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Retaining Women in Engineering

## Retaining Women in Engineering The Empowerment of Lean Development

## Bios

## Alissa Stavig, MD

- Bachelors in Physics and Anthropology
- MD from Duke Medical School
- 5 Year Residency, Duke Hospital
  - Combined Internal Medicine and Psychiatry
- Currently an MD working in Billings MT.

## **Bob Stavig**

20 years of Product Development experience
16 years of using the principles of Lean Development

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- 15 years of Manufacturing experience
- BS in Mechanical Engineering

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No But Why do we think we can address this..... **Difference in** Maybe it is fundamentally lack of interest..... Capability Protentional Engineering Recruits (in the US) ~ 4.4 M Only about 3% of 18 year olds will become 97% of 18 engineers 3% year olds will not be engineers ~140k Engineering High Low Grads 18 year old Each year 3% is a very Interest and Capability 8 small number Sept. 7, 2023 © Robert N. Stavig, 2023

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The Creation of Reusable Knowledge	Set Based Design Vs
<ul> <li>The knowledge is being "written down" during the work of learning</li> </ul>	Build-Test-Fix
• (It is not done after the fact)	<ul> <li>Identifying the Multiple options/ideas</li> <li>Establish the Knowledge Gaps for each.</li> </ul>
• It is focused on clarity and conscience.	• Fast learning to eliminate the weakest.
<ul> <li>It is findable by others.</li> </ul>	<ul> <li>Capture the learning as it is gained.</li> </ul>
<ul> <li>It has both scope and depth.</li> </ul>	<ul> <li>Move the learning forward to stronger options</li> </ul>
<ul> <li>It is technical and/or business (not fluff)</li> </ul>	End up with the strongest solution
The A3 Problem Solving Process is a good tool/method to do this.	Build Test Fix is like playing checkers Set Based Design is like playing chess
Both of these promote Technical Excellence and Level the Playing Field	
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