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Automation and Technology

Are we losing our ability to think critically?

Or, how do we use technology to benefit but not derail our decision making?

WRMC
October 5, 2018
Portland, Oregon

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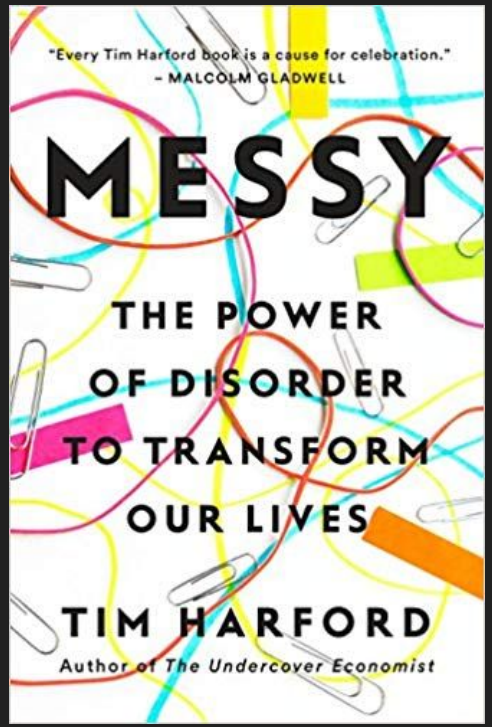

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Automation and Technology have made vast improvements to our lives and our safety:

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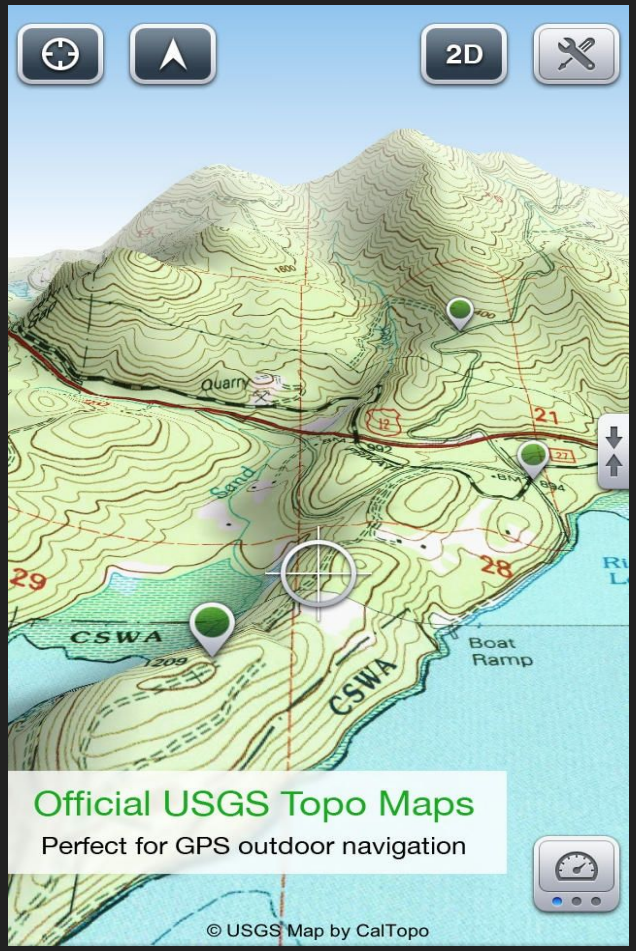

