

### Troy Ness Manufacturing Technology Engineer

### Seeq conneqt





## Navigating a Grassroots Deployment Strategy

#### **Troy Ness**

Senior Manufacturing Technology Specialist Global Manufacturing Technology 3M Company



Our purpose Why 3M exists

### Unlock the power of people, ideas, and science to reimagine what's possible



#### **3M** Technology Platforms

# Innovative technologies, unique applications deliver for customers

Ab Abrasives												
Ad Adhesives	Em Electronic Materials		•								Di Display Components	Hd Healthcare Data Management
<b>Bi</b> Biomaterials	<b>Fi</b> Films	Nw Nonwovens							Ms Modeling & Simulation	Ac Acoustic Management	Ec Energy Components	Lm Light Management
Ce Ceramics	Fluoro- materials	Performance Materials	Am Additive Manufacturing	Precision Coating & Web Processing	Rp Radiation Processing	Analytical Science	Process Design & Control	Cv Computer Vision	Ro Advanced Robotics	Biodetection & Microbial Management	Eg Engineered Graphics	Mechanical Fasteners
Co Advanced Composites	<b>Mm</b> Metamaterials	Porous Materials & Membranes	Mo Molding	Pd Particle & Dispersion Processing	Surface Modification	Converting & Packaging	Sustainable Design	Ds Data Science & Analytics	Se Sensors	Cs Connected Systems	Fe Flexible Electronics	Stin & Wound Management
Do Dental & Orthodontic Materials	Nano- technology	Rm Rolease Materials	Mr Micro- replication	Pp Polymer Processing	<b>Tff</b> Thin Film & Plasma Processing	In Inspection & Measurement	We Accelerated Weathering	Es Electronic Systems	SS Software Solutions	Dd Drug Delivery	Fp Filtration & Purification	Tm Thermal Management
Materials			Processing		Capabilities		Digital		Applications			



#### Nonwovens

#### Safety & Industrial

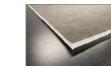
Protecting workers and insulating from sound and heat



#### **Transportation & Electronics**

Automotive acoustic insulation and commercial cleaning solutions







#### Consumer

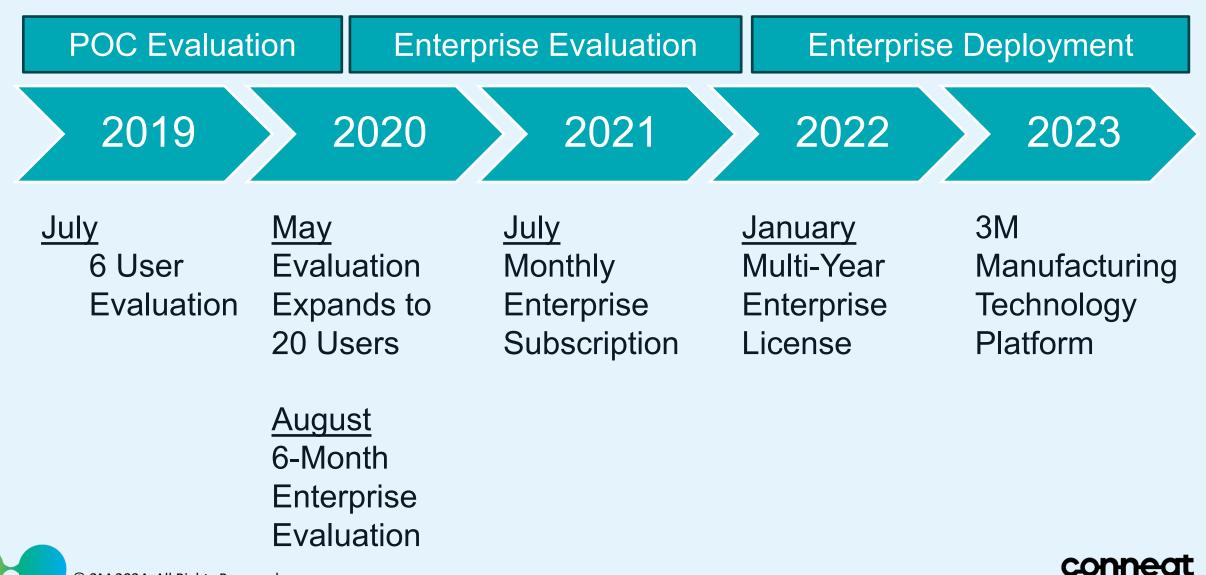
Improving air quality and cleaning homes





#### **Our Journey**







#### **Two Mountains To Climb**

#### <u>Management</u>

- Does Seeq deliver a measurable return on investment?
- Is there really a problem?
- Who will pay for this?

### **Technical**

- Is it worth my time to learn Seeq?
- I have my tools.
- Not my idea.
- Just another tool.

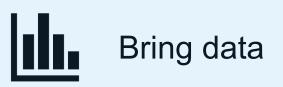
### "Troy, why are we doing this?"

-From a former skeptic, now converted power user of Seeq



#### **Six Strategies to Gain Acceptance**

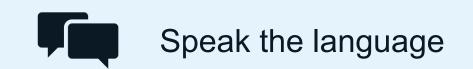


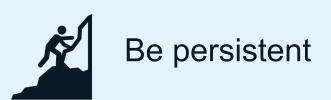




Understand your culture









#### **Define the Problem**

"The absence of use of data, or using inefficient data systems, drains time from multiple resources - supervisors, mechanics, engineers. And the cost of machine parts and/or resources is iterative as the speculative solution rarely identifies the correct problem the first time. **We need to use data better.**"

– An Experienced 3M Process Engineer





#### **Understand the Culture**



Understand



- Corporate culture
- Incentive structures

Find a partner



- Varied experiences
- Personal connections

Don't assume



- Management will understand/value data analytics
- Data-driven engineers will be interested
- Plant OT will be supportive



#### Speak the language









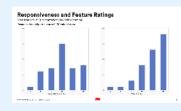






User Survey





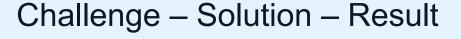


Value Case



 $\overset{\circ}{\frown}$ 





**Reported Time Savings** 



Analysis Time Study

	A	Seeq		
Analysis Time	6h	11h	16h	<b>2</b> h
% Completed	10%	43%	100%	100%





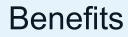
#### **Keep the Focus**





Problem – What is Seeq solving?







Don't compare unless being compared.



It is not about the software; it is about efficient data analysis.





#### **Be Persistent**





Be committed



Be willing to ride to the end of the line.

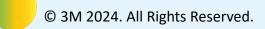
Remember, sometimes EAFP is better than LBYL



EAFP = Easier To Ask Forgiveness Than Permission

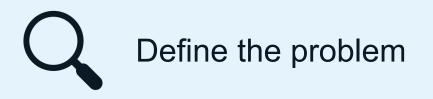


LBYL = Look Before You Leap







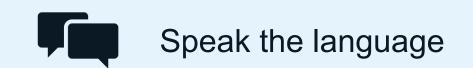


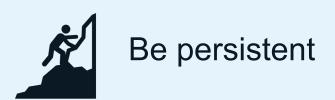




Understand your culture





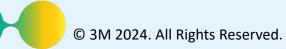




#### Where we are and where we're going.

**Current State** 

- Seeq is a component of our process data analytics technology platform.
- From six users to hundreds of users
- Next Steps
- Connecting sites
- Expanding user base
- Leverage Seeq with other custom and 3<sup>rd</sup> party solutions.
- Continue to deliver benefits





## **Questions?**

