



1

**Yesterday, Today and Tomorrow –
What is the New Normal during a time of Crisis
and Beyond?**

A Focus on People, Processes and Technologies

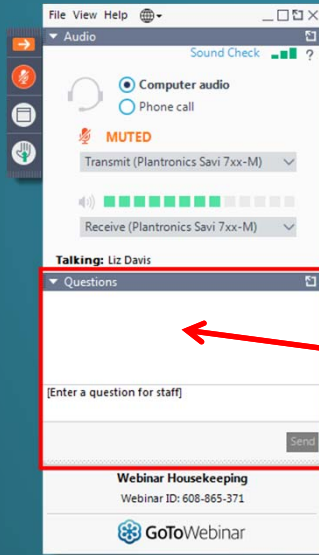
January 21, 2021

Developed by the “Retooling the Workforce” workgroup of the WEF
Utility Management Committee



2

How to Participate Today



- **Audio Modes**
 - Listen using Mic & Speakers
 - Or, select “Use Telephone” and dial the conference (please remember long distance phone charges apply).
- **Submit your questions using the Questions pane.**
- **A recording will be available for replay shortly after this webcast.**



3



Rhonda Harris
Brown and Caldwell



Gwen Ruff
Columbus Water Works



Jeanette Klamm
Johnson County Wastewater



Cello Vitasovic
9D Analytics



Michael McGrath
Fairfax County



Richard Gerstberger
Tap Resource Development Group



4

How do we deal with the “New Normal?”

Moderator	Rhonda Harris – Brown and Caldwell
Challenges	Gwen Ruff – Columbus Water Works
Information	(with overlap between the speakers)
People	Jeanette Klamm – Johnson County Wastewater
Processes	Cello Vitasovic – 9danalytics
Technologies	Michael McGrath – Fairfax County

Discussion and Closing Comments

Richard Gerstberger – Tap Resource Development Group



5

Opportunity for Interactive Participation

On your computer or smart phone,
go to www.menti.com and use code
91 64 22 (no spaces)



6

Challenges

Major issues in the new paradigm

Gwen Ruff, Columbus Waterworks



7

Workforce Challenges – what are we facing?

- Cultural Shifts
- Limited Essential Staff Resources
- Effects of stress
- People, processes and technologies needed

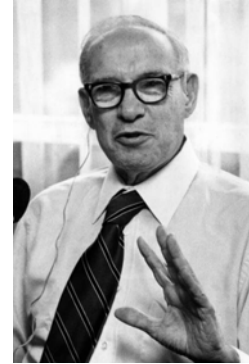


8

Cultural Shifts

“The greatest danger in times of turbulence is not the turbulence – it is to act with yesterday’s logic.”

– Peter Drucker



9

Cultural Shifts



- Hoarding of basic needs and supplies
- Financial and health concerns
- Employee expectations
- Adaptability and flexibility to respond to the speed of change

10

Cultural Shifts

- Customer expectations
- Organizational reset
- Defining essential personnel and operations



11

Staff Resources

- Limited staff and staff availability
- Retirements and loss of institutional knowledge
- Telecommuting options - impact on customer expectations and customer service



12

Staff Resources



- Childcare and Eldercare commitments
 - Sandwich generation
 - Work/home balance
- Social distancing and work scheduling
- Effectiveness and timeliness of internal communications

13

Physical and Psychological Impacts

- Financial
 - Underemployed/layoffs
- Family Values/Beliefs
 - Off duty behaviors
 - Vacations/Holidays
 - To mask or not to mask?



14

Physical and Psychological Impacts

- Stress
 - Home and Work
- Physical and Mental Health/Well Being
- Depression, Anxiety, Social Isolation and Grief



15

People, Processes and Technology



- Create new opportunities
- Reevaluate, reinvent and reset
- Unpredictable Chaos
- Speed of information (social media) and impact on decisions

16

Opportunity for Interactive Participation

On your computer or smart phone,
go to www.menti.com and use code
91 64 22 (no spaces)

17

People

Figuring Out Ways to Help People
Accomplish Their Work

Jeanette Klamm, Johnson County Wastewater

18

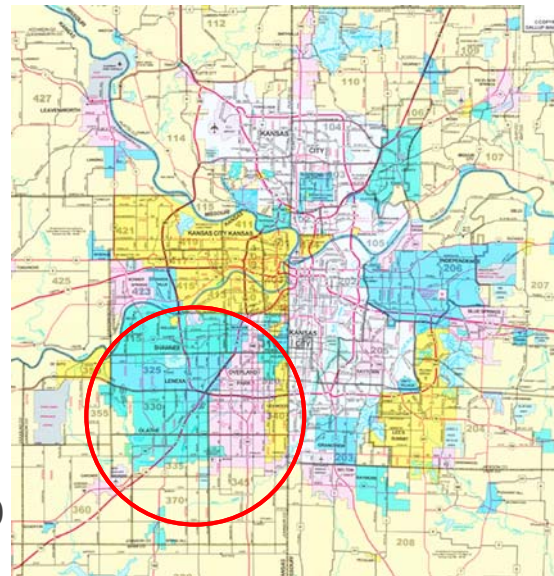
Our Most Valuable Resource (for all of our organizations)...



19

JCW Background

- Southwestern quarter of KC metro
- 5 plants with a 6th plant in June 2021
- Average Daily Flow – 0.8 MGD – 16.3 MGD
- 600,000 customers served
- Over 200 employees in JCW/150 employees in O&M



20

Covid-19 strategies

- Staggered shifts
- Updated and written SOP's
- Work remotely if possible
- Lots of PPE's
- Procedural (no riding in vehicles together, social distancing, hired out some jobs, disinfection after each shift, etc.)



21

Plan A in March – Skeleton Crew

- Minimum number of people on staff
- All others sent home
- Not sustainable



22

Plan A Outcome

- Pro – make sure staff was available to come in
- Con – Use up accrued time and have none when needed



23

Plan B – Supervisor work remotely



- Sent all supervisors to work remotely
- All staff remain on site

24

Plan B Outcome

- Pro – O&M continued normally
 - Creative communication by supervisors
 - Natural leaders stepped up
 - Remained in compliance/PM's completed
- Con – Extra effort from supervisors



25

How was this able to work?

