



1

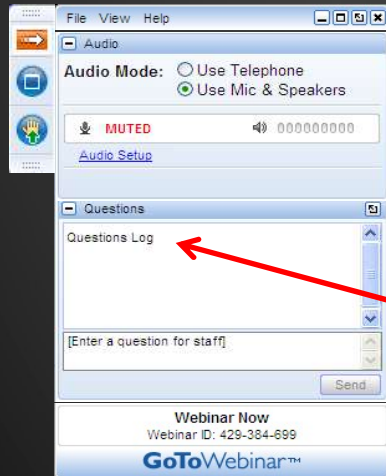
**Engaging the Workforce in
Asset Management**

Thursday, June 27, 2019
1:00 - 2:30 PM ET

The Water Environment Federation logo is located in the bottom right corner of the slide. It features the same white stylized 'W' icon and text as seen in the first image.

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

Your Co-Hosts



Mike Sweeney
Toho Water Authority

Deputy Executive Director

- Oversees Asset Management Program and Expansion
- Strategic Planning
- Interdepartmental Initiatives



Scott Haskins
Jacobs

Vice President, Strategic Planning

- Utility Management
- Asset and Risk Management
- Leadership Development



4

Introduction



5

Relevant Quotes

- “It is not the strongest or the most intelligent who will survive but those who can best manage change.”
-*Charles Darwin*
- “Don’t fear failure. Fear being in the exact same place next year as you are today.”
-*Michael Hyatt*



6

Asset Management is transformational, not trivial

- Core business and touches every aspect of utility business
- Entire asset life-cycle is involved
- AM is a discipline (practices and principles) with accountability and reporting requirements
- Practices need to be learned and documented as work processes
- Vendors often need to be familiar with AM



7

Employee Engagement is difficult to measure but important

- External stakeholders and customers need to understand vision
- Service level and customer driven
- Involves getting from current state to future state
- Long term resource investment is required
- Ultimately, Culture and values need to embrace AM
- Understanding Change is essential to success



8

Speaker Introductions

- Leisa Thompson- General Manager, Metropolitan Council Environmental Services
- Helena Henao Fernandez- Deputy Director, TEAM2100, Environment Agency
- Doug Stewart- Asset Management Director, Portland Water Bureau



9

Metropolitan Council Environmental Services




Leisa Thompson
General Manager
Minnesota



10

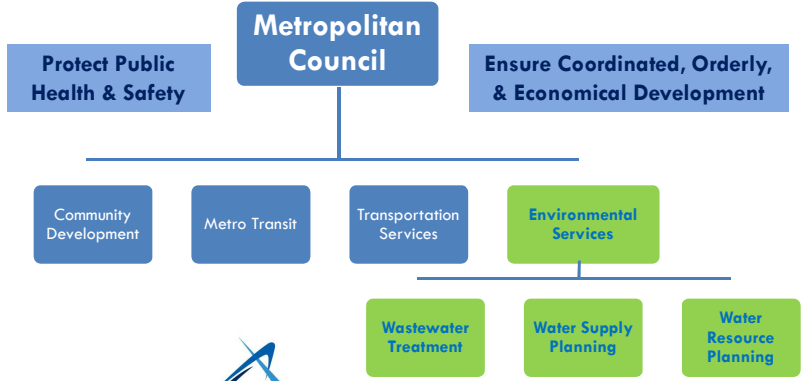
21st Century Leadership

Insights from Neuroscience




11


Metropolitan Council is a Regional Planning Agency



```
graph TD; MC[Metropolitan Council] --- PPHS[Protect Public Health & Safety]; MC --- ECOD[Ensure Coordinated, Orderly, & Economical Development]; MC --- CD[Community Development]; MC --- MT[Metro Transit]; MC --- TS[Transportation Services]; MC --- ES[Environmental Services]; ES --- WWT[Wastewater Treatment]; ES --- WSP[Water Supply Planning]; ES --- WRP[Water Resource Planning];
```



12



12

Environmental Services
Serves 50% of
Minnesota's Population

We Serve
... 7 Counties
... 110 Communities
... 2,700,000 People

Our Facilities
... 9 WW Facilities
... 610 Miles Interceptors
... 250 MGD

Our Organization
... 600 Employees
... \$7B Assets
... \$150M Annual Capital

13

13

Strategic Plan
Catalyst for Change

14

Recognizing the Need for Change



You can't solve today's problems with the same thinking that created them
Einstein

15



15

Create an ES Vision



One to Many
Relationship

Leaders at All
Levels

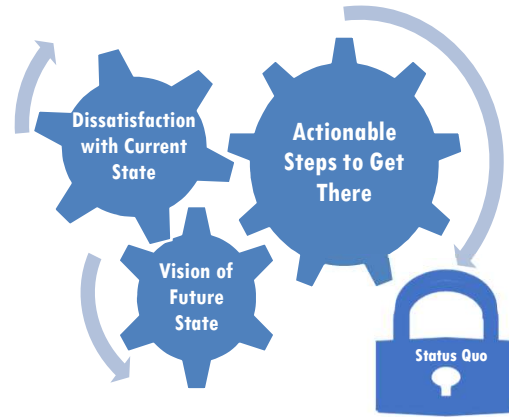
Collaborative
Process

16



16

Unlocking the Key to Transformation



17

17



17

Strategic Plan Take-Aways

Experience

- Everyone likes to be heard (Hearing all the Voices)
- Safe space enables rich dialogue
- Discovering we have common ground creates community
- Visual facilitation spurs co-creation
- We have energy to make change happen
- Silo-connecting is Best

Future

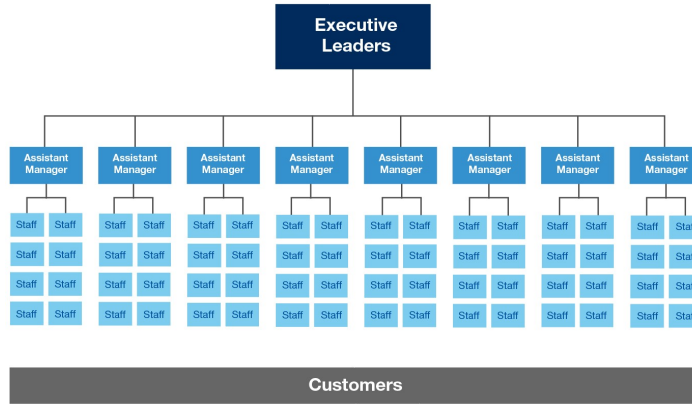
- Create Vision & Leaders at All Levels
- Build Sustainable Collective Excellence and Systems
 - Internal Teams
 - External Collaborations
- Build New Knowledge & Skills
 - Meeting
 - Collaboration
 - Team Facilitation
 - Design Change

18



18

Traditional Structure: The Sum of Our Silos



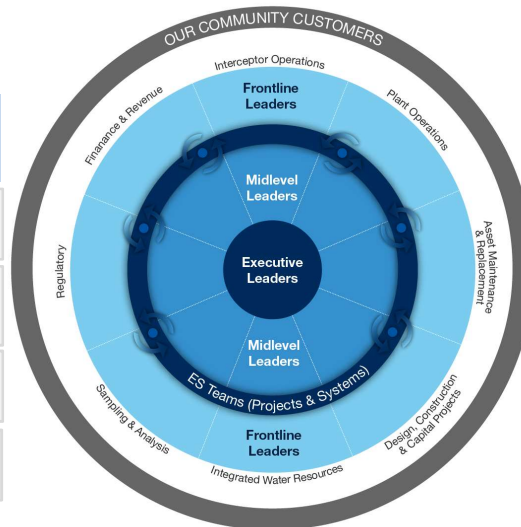
19

19

Becoming Greater Than the Sum of Our Silos

Our Model for Working Together

-  **We are all leaders**
-  **Connect business areas**
-  **Customers come first**
-  **Systems for Sustaining**