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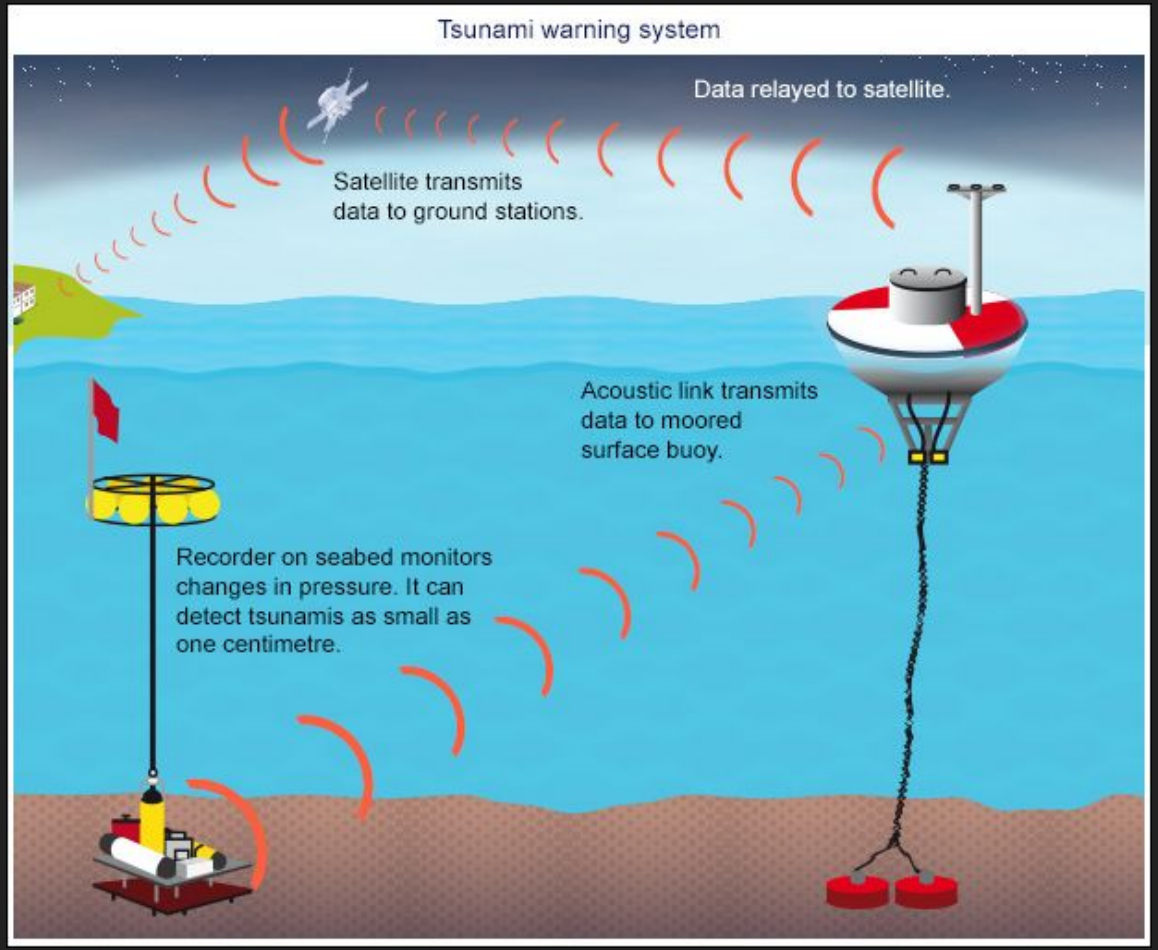