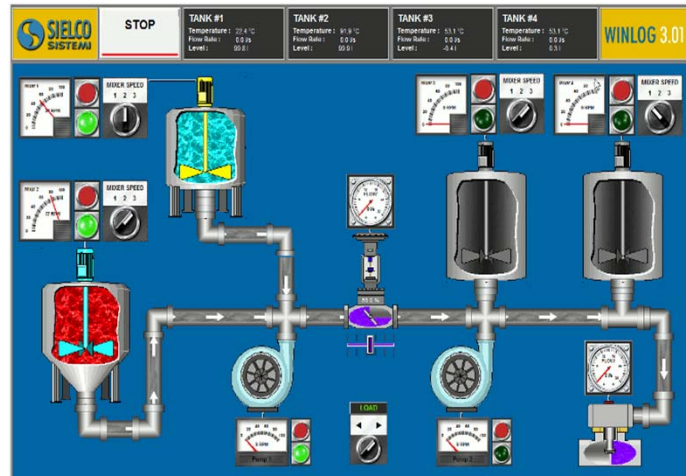


- Automation/Controls/SCADA
- Organizational Culture

26

Automation/Controls/SCADA

- Plant process is mostly automated
- PM's directed through asset management
- Maintenance requires personnel



Water Environment Federation
the water quality people®

27

Organizational Culture

- **HPO** – High Performing Organization
“...conceptual framework for organizations that leads to improved, sustainable organizational performance”
- **LEAP** – Leadership Empowers All People
“lead from where you stand philosophy”
- **Q2 Time**



Water Environment Federation
the water quality people®

28

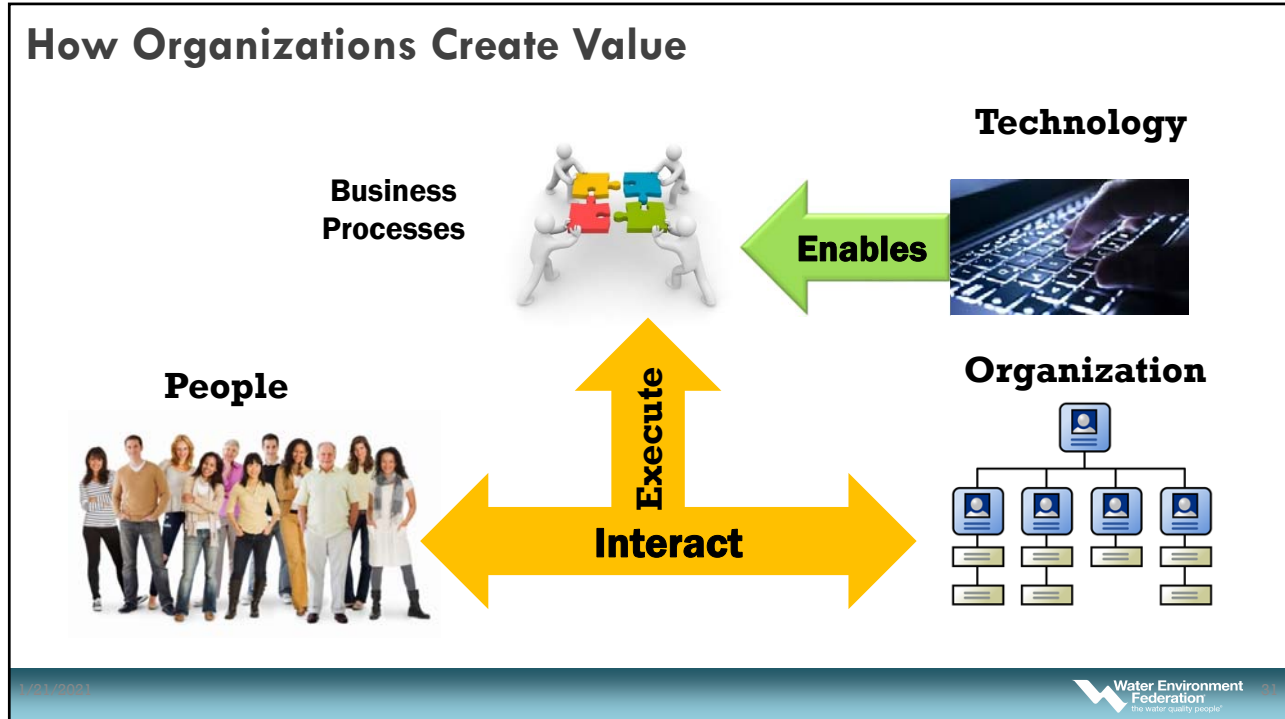
Opportunity for Interactive Participation

On your computer or smart phone,
go to www.menti.com and use code
91 64 22 (no spaces)