20

20

Transformation Work in Progress







Build Skills and Mindsets




Water Environment Federation
the water quality people®

21

Start at the Top and All Levels - Build Skills and Mindset

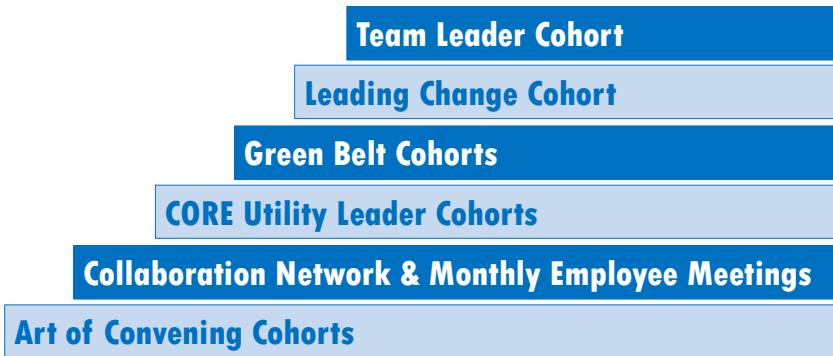
-  Group Stays Together
-  Multiple Sessions over weeks/months
-  Applied Learning
-  Integrated with their regular work role
-  Visual Emphasis
-  Network for ongoing learning



Water Environment Federation
the water quality people®

22

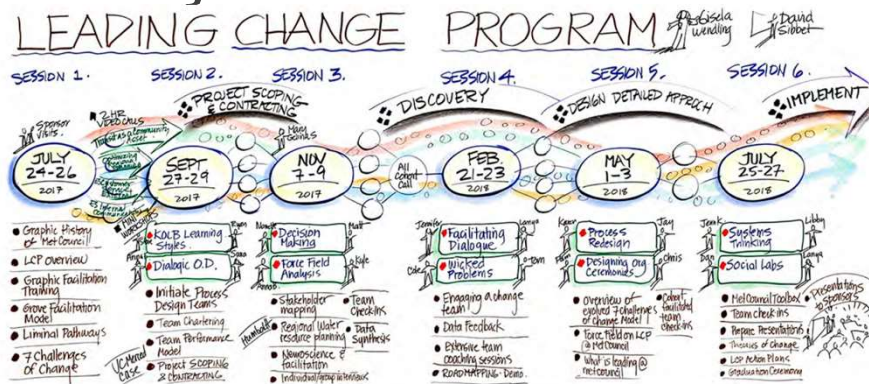
Start at the Top and All Levels - Build Skills and Mindsets