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FLIGHT CONTROL SYSTEM

AIRCRAFT SENSORS

*Orientation
*Velocity
*Altitude
*etc

SENSOR MEASUREMENTS

FLIGHT CONTROL COMPUTER

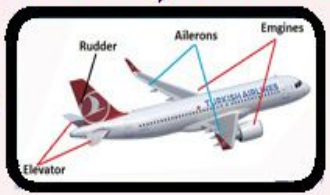
PILOT COMMANDS

AIRCRAFT COCKPIT

*Flight Path Command
*Velocity Command
*Altitude Command
*etc

CONTROLLER'S COMMANDS

*Throttle Position
*Rudder Position
*Elevator Position
*Aileron Position
*etc



AIRCRAFT CONTROL EFFECTORS

elektromot.com

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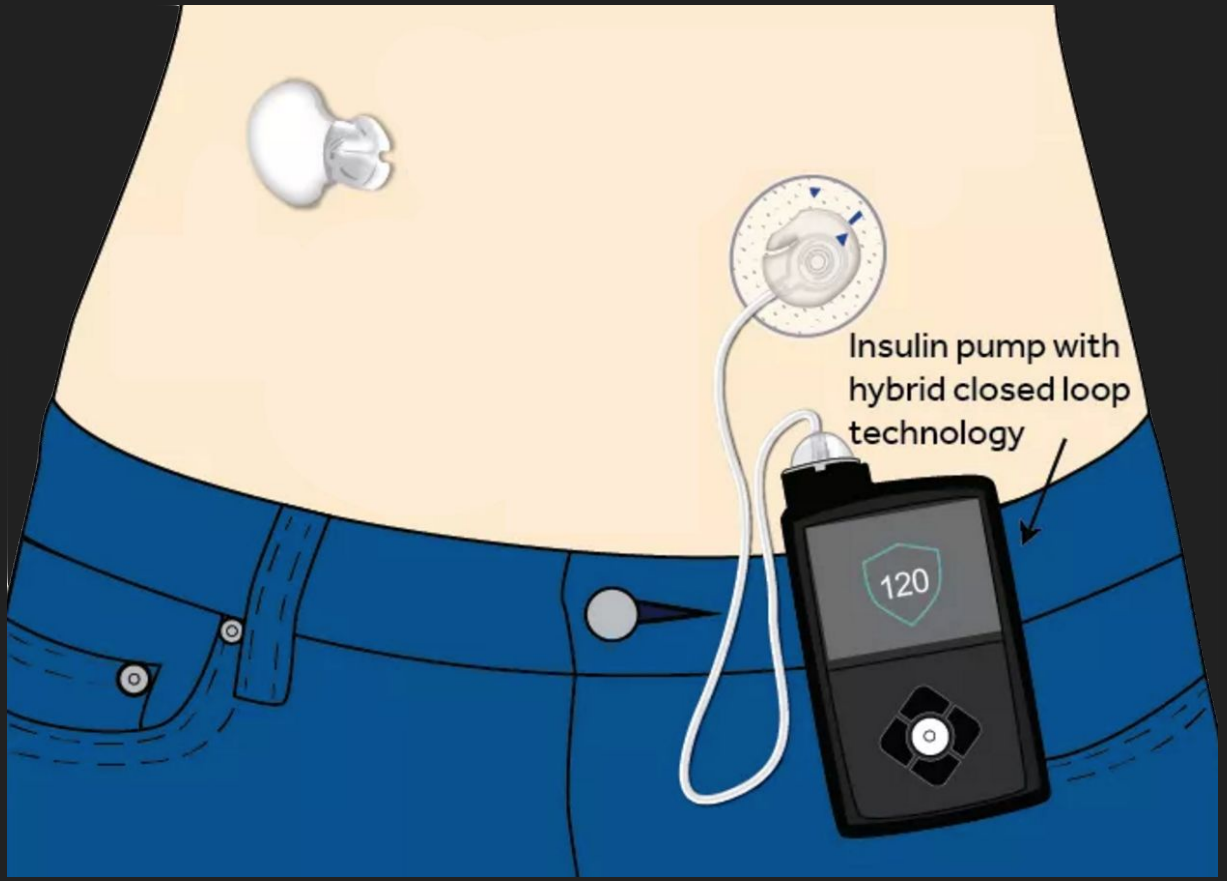

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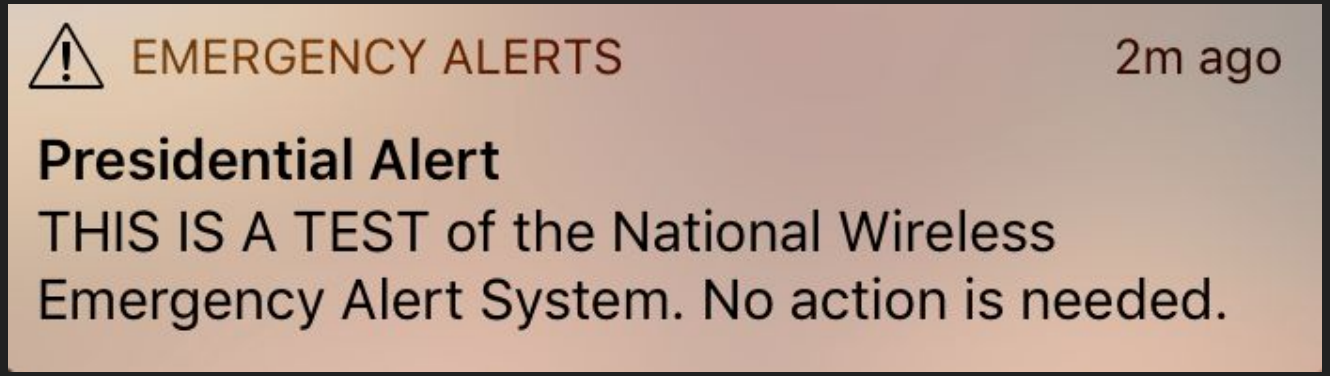

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How has automation and/or technology positively impacted your program?

Break out….

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The Paradox of Automation

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The Paradox of Automation

1. Automatic systems accommodate incompetence by being easy to operate and automatically correcting mistakes.

2. Even if the operator is an expert automatic systems erode skills.

3. Systems fail in unusual ways or produce unusual situations.

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With the potential for dire consequences...