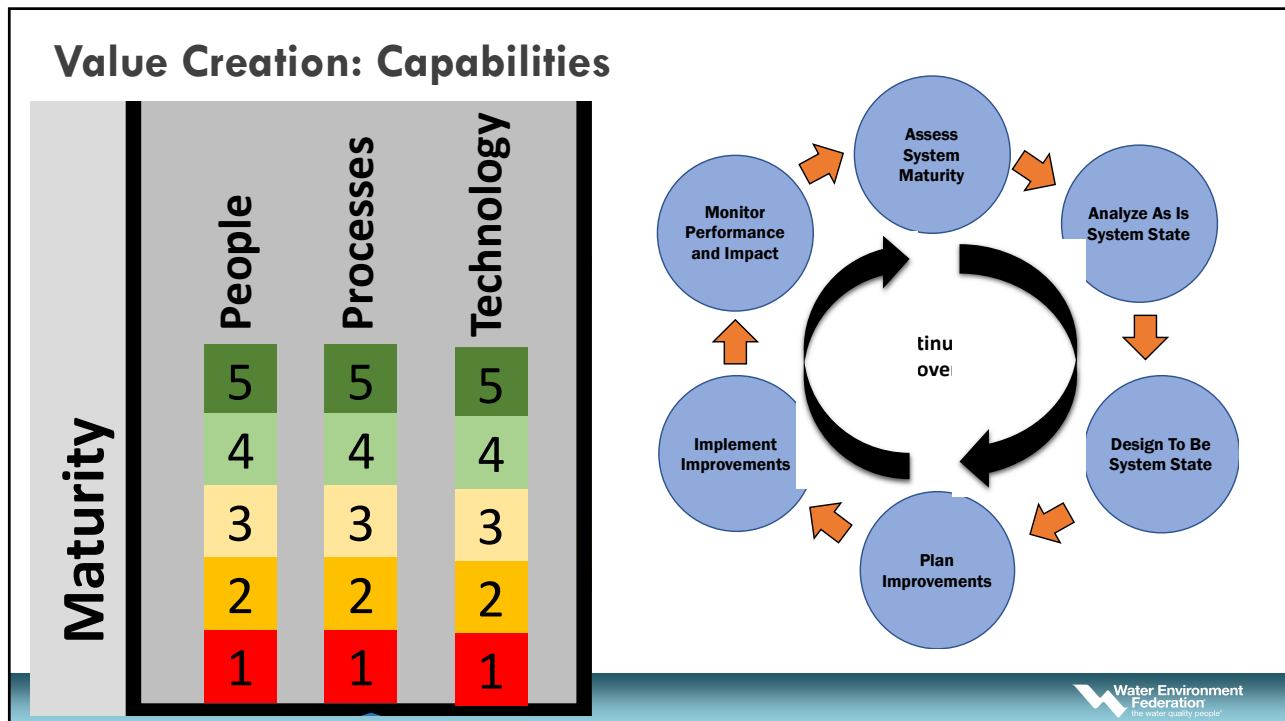
Processes

Documenting, Analyzing, and Improving
How We Do Business

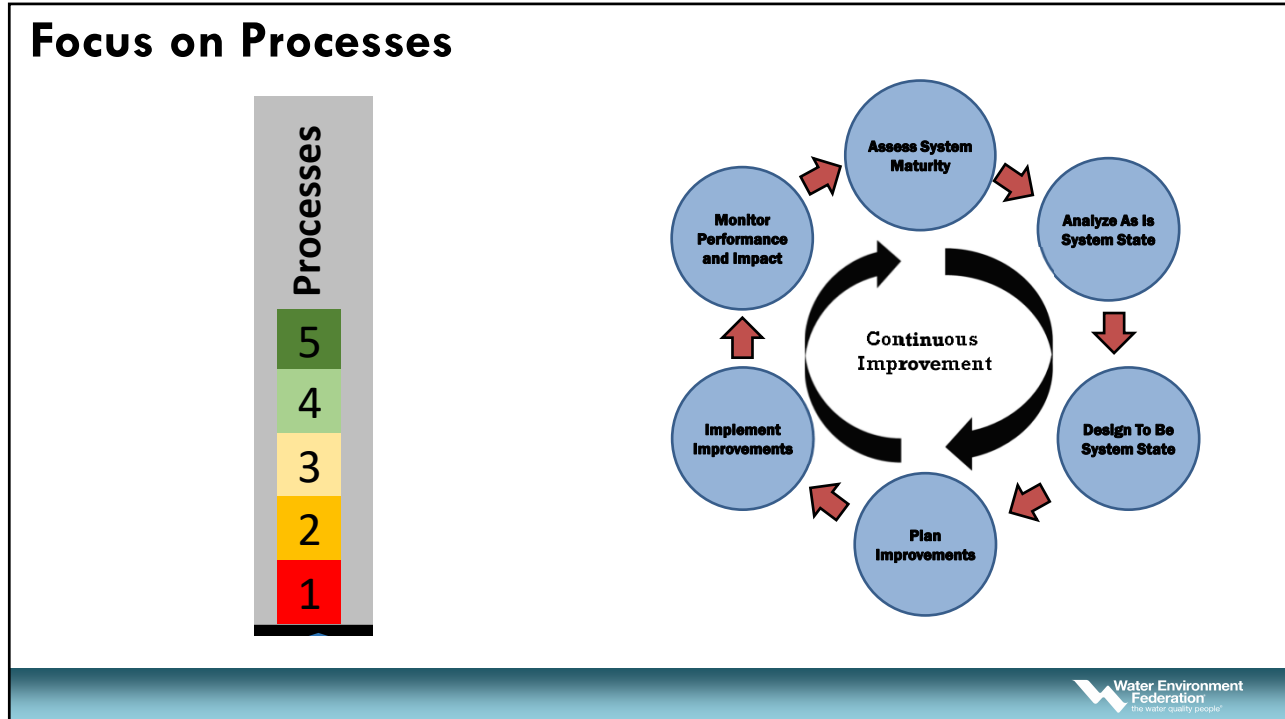
Cello Vitasovic, 9danalytics



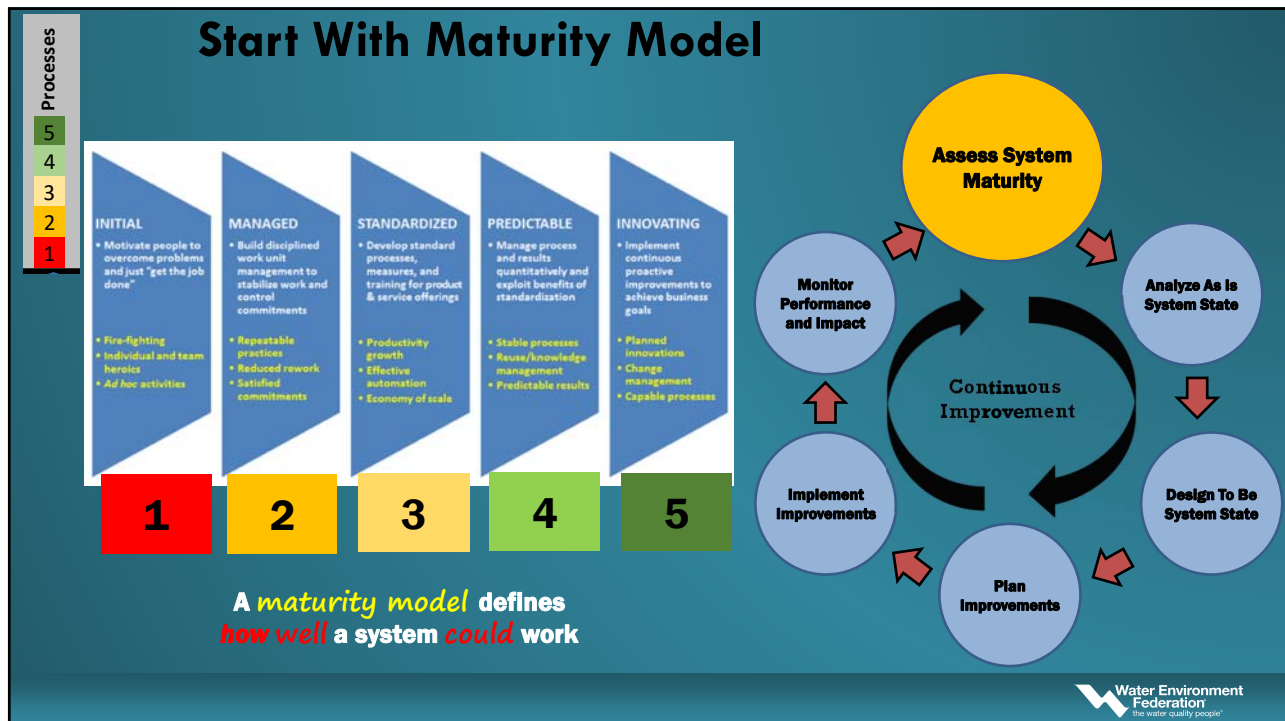
31



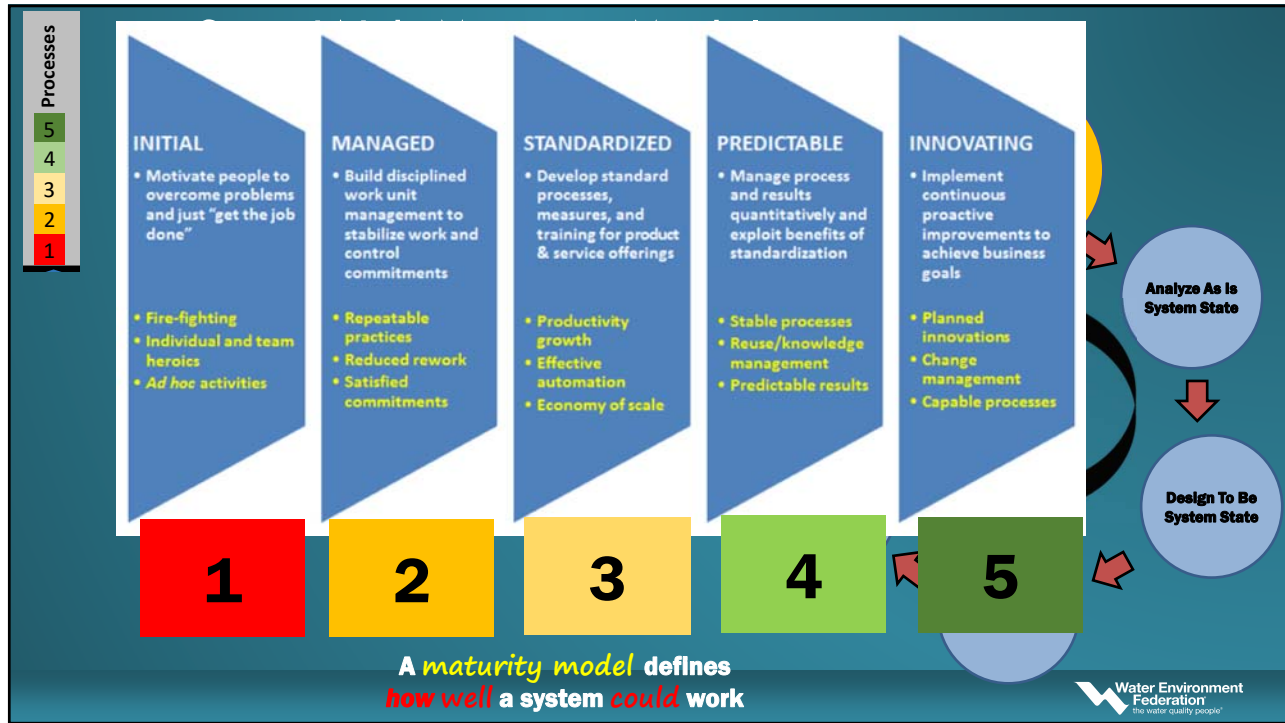
32



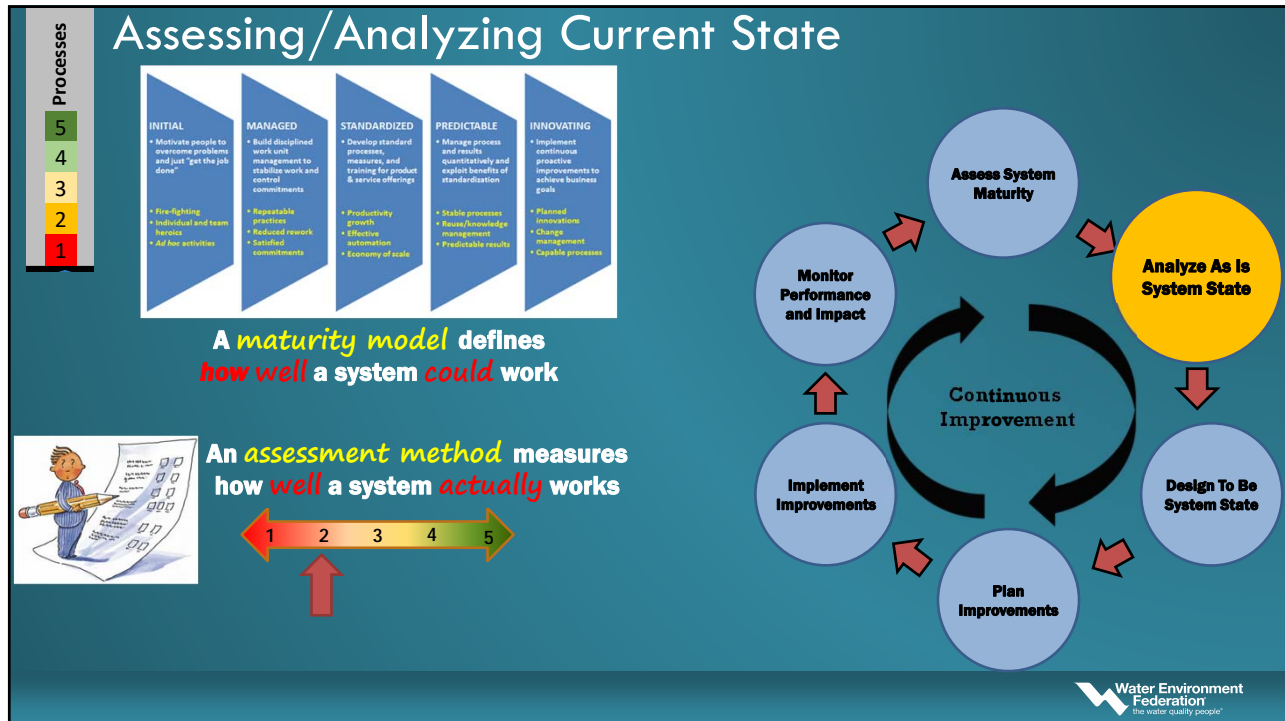
33



34



35



36

Processes

Example – City of Grand Rapids³

Cross-Media Electronic Reporting Rule (CROMERR)

- Timeliness of data generation,
- Integrity of the electronic document,
- Submission knowingly with intent and not by accident,
- Opportunity to review and repudiate copy of record,
- Acknowledgement of receipt, and
- Determining the identity of the individual uniquely entitled to use a signature device.