23

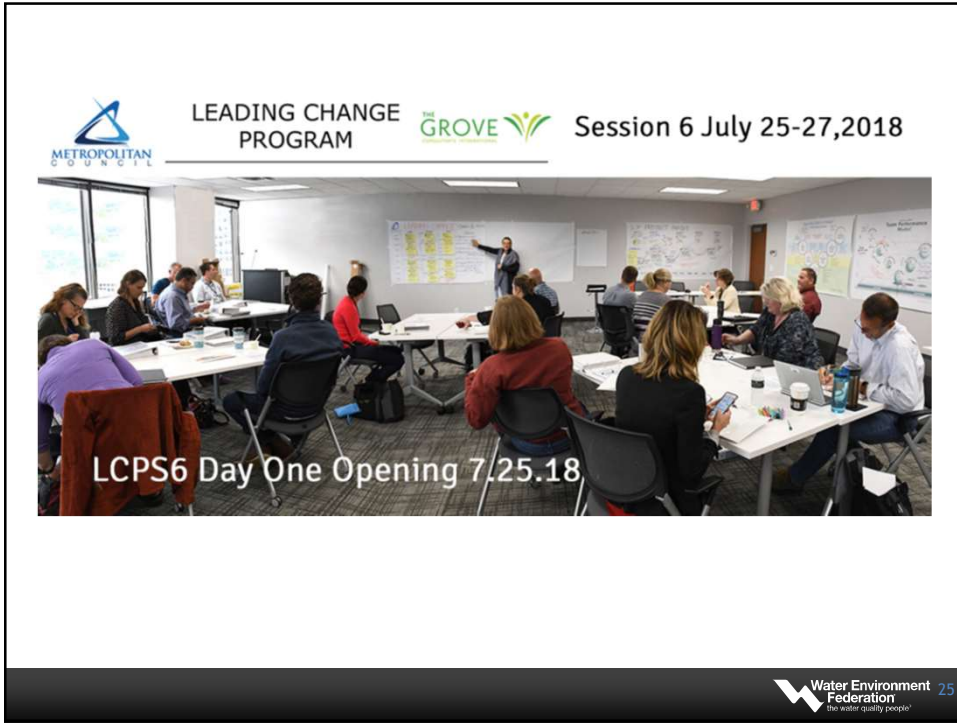
23

The Leading Change Cohort Summary



24

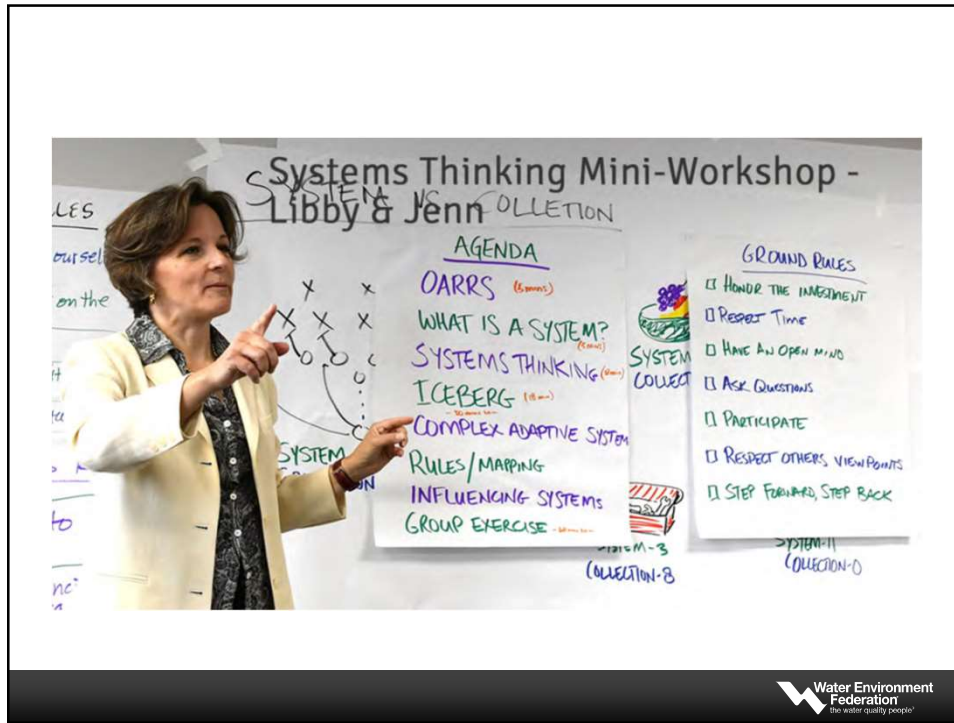
24



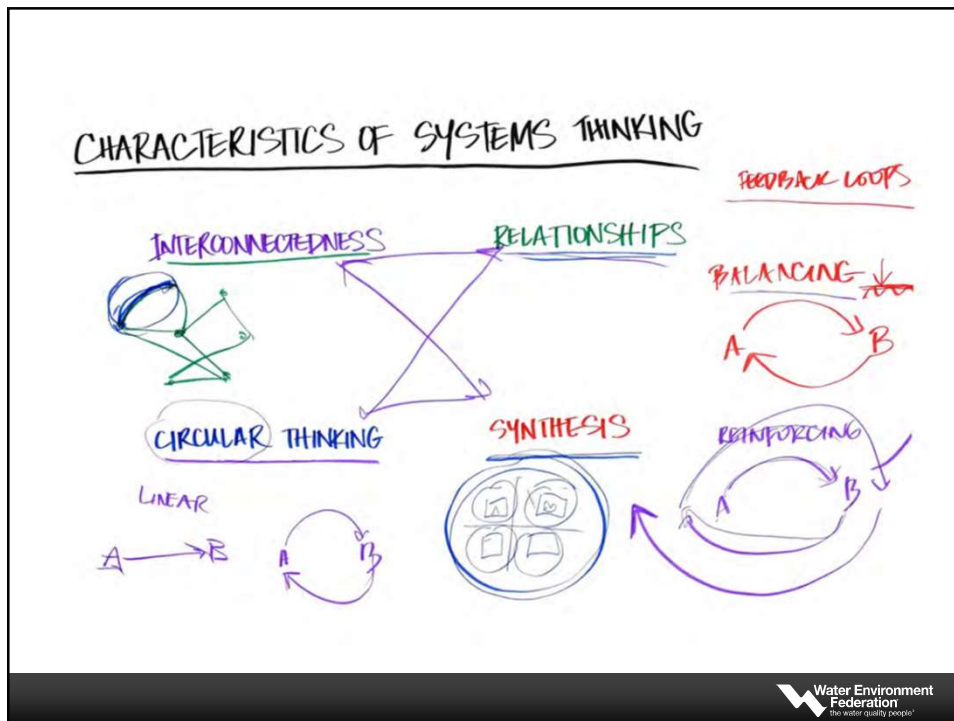
25



26



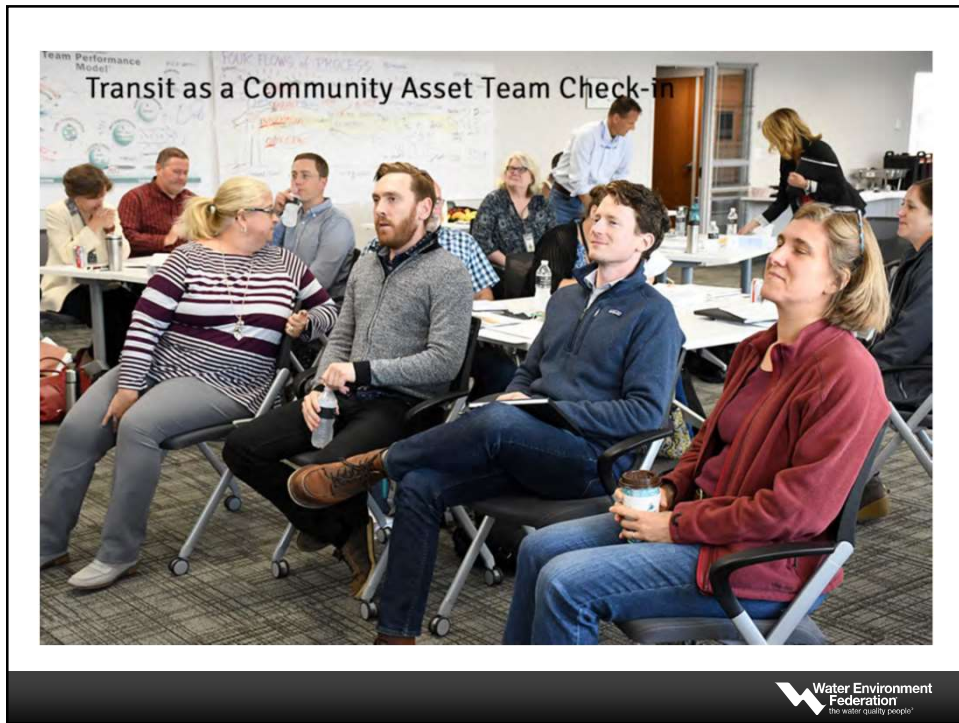
27



28



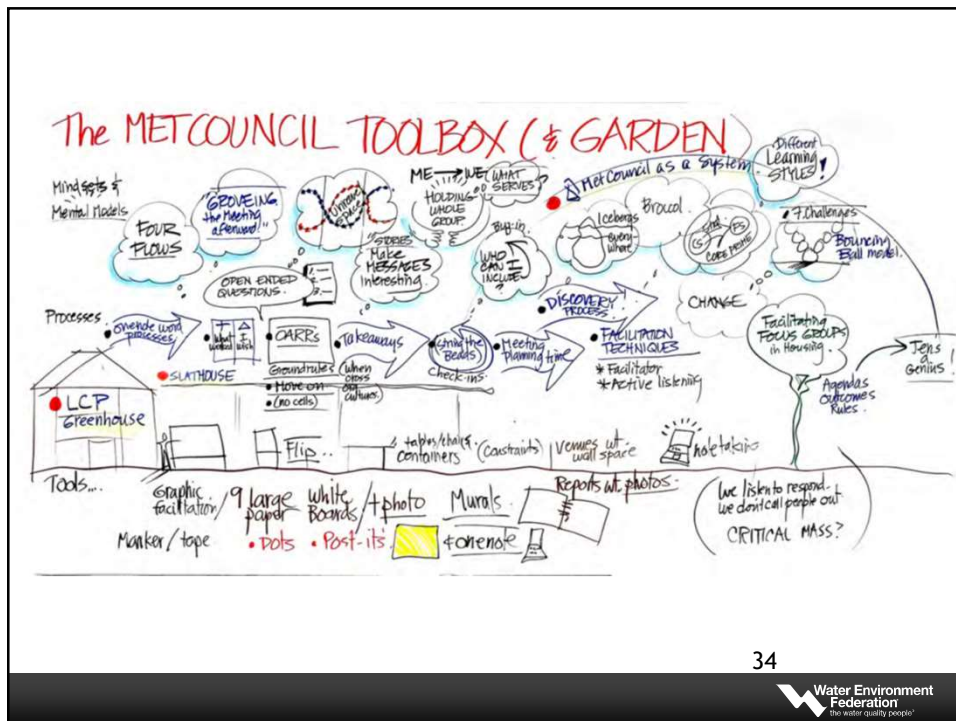
29



30



33



34

OPTIMIZING REGIONAL PLANNING

IN THE BEGINNING: Take the immediate point between Regions / Plans to be intentional!

OUR PROCESS

- Stakeholder Meeting
- Assess
 - Goals: "Make all aware of one another" "All interest"
 - Open room
 - Who, why, who, how, objectives
 - Balance - Reflection of Process?
 - Outcomes need by participants
- 450 Paper
- Roadmap
- Getting Buy-in
 - "Who is in control?" "Who has final say?"
- SWACKS!