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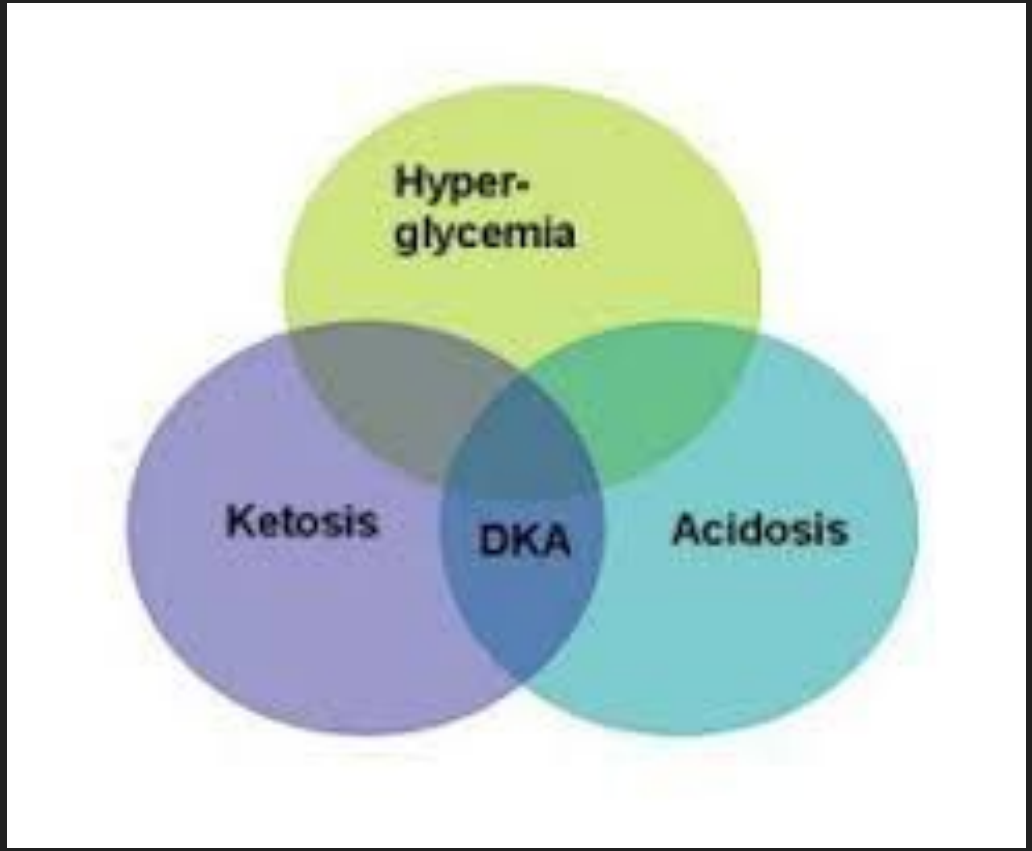

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What automation/technology concerns do you have for your programs? Actually experienced and/or anticipated...

Go back to your groups

Share experiences/concerns

Be prepared to share out

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What can we do?

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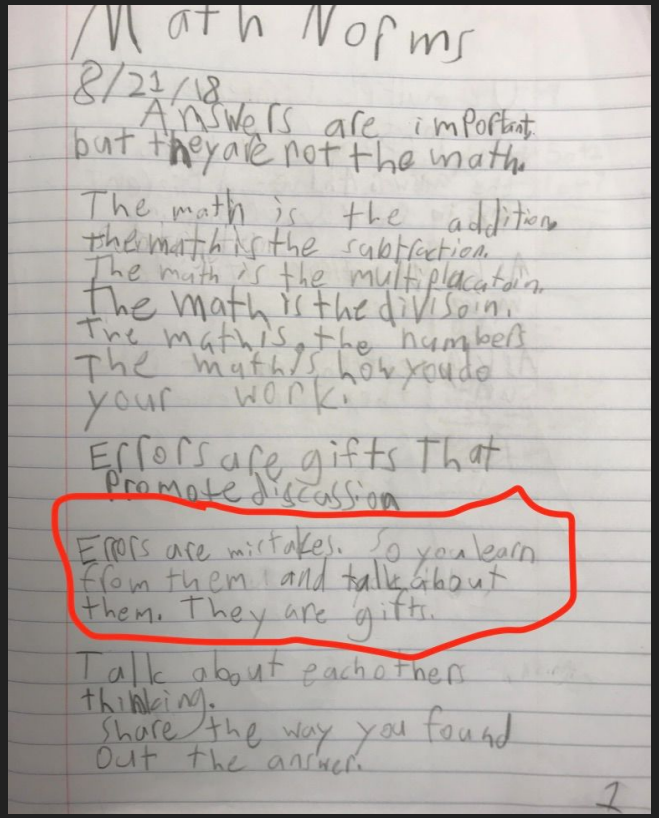
Put some unleaded in the diesel tank