³UAIM (WRF) Cross Media Reporting Case Study, Mike Staal
 Water Environment Federation
the water quality people!

37

Processes

System = Process

A *system model* explains **how something **actually** works; example here is for business process modelling.**

System models for other components (e.g. technology, people components) would have different form & notation

As Is

³UAIM Cross Media Reporting Case Study, Mike Staal
 Water Environment Federation
the water quality people!

38

19

What Model Tells US

Processes

A *system model* explains **how something actually works**; example here is for business process modelling. System models for other components (e.g. technology, people components) would have different form & notation

Business process (system) models answer questions like the following:

- What are the boundaries of the process, including all required elements and excluding others?
- Who is responsible for the process and who participates in the process?
- What metrics are used to assess performance of the process?
- What triggers the start of a process and when does it end?
- What artifacts, such as documents and data stored in a database, result from the process?
- Which activities must happen in sequence and which can be done in parallel?
- What decisions drive the process?
- What are the business rules that must be applied in those decisions?

ment
³UAIM Cross Media Reporting Case Study, Mike Staal

39

Analysis

Before Simulation

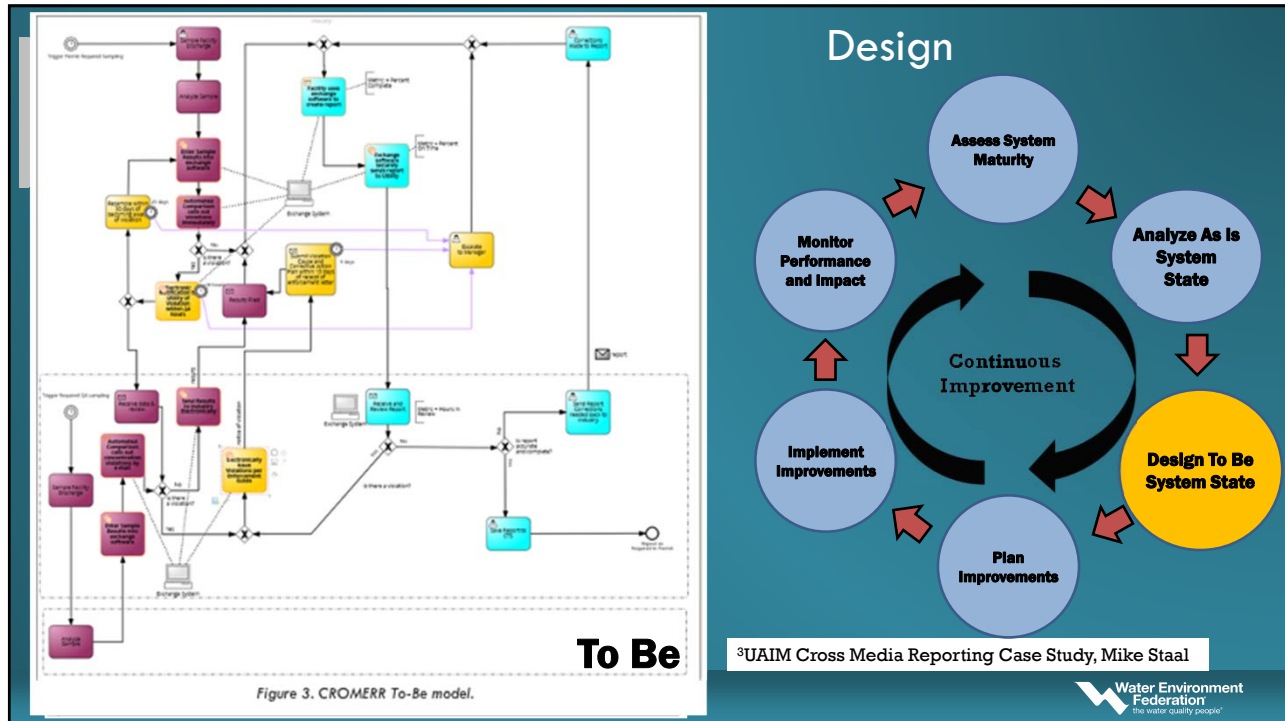
After Simulation Process Configuration Changes