GOING FORWARD

- Documentation of process
- Capture critical
- Multidirectional influence
- Focus/Deliberation with sponsor
- Define what has call commit to
- Rules?
- Meet w/ leadership to commit resources
- Get buy-in from upper leadership
- create space that is supportive
- Judge Time / Vision?
- Document iterations / approach
- Leave from other organizations (own objectives)
- Set the symphony

CURRENT GOALS

- Build Interest in planning earlier
- Make all aware of one another
- Set an institutional approach for new leadership
- Change team (broad stakeholder group)

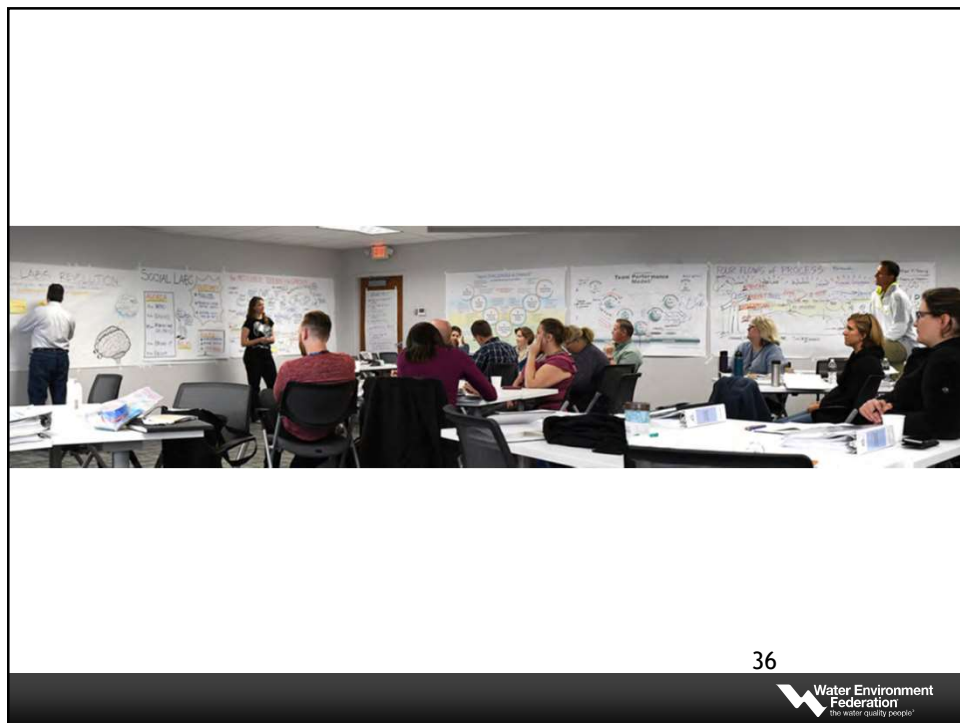
CHALLENGES

- Change in leadership
- No single authority
- Long duration - 6 years
- How to settle relationship between land use / Transportation / regional planning
- Not jumping to convergence too soon

35



35



36

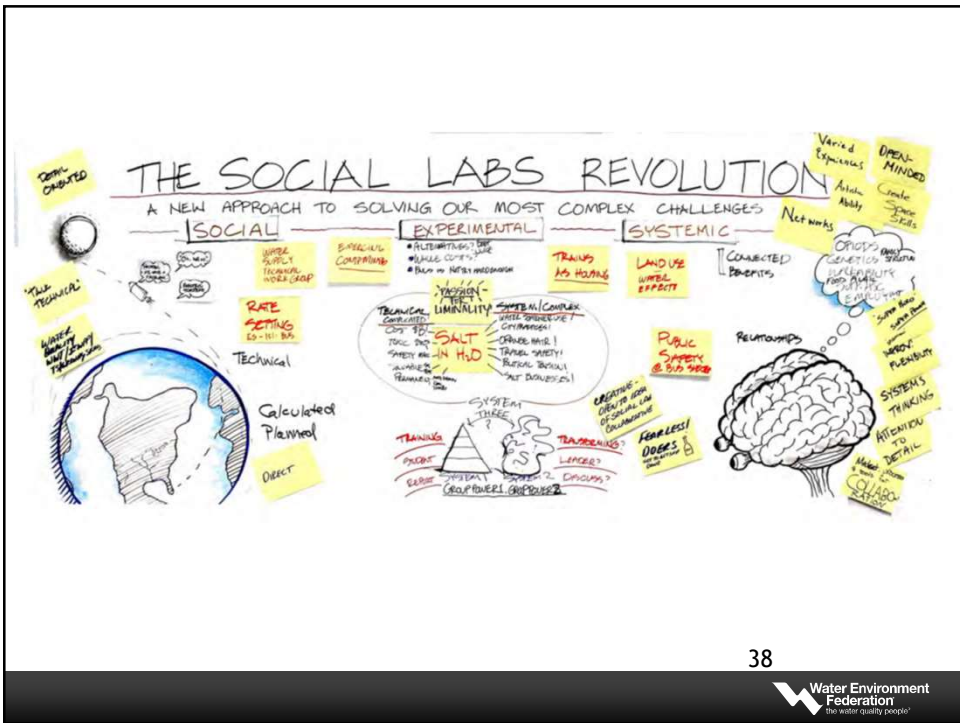


36



37

37



38

38

ES INTERNAL COMMUNICATIONS

PURPOSE

- Internal Submitter - Communication resources
- Shift in purpose
- Internal Communications focus

OUR PROCESS

7 S's Model

- 5 part workshop (5-60 min)
- Leaders of each initiative (5 parts)
- more voices in the room
- communicate our success
- for each stakeholder
- Artifacts
- Are we on the same page?
- Oh, what's your state in this?

3-POINTS

- All communication starts at top - model the culture
- Process holder + Community of practice
- Training + aggressive feedback
- High level of commitment at staff level
- What does it mean to "own the process"?
- NO one person or business unit should be responsible for communications!
- Communications is a process based organization - not a job
- new EA Bill, Water Bill - Plant

CURRENT GOALS

SPONSOR MEETING

SUPPORT IT AS IT MOVES FORWARD

PAUSE? POLITICAL CHANGE SUCCESS OF BUSINESS DEPENDS ON IT


WHAT ARE CURRENT GOALS? HOW CAN WE GET THERE? TO BE CLEAR

DEBRIEF + CLOSURE

CHALLENGES

- Sponsor alignment with direction - running out of bandwidth to ask about communications?
- external vs. internal communication focus?
- no response is a form of response

39




39

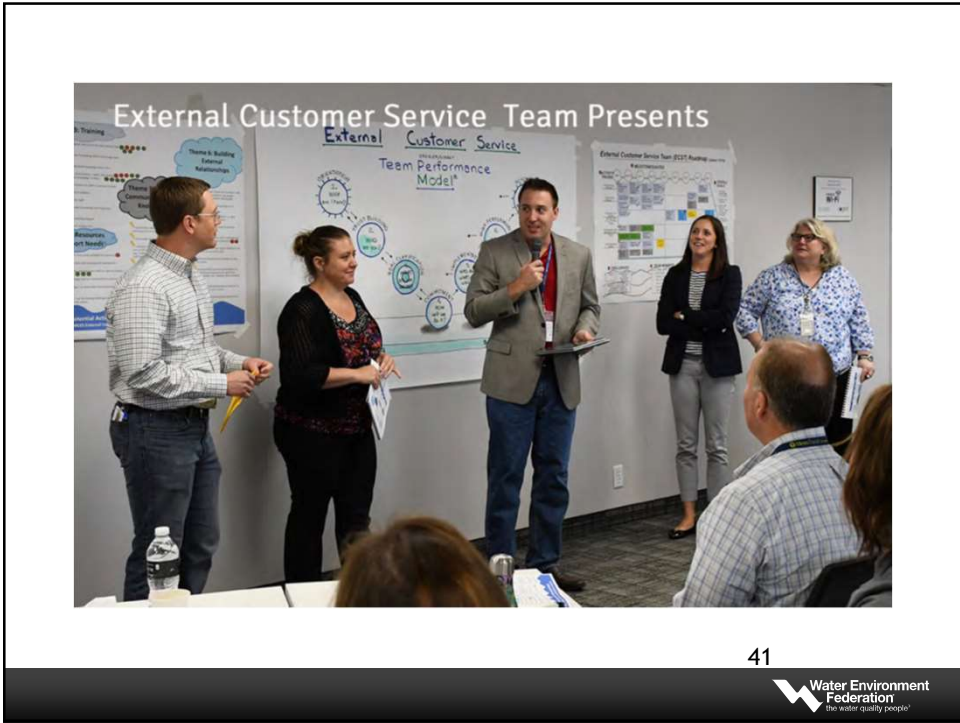
External Customer Service Team Performance Model®