Math Norms
8/21/18
Answers are important
but they are not the math.
The math is the addition.
The math is the subtraction.
The math is the multiplacation.
The math is the divisoin.
The maths the numbers
The maths how you do
your work.
Errors are gifts That
promote discussion
Errors are mistakes. So you learn
from them and talk about
them. They are gifts.
Talk about eachothers
thinking.
Share the way you found
out the answer.
1

-Gillian, 8 years wise

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Training

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Stress and Startle response

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Strategies for Improving Startle Performance

- Know your craft: Maintain handling skills
- Train appropriately
- Be cognisant of your surroundings
- Avoid complacency
- Anticipate threats
- Have a plan

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Keep it simple

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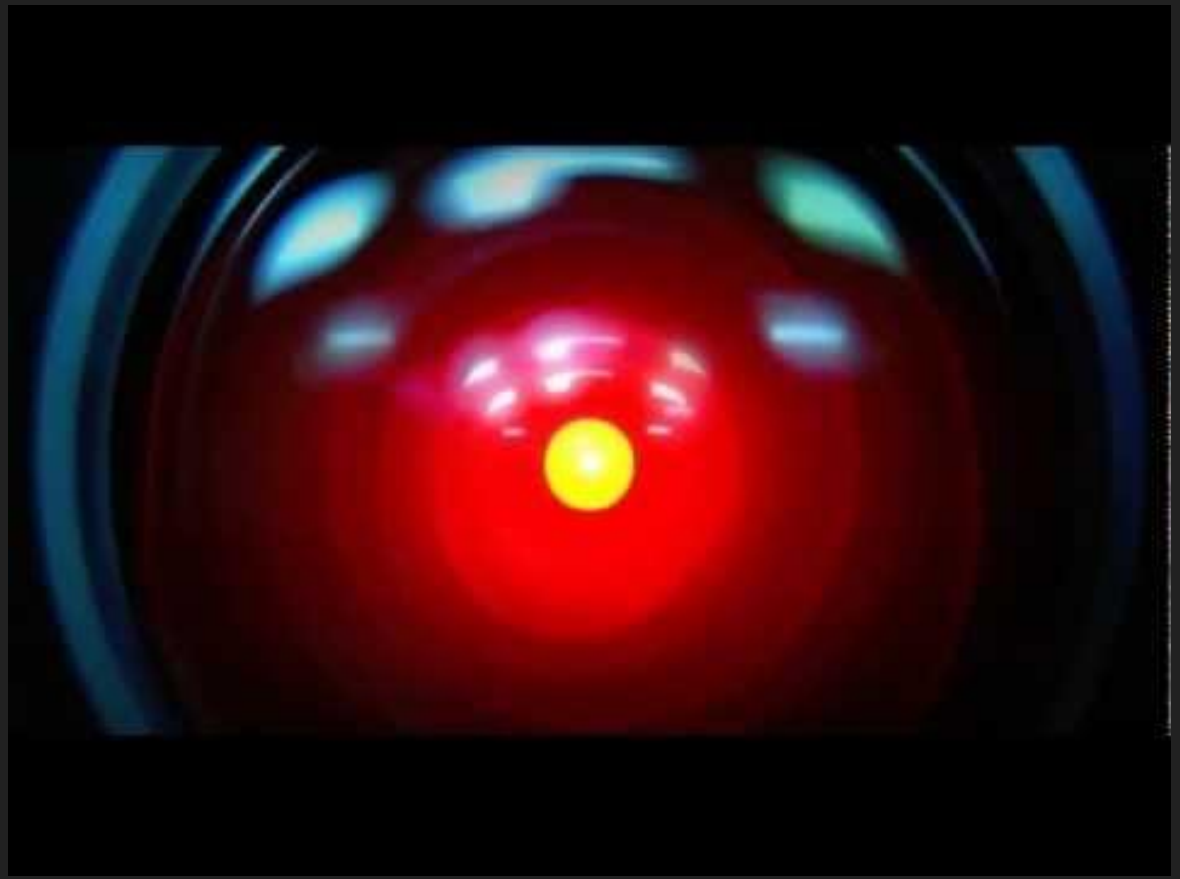

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Action Steps

1. Create a staff training exercise that allows staff to see the potential for passivity in decision making when decisions are device influenced.
2. Review what devices/apps are used and for what purpose in your organizations.
3. Share internal examples and case studies with program managers.

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Thanks!

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