(b) Checking for bottlenecks

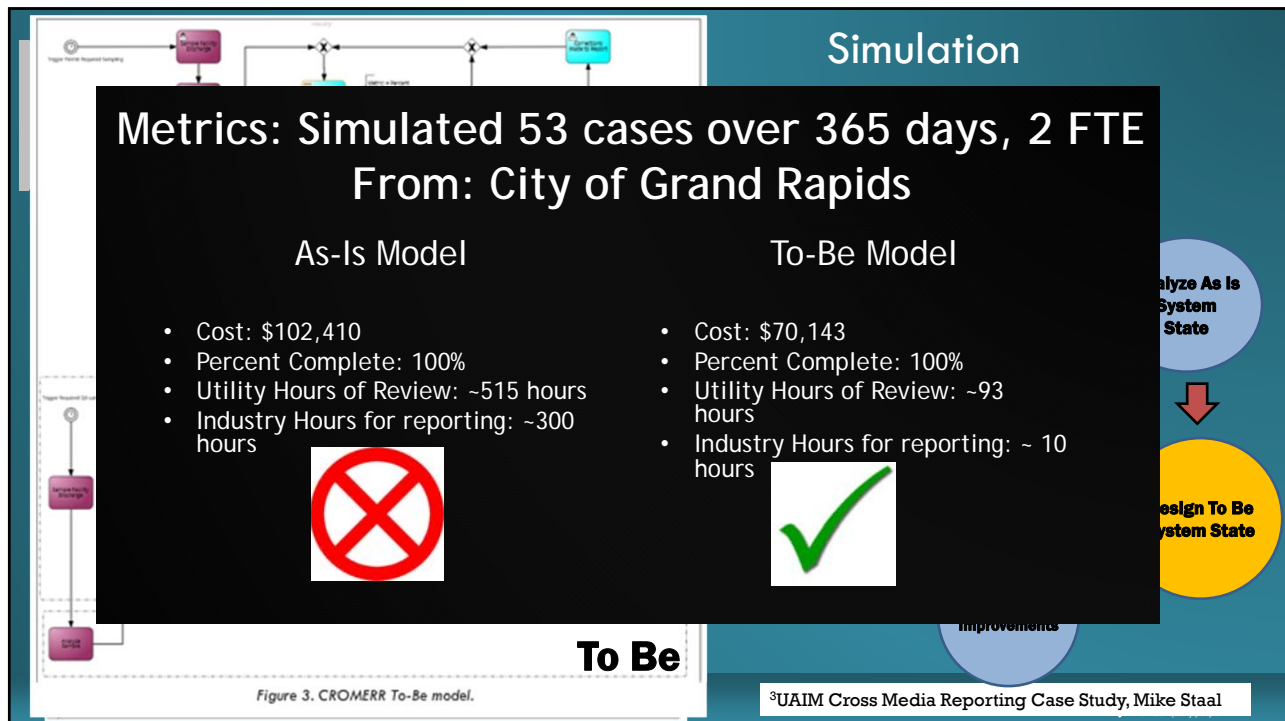
Figure 2. Using simulation to (a) find process workflow improvements and (b) find bottlenecks.