DREXLER/SIBBERT

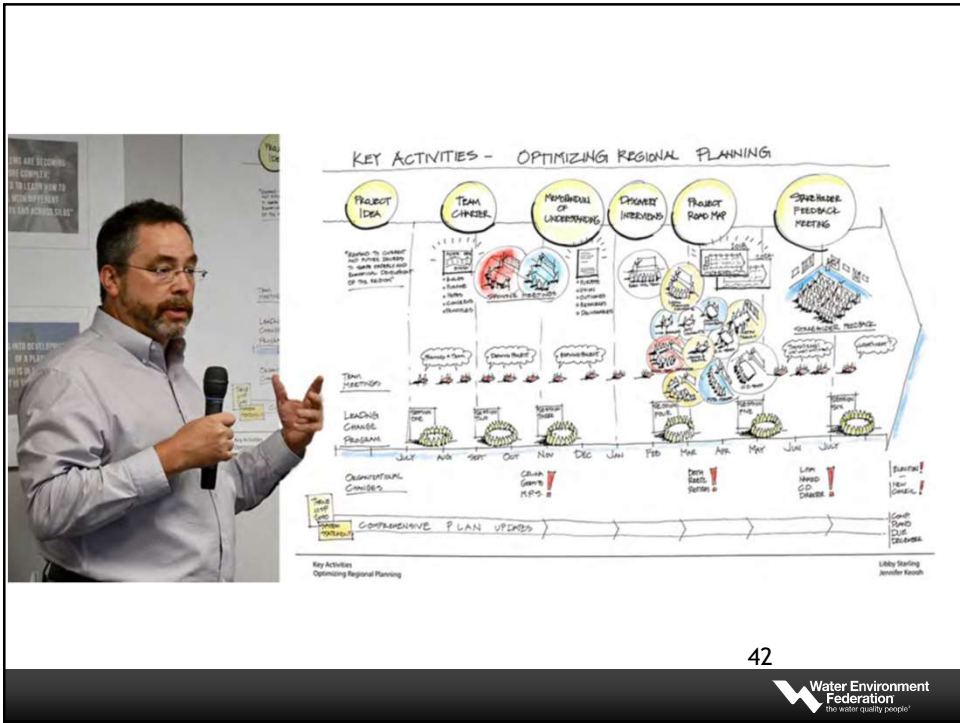
40



40



41



42

Use
Neuroscience
for
Transformation

Water Environment
Federation
the water quality people®

This slide features a blue background on the left with the text "Use Neuroscience for Transformation" in white. A thin white horizontal line is positioned below the word "Transformation". To the right is a vertical grey gradient bar. The Water Environment Federation logo is in the bottom right corner.

43

T H I N K

Brain Science

Significantly Improve
Organizational
Performance

Bring Out the Best in
Others

Make Change Happen
& Adapt Faster

Become an Inclusive
Organization that
Attracts Diversity

44

Water Environment
Federation
the water quality people®

The slide displays the word "THINK" in large, spaced-out letters at the top. Below it, "Brain Science" is written above an open cardboard box with a blue arrow pointing upwards from the box. Four bullet points are arranged around the box, describing organizational benefits. The Water Environment Federation logo is in the bottom right corner.

44

The Neuroscience of Social and Physical Threats

Exhibit 1: Social and Physical Pain Produce Similar Brain Responses

Brain scans captured through functional magnetic resonance imaging (fMRI) show the same areas associated with distress, whether caused by social rejection or physical pain. The dorsal anterior cingulate cortex (highlighted at left) is associated with the degree of distress; the right ventral prefrontal cortex (highlighted at right) is associated with regulating the distress.

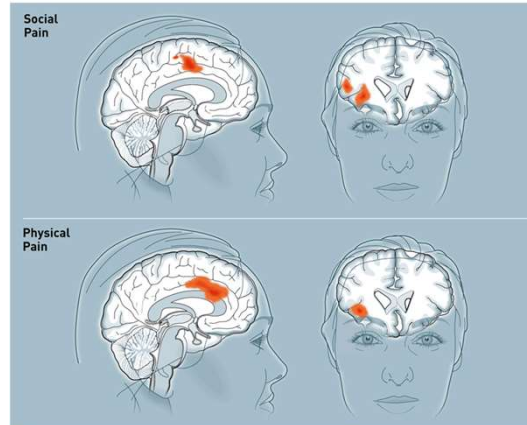


Illustration: Samuel Valasco

Source: Eisenberger, Lieberman, and Williams, Science, 2003 (social pain images); Lieberman et al., "The Neural Correlates of Placebo Effects: A Disruption Account," NeuroImage, May 2006 (physical pain images)

45



45



Collaboration and Meetings

46



47




48

Synchronize the Science of the Brain with Leadership Behaviors and Culture Change

5%

Brain is 2% of body mass


Brain Uses 20% of available energy



95%

<p>Thinking Behaviors 20% of brain energy is used by conscious brain for creative and thinking behaviors</p>		<p>Un-Thinking Behaviors 80% of brain energy is used by the subconscious brain for reflex behaviors and habits that keep our body functioning and safe</p>
<p>Processing Speed 40 bits info/second</p>		<p>Processing Speed 40 million bits info/second</p>
<p>Blood Supply Decreases when fear is triggered</p>		<p>Blood Supply Increases when fear is triggered</p>


49




49

Culture Change Requirements


Goal: Improve the Quality of Conversations and Decisions



Priorities




Habits



Systems

<p>Reduce Social Threats from Meetings: <u>Group or Individual</u></p>	<p>Apply SCARF within <u>Group or Individual Meetings</u></p>	<p>Leadership development plan incorporates principles</p>
	<p>Design <u>Group Meetings</u> to Integrate SCARF</p>	<p>Provide resources for meeting design & facilitation</p>
	<p>Design <u>Individual Meetings</u> to Integrate SCARF</p>	<p>Provide meeting and feedback guides</p>

50



50



Email
Leisa.Thompson@metc.state.mn.us



Twitter
<https://twitter.com/MetCouncilNews>



LinkedIn
<https://www.linkedin.com/company/metropolitan-council-of-the-twin-cities/>




Web
<https://metro council.org/>


51




51



Helena Henao-Fernandez
Deputy Program Director
Thames Estuary Asset Management
2100 (TEAM2100) Program



