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Sculpting Variation - A Transformative Experience

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Target Audience

- Year 4 on the BSc (Hons) in Applied Biology & Biopharmaceutical Science degree
- In Semester 1 they undertake a 5 ECTS module Statistical Methods for Manufacturing



Background/Challenges

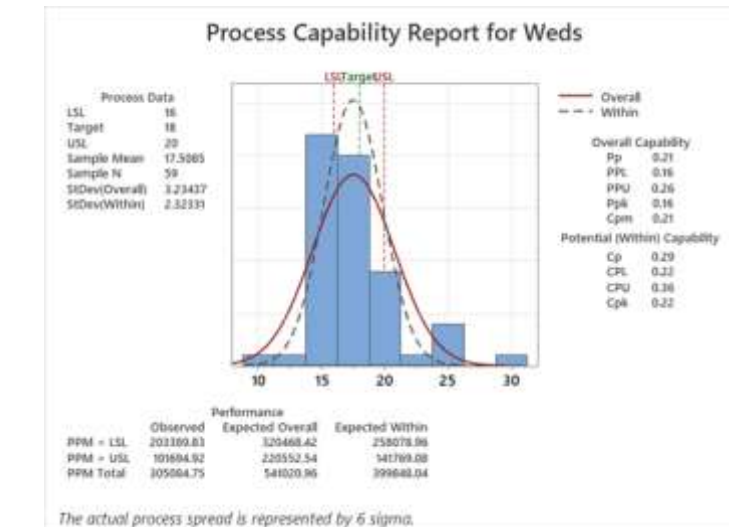
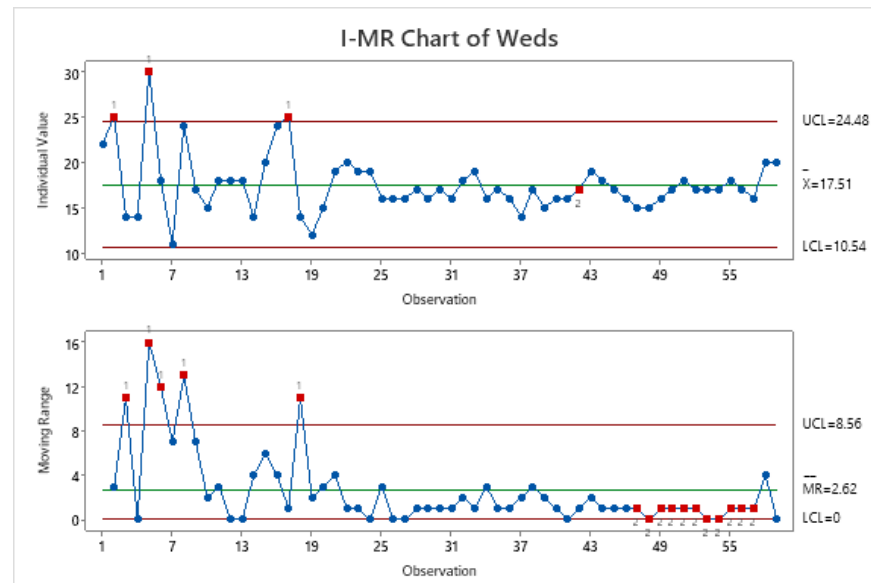
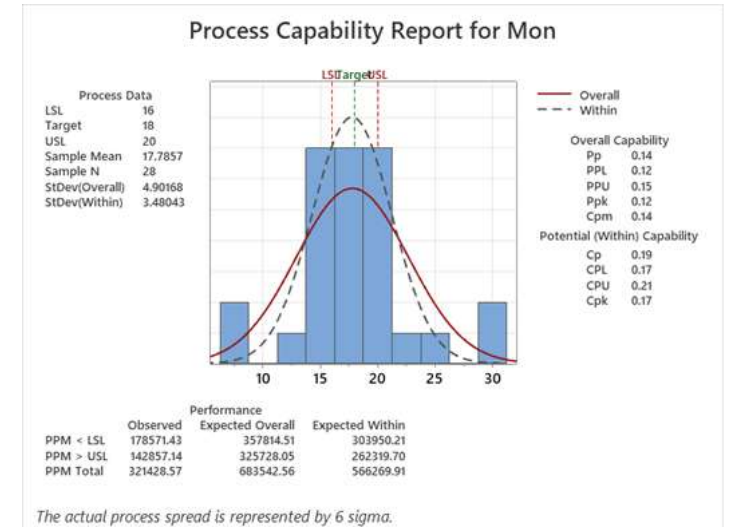
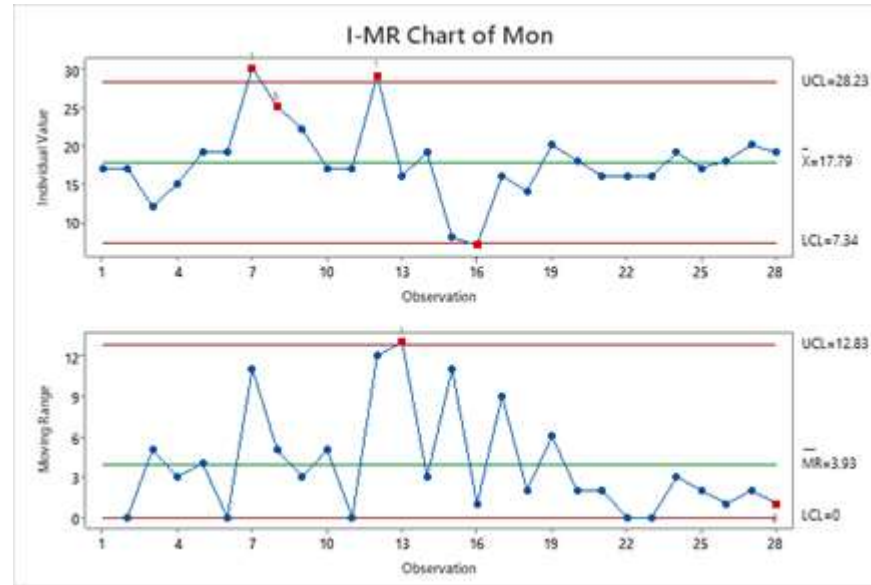
- Moving from product-quality mindset to a process-focused understanding of the concept of variation & how it impacts quality in manufacturing
- Appreciating the distinction between process stability (control) and process capability
- The conceptual integration challenge involved in stability and capability to meet specifications
- Understanding and using the visual tools required for process understanding – VoP & VoC

Implementation... Sculpting Learning!



Results

- As expected, excessive variation
- Processes absolutely not capable of meeting customer specifications



Reflection...

- “It made the concepts of variation much easier to understand as we could physically see where the variation was coming from rather than looking at numbers.”
- “It was a simple but impactful exercise, and a great teaching approach.”
- “.... it was very interesting and thought-provoking. This is because even though the instructions were clearly laid out for us the variation between each of the different results was actually pretty cool.”
- “I found it to be quite fun & engaging whilst being able to relate it to the real-world industrial setting”

Reflection cont'd

- “I think it was a fun and interactive way to learn about variability as it gives a more hands on experience which is something that I will remember more than a lecture.”
- “I thought it was a great way to show variation in industry as a lot of the students in our year will end up making drugs or medical equipment and to have that experience/ knowledge already is great. I loved the fact it was a fun activity, and everyone was engaging.”
- “I think it was a great way to build understanding .”
- “showed real insight into variation, while still being able to make it fun. It showed how variation is in every aspect of life.”
- “ it was fun and creative..”



Questions...

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