³UAIM Cross Media Reporting Case Study, Mike Staal

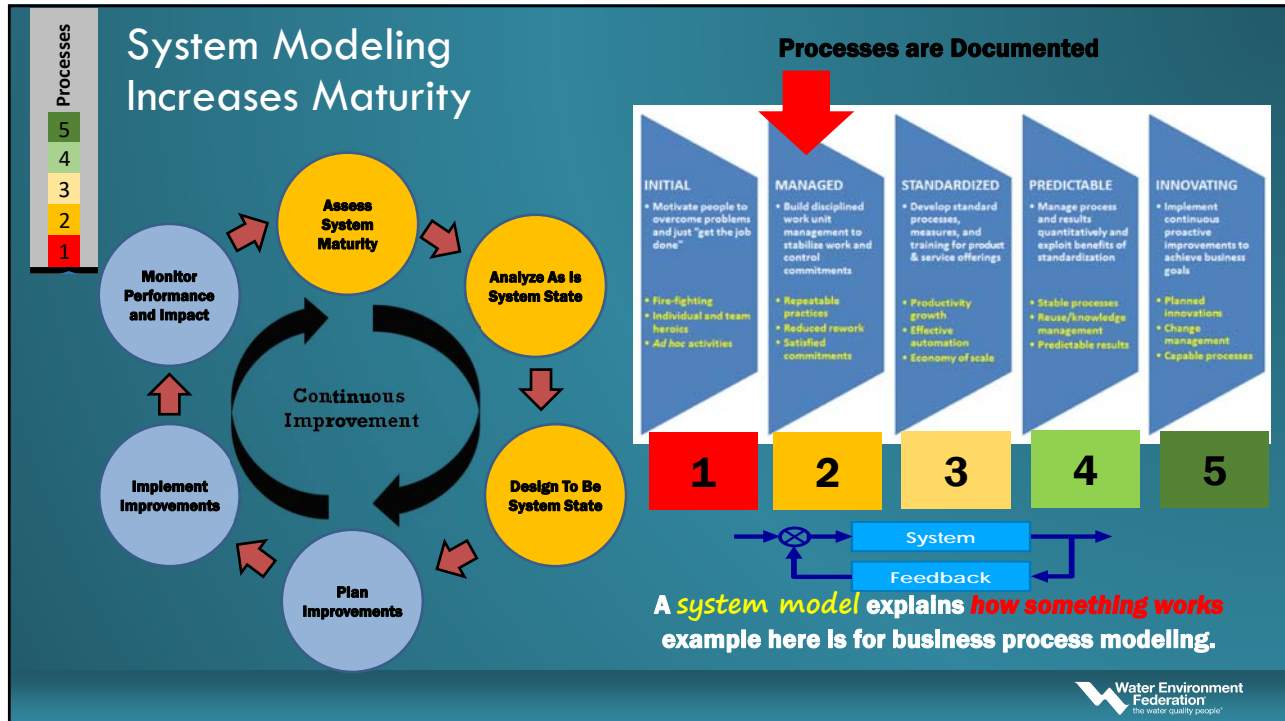
40



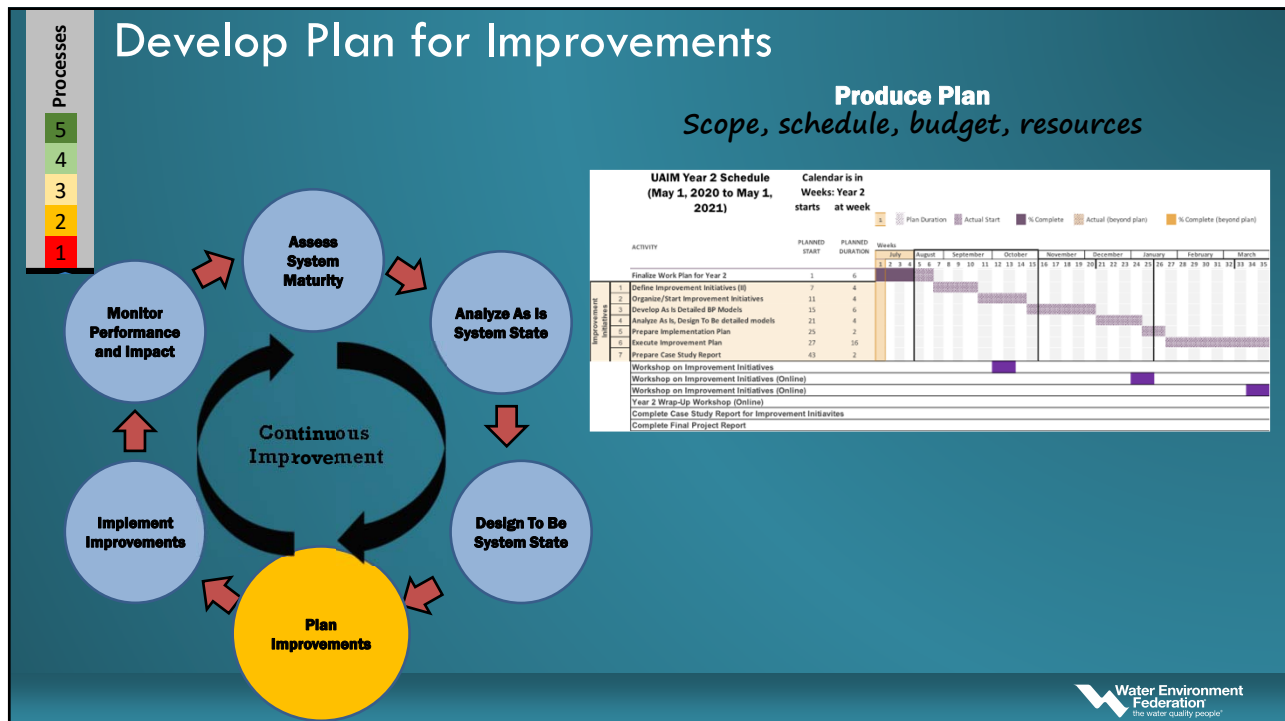
41



42



43



44

Execute Improvement Plan

... to develop and apply a holistic analysis framework and a methodology based on system modeling to help utilities improve maturity of their capabilities and **implement change management** focused on value and overall performance.⁴

Value Creation			
	People	Processes	Technology
Maturity	5	5	5
	4	4	4
	3	3	3
	2	2	2
	1	1	1

Make Adjustments

1 2 3 4 5

Learning/Change Management

⁴WISE Mission statement

Water Environment Federation
the water quality people®

45

Managing System Based on Quantitative Measurements

Monitor performance according to metrics, KPIs

INITIAL

- Motivate people to overcome problems and just "get the job done"
- Fire-fighting
- Individual and team heroes
- Ad hoc activities

MANAGED

- Build disciplined work unit management to stabilize work and control commitments
- Repeatable practices
- Reduced rework
- Satisfied commitments

STANDARDIZED

- Develop standard processes, measures, and training for product & service offerings
- Productivity growth
- Effective automation
- Economy of scale

PREDICTABLE

- Manage process and results quantitatively and exploit benefits of standardization
- Stable processes
- Reuse/knowledge management
- Predictable results

INNOVATING

- Implement continuous proactive improvements to achieve business goals
- Planned innovations
- Change management
- Capable processes

1 2 3 4 5

Water Environment Federation
the water quality people®

46

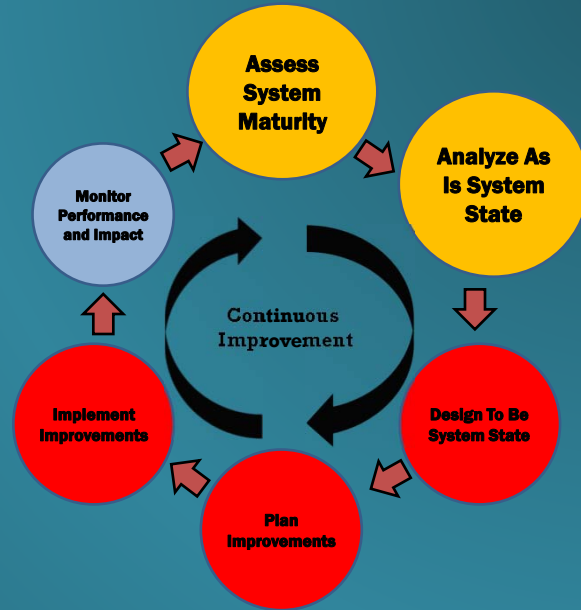
UAIM/WISE: "People Topics"

Maturity models for:

Workforce



Organization



47

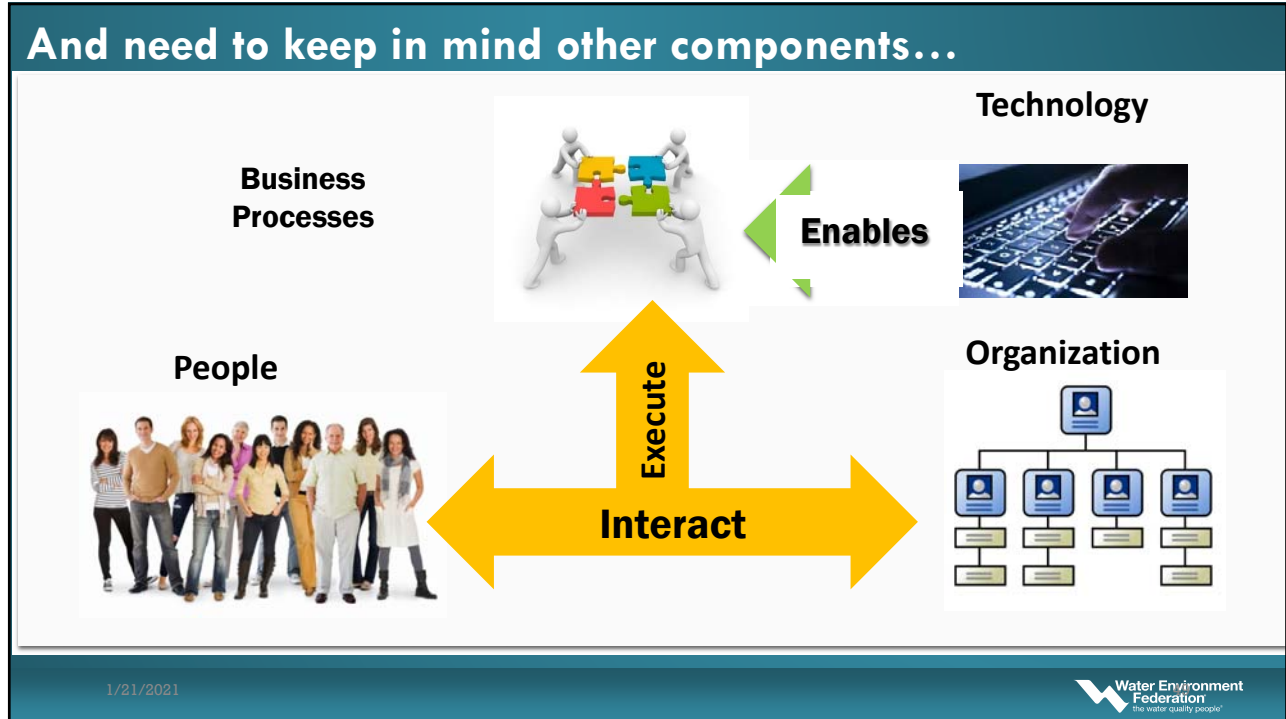
We Focused on Business Processes...



1/21/2021



48



49



50

Opportunity for Interactive Participation

On your computer or smart phone,
go to www.menti.com and use code
91 64 22 (no spaces)

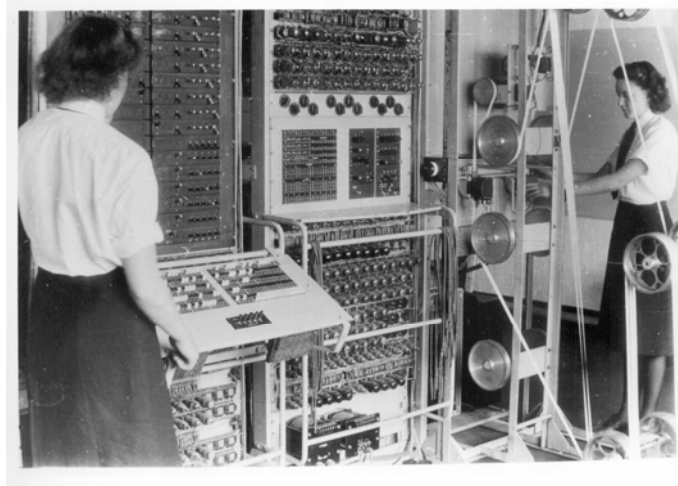
Technology

The Tools we Use to Help Us

Michael McGrath, Fairfax County

World War II Innovations

- Radar
- Nuclear power
- Jet engines & space travel
- ATMs & Ballpoint pens
- Superglue
- Synthetic rubber
- Photocopiers
- Penicillin
- Computers



Sources: www.findmypast.com/blog/history & bletchleypark.org.uk

53

Crisis Breeds Innovation



Research may have existed but not applied for practical use

These innovations needed for survival

Those that used innovations and changed processes were more successful.

Innovations were adapted for widespread use. More it is used, more it is needed

Without need/ practical use, innovation is solution in search of a problem

Sources: www.essentialimpact.com

54

2020 Crisis



55

Technology moving to widespread use

	Yesterday	Today	Tomorrow
Training Seminar	Travel to conference center	Live & recorded in teams	?
Meeting w/ other government agencies	Drive to government center, sit in conference room for hours, drive back	Sign in on laptop. Open Zoom	?
Approvals	check inbox, sign, copy & interoffice mail	download, print, sign, scan, email or digitally sign	?
Enterprise application (like timesheet, SCADA)	Office Desktop	Citrix or zscaler	?
Operator Log Books	Logbooks at duty station	Elogger shared w/ all depts	?
Connect w/ others. Exchange ideas, gossip	Huddle around water cooler	social media, texting	?
Vote on ideas	Raise hands, stickies, red dots	Kahoot, Mentimeter	?

56

Our Experience

- Tech already existed. Not invented for this crisis
- Early adopters did not benefit until everyone else joined in
- Started using them because we had to (the burning platform analogy)
- Those adopting and adapting fared better

57

Future Self Advice

- Tech might already exist but can't predict its widespread use
- Be ready to adopt. But ...
 - Is there a benefit?
 - Will it be widely adopted?
 - Plan for changing business practices
- Staff who think critically and can adapt are valuable
- How do we find and retain them?
(back to PEOPLE)



58

Thoughts Moving Forward

- What is the “new normal”?
- How to successfully navigate in this environment
- Let’s connect and learn from each other!
- View these challenges through the lens of creating opportunities

Opportunity for Interactive Participation

On your computer or smart phone,
go to www.menti.com and use code
91 64 22 (no spaces)

Questions and Discussion

Richard Gerstberger,
Tap Resource Development Group