Environment Agency, United Kingdom

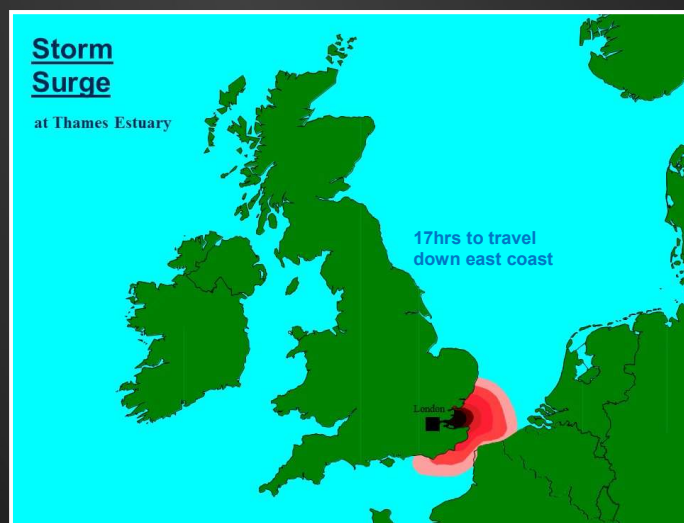


52

Innovation as a Tool of Engagement

53

The 1953 Flood



54

The 1953 Event

- 100 people died in the Thames Estuary
- Over 25,000 properties were damaged
- 30,000 people evacuated
- 100,000 acres of land flooded along the coast
- London escaped due to outer defence failures




55

The Thames Barrier and Tidal Defences Built



56

What Does the System Protect?



People & Property

- 1.3 million residents
- Over 500,000 homes
- £275 billion property value

Industry

- 40,000 commercial and industrial properties

Habitat

- 55 sq km designated habitat sites

Heritage



- over 3100 hectares of sensitive heritage sites
- 4 World Heritage sites


Culture

- Art galleries and historic buildings



Infrastructure



- 400 schools
- 16 hospitals
- 8 Power stations
- More than 1000 electricity substations
- 167 km of railway
- 35 Tube stations
- 51 Rail stations
- Over 300 km of Roads







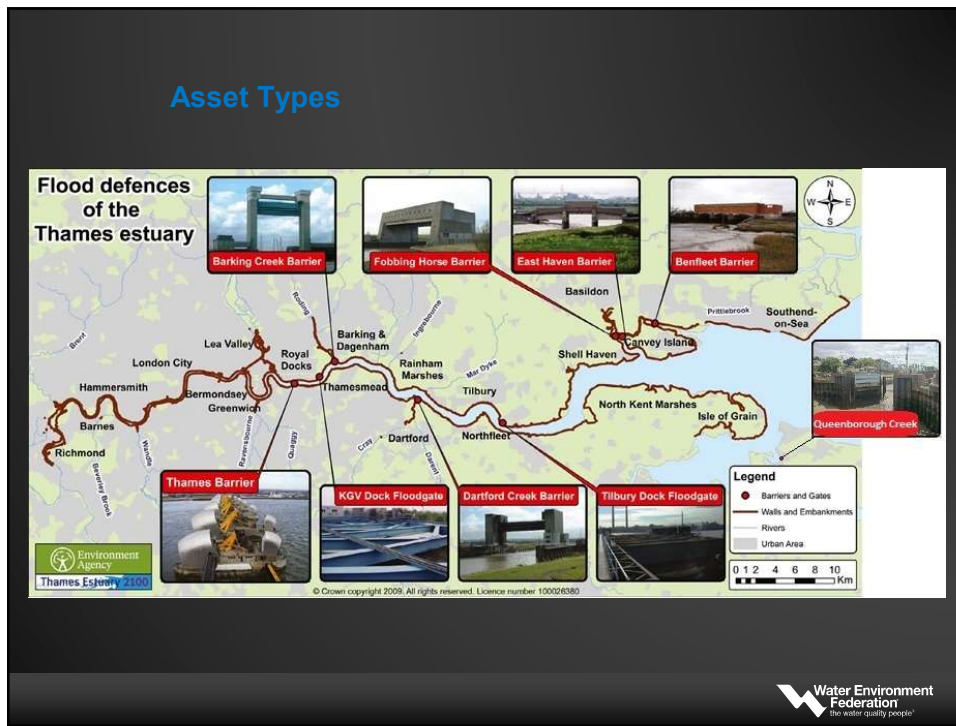
57



58



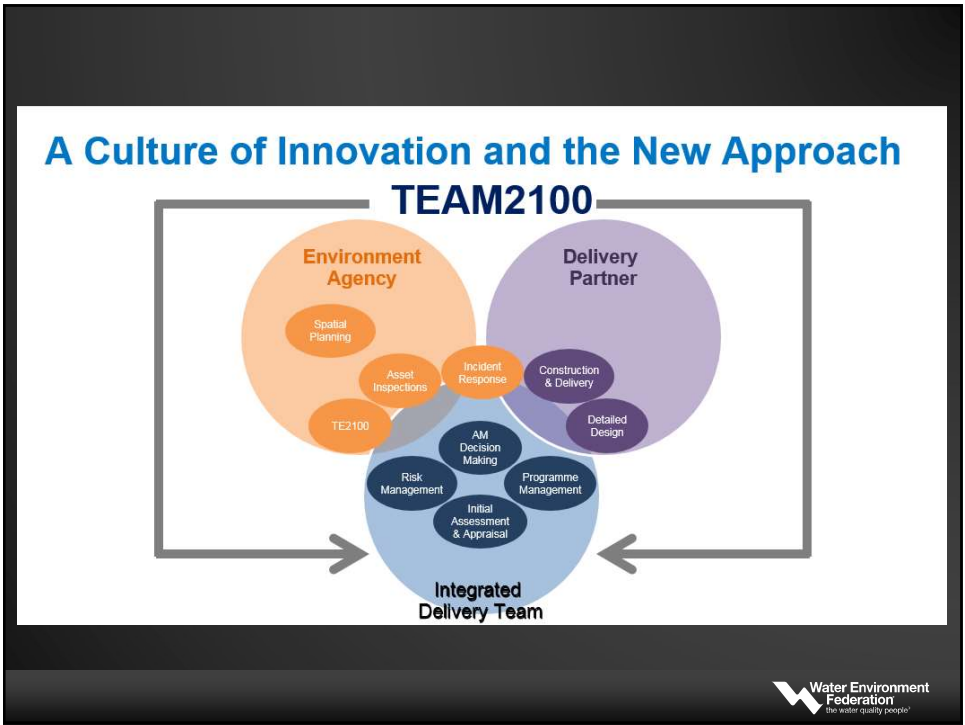
59

The icon consists of three diamond-shaped panels. The top panel shows a hand holding a pound sterling symbol (£). The middle panel shows a profile of a human head with gears inside, symbolizing thought or knowledge. The bottom panel shows a speedometer and gears, symbolizing efficiency or performance.

