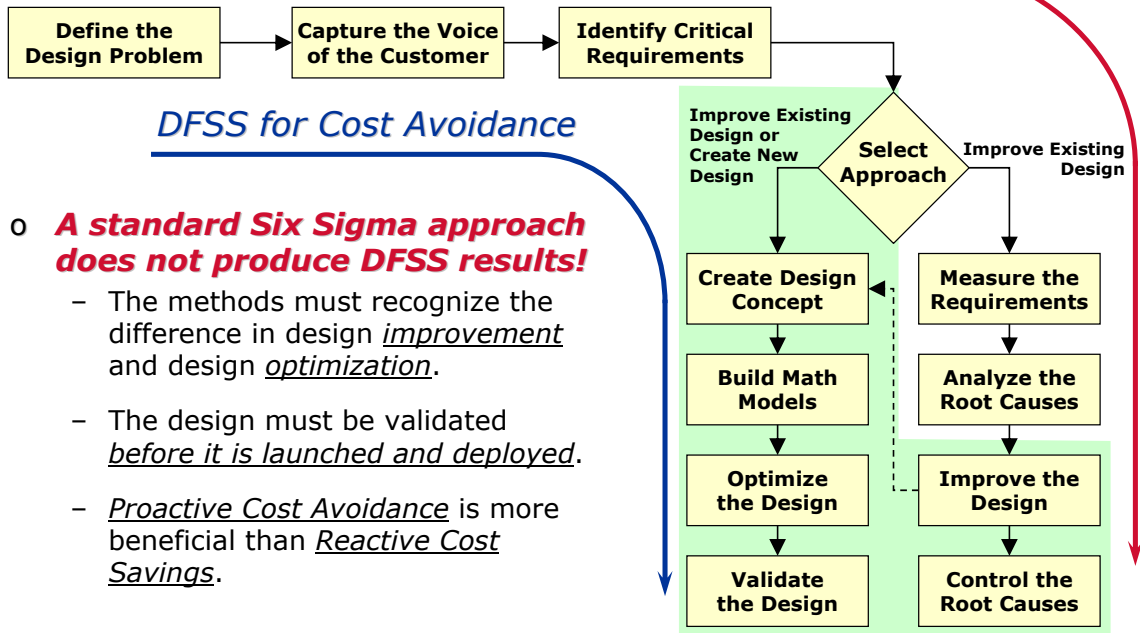
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Comparing DFSS with Six Sigma

- o In **Six Sigma**, the DMAIC methodology is typically used when a product or process is in existence, but it is not meeting customer specification or is not performing adequately.
- o **Define** - define the problem, opportunities, project goals and customer (internal and external) deliverables
- o **Measure** - measure the process to determine current performance and establish a baseline
- o **Analyze** - analyze and determine the root cause(s) of the defects
- o **Improve** - improve the process by eliminating defects
- o **Control** - control future process performance

Ref: *DMAIC versus DMADV*, www.isixsigma.com.

Six Sigma for Cost Savings



DFSS for Cost Avoidance

- o **A standard Six Sigma approach does not produce DFSS results!**
 - The methods must recognize the difference in design *improvement* and design *optimization*.
 - The design must be validated *before it is launched and deployed*.
 - *Proactive Cost Avoidance* is more beneficial than *Reactive Cost Savings*.

Comparing DFSS with Six Sigma and Lean

- o **Six Sigma** - philosophy and science of reducing costs and improving customer satisfaction through statistical and lean methods. ¹ } Reduce Defects
- o **Lean** - identification and elimination of waste to create a continuous flow of materials and information through the value stream to meet customer demand. ¹ } Reduce Waste
- o **Lean Six Sigma** - combines quality and lean manufacturing tools ... into a systematic model of process, product and service improvement. ¹ } Reduce Defects and Waste
- o **Design for Six Sigma** - a rigorous approach to designing products and services and their enabling processes from the beginning to ensure that they meet and exceed customer expectations and outperform competitive products and services. ² } Avoid Defects and Waste

o Statistical Design Institute, LLC - The Company

- Focus on applied research, development, and effective implementation of Design for Six Sigma (DFSS) and methods for Enhanced Product Development.
- Recognized need to apply the principles of Six Sigma to the engineering and new technology/product development process.
- Provide consulting, training, and SW tools for applying DFSS in new product development.

o Statistical Design Institute, LLC - The People

Applicable Experience

George Chollar	PhD, EE/SE	30 yrs	BB, 6 yrs
Jesse Peplinski	PhD, ME/SE	7 yrs	MBB, 6 yrs
Michael Elliott	BA, Marketing	30 yrs	Sales & Marketing
Tom Cheek	PhD, EE	33 yrs	BB/Champion, 10 yrs

... plus consultants with MBB and BB experience in Operations Research, Supply Chain Management, and Computer Science for support of DFSS applications in process, service, and software development.

SDI Contact Information

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