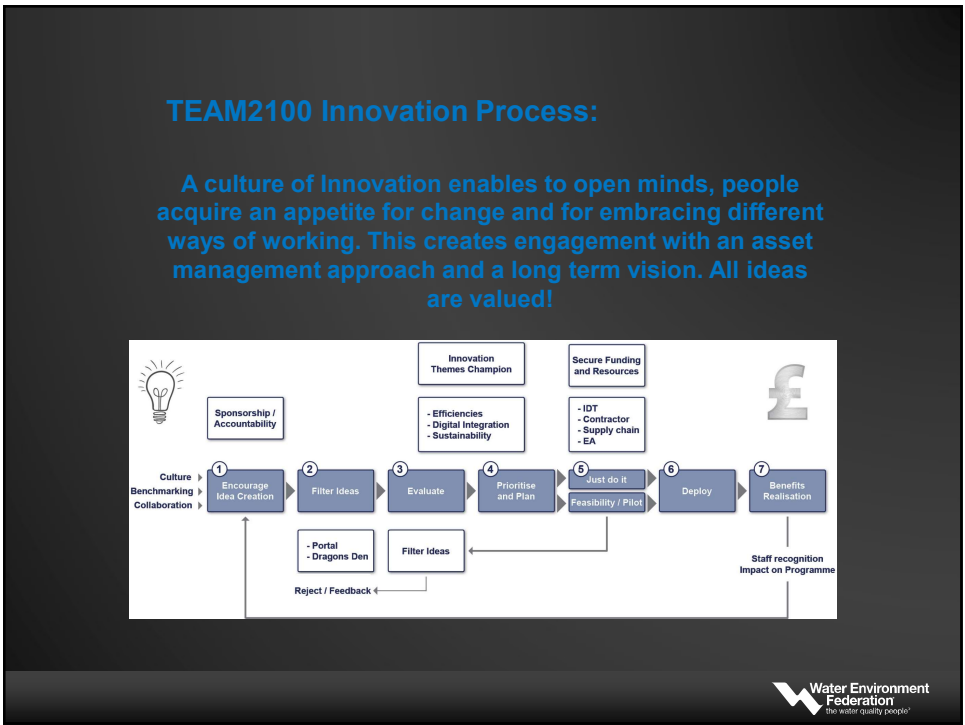
Why focus on Asset Management?

- Delivering **long term value**: Pledge within the Full Business Case to show Government that its money is being invested wisely;
- Ensure our stakeholders – those we protect – receive **best benefit** from our investments;
- **Develop our knowledge and understanding** of our assets, how they perform, how effective our work is and how our work delivers the EA Corporate Strategy; and
- Ensuring we **deliver what we say we will efficiently**.

60








61



62


The “Soft” and “Hard” Innovations: More than 243 innovations recorded to date


 Digital/Physical	 Health, Safety and Wellbeing	 Sustainable Solutions	 Engineering efficiencies through the life cycle
<ul style="list-style-type: none"> • Drone survey • Estuary Eye GIS Solution • IPAD Usage • 3D Scanning • ERT Technology– Smart Infrastructure • Darzin Stakeholder Software • P6/GIS Integration • 3D BIM Models • Deterioration modelling • Asset Level Risk Modelling • Infracore 3D Solution Development • Geo-Referenced Sheet Pile App • Ground Anchor App 	<ul style="list-style-type: none"> • Stay Safe App • Wellness Week • Confined space mock ups • Factory mock ups • Insights discovery program • Joint training programs • Observation cards • Ice Vests • Value led IDT • The ZOUND moment 	<ul style="list-style-type: none"> • Green infrastructure trials • Geomorphological Assessments • Silt flushing system • Joint planning 	<ul style="list-style-type: none"> • Benefits realization approach • High level schedule • TILOS Software

 Water Environment Federation
the water quality people®

63

Innovation in Access Solutions



 Water Environment Federation
the water quality people®

64

Thames Barrier Principal Inspections - Mock Up structure



Objectives: The objective of constructing the timber Mock Up was in order that people who were not confined space trained could appreciate the space constraints within the Gate arms of the Thames Barrier without having the expense and the safety risks associated with entering the actual gate arms.

Innovation Benefit: The Mock Up enabled an out-door meeting in an open space near the Thames Barrier where Health and Safety professionals and operational people could discuss the situation and decisions were agreed on the safe system of work. Ideas shared outside of TEAM2100 and used on Ipswich Barrier project.



65

Meet Elios – Our Confined Space Drone



66



67

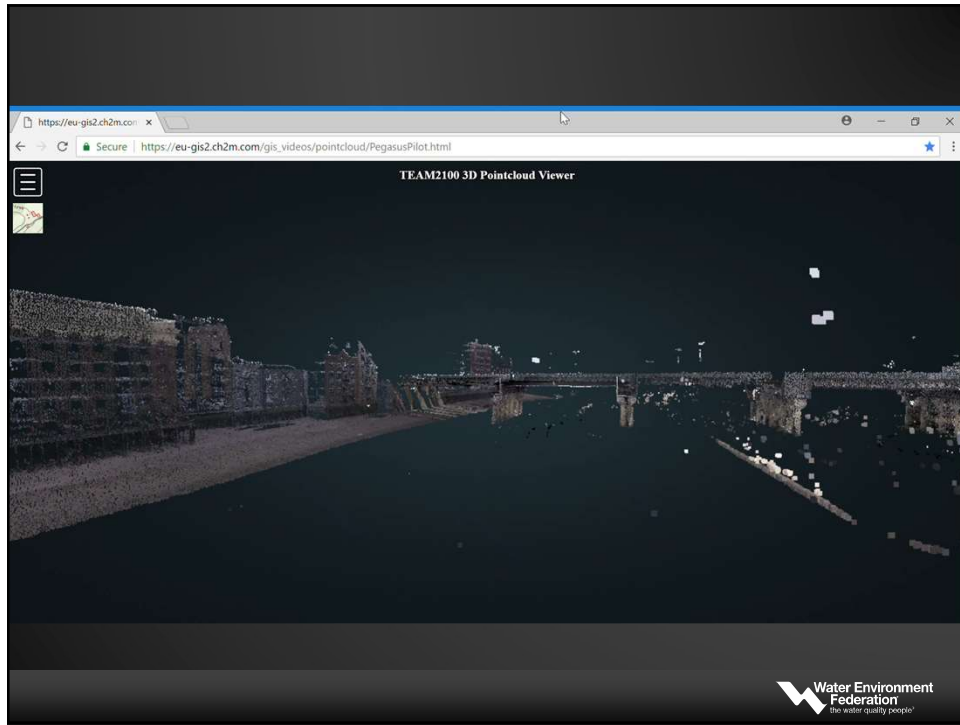
TEAM2100 Digital Transformation of Our Approach and Data Management Innovation

- Transformational Approach to Data Use on Whole Life Asset Management



Water Environment Federation
the water quality people®

68



69

Innovation in Construction

Innovations include:

- MSite Biometric System
- Reactec HAVWEAR
- SiteZone proximity system
- The Perimeter Intruder Detection (PID) System

A real focus on wellbeing potentiates the engagement of your team!

Water Environment Federation
the water quality people®

70

The “Soft” Innovation with a hard impact on the Program



Taking collaborative working to the next level



71

Embedding a Collaborative and Innovative Culture

- Insight workshops
- “Zero comments”
- Leadership team example
- Support and engagement with other teams
- Staff rotations across our organizations
- Best person for the role




72

Diversity on TEAM2100 Drives New Thinking and Engagement



Organizational Diversity through an Integrated Delivery Team

Environment Agency, Jacobs, BB, Tier 2 & 3s (SMEs)

60+ nationalities within the team

The more diverse, the more experiences and ideas, the better the chance of getting it right

Beyond Gender and Ethnicity



73



The Results!

- ISO55001 AM certification done – focus on world class
- Case study for P13
- Over £25m of efficiencies recorded to date with potential £50m savings identified on large realignment schemes and £1b from WLC optimization
- 243 innovation ideas submitted, over 50 implemented
- Zero accidents or incidents since day one – 1.3m hours to date
- 23% More efficient than our own business case.



74

In summary!

Factors that work for us to engage the team:

- Shared sense of purpose
- Innovative culture that helps to increase appetite for different ways of working
- Diversity in a holistic sense, beyond ethnicity and gender: skills, organizations
- Acknowledgement that the most important asset in your asset management system is the people working on it

75



Douglas Stewart
Portland Water Bureau

Supervising Engineer

- Asset management practice leader
- Asset management program oversight and development
- Municipal and consulting experience
- Risk assessment

76

Portland Water Bureau



Strategic Business Planning Based on Assessing Corporate Risk

Douglas Stewart, MSCE, PE

June 27, 2019



77

This presentation will describe:

- Using asset management risk assessment and management principles to manage strategic risk profile.
- Highly intensive collaborative staff process
- Produced corporate business plan based on managing strategic risks
- Developed strategic risk register



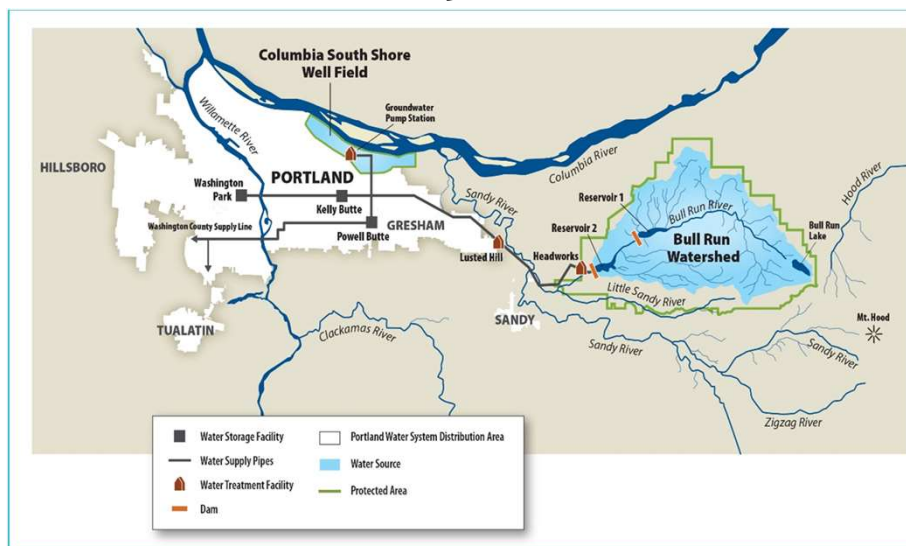
78

Background

- 2008 - 2011 Strategic Plan is **out of date**.
- In 2016, bureau leaders voted that **identifying and addressing organizational risks is a top bureau priority**, based on AMCV benchmarking.
- The strategic risk assessment and mitigation plan will become the **core of the Five-Year Strategic Business Plan**.

79

PWB Water System



80

Water System Major Assets

2 Water Sources

41 Pump Stations

66 Tanks and Covered Reservoirs

2,330 Miles of Pipe

178,500 Meters

14,350 Hydrants

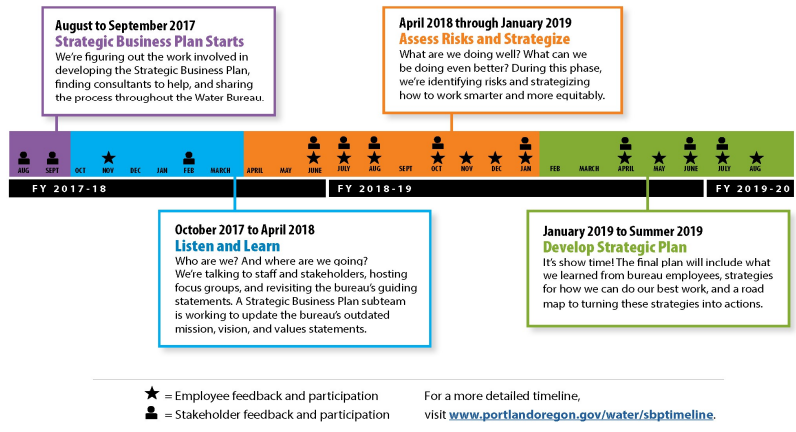
130 Drinking Fountains

Estimated replacement value is \$8.0 billion.



Project Timeline (The Process)

PORTLAND WATER BUREAU Strategic Business Plan Timeline



1. Update Organization Vision, Mission, Values

- **Review** key documents and **interview** internal and external stakeholders
- Analyze **strengths, weaknesses, and opportunities**
- Facilitate discussions with bureau stakeholders to **update vision, mission, values statements**
- Bring **expertise in integrating equity** into the **planning process**



83

2. Organizational Risk Assessments

- “What keeps you up at night?”
- Bureau stakeholders identify and vote on organizational risks
- Risk Map with scores for likelihood and consequence
- Risk Register with mitigation measures
- Workshops for internal and external stakeholders, employee feedback



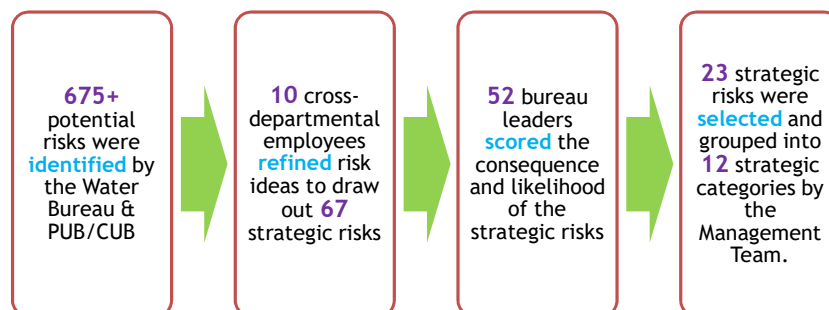
84

3. Strategic Business Plan Development

- Term of the plan is five years but will include discussion of **future risks** outside of that period.
- Strategies come from the **risk register**.
- Strategies become the **basis of bureau programming and budgeting**.
- Plan sets up the **pathway for implementation of the strategies and actions**.
- Plan will be a **living document**, with periodic updates and review of the priorities.

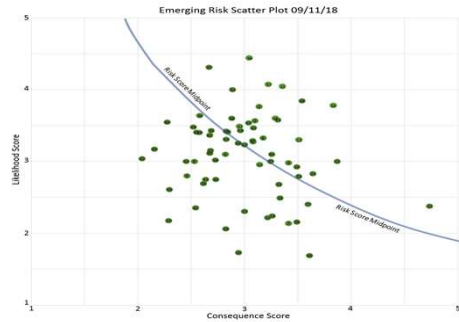
85

Strategic Risk Identification by the Numbers



86

Selecting Strategic Risks to Address



Strategic Risk Selection Criteria

- ✓ Could the bureau significantly mitigate the risk?
- ✓ Would addressing this risk align with the bureau's Guiding Statements?
- ✓ Is the bureau currently engaged in significantly addressing the risk?
- ✓ Are there potential cost effective mitigations?
- ✓ Could change be measurable and/or demonstrable?
- ✓ Is there a likely champion within the bureau to lead the mitigation effort for the risk?



87

Risk Groupings Assessed

Ensuring a Reliable Groundwater Source	Ensuring Affordability for Customers	Promoting a Collaborative Workplace & Culture	Acting as an Engaged City Partner
Leading as a Workplace of Choice	Demonstrating Accountability	Protecting Customer Data	Enhancing the Project Delivery Process
Being Prepared and Resilient	Becoming a Trusted and Inclusive Public Utility	Planning and Preparing for Climate Change	Fostering an Equitable and Diverse Workplace



88

Risk Strategies Developed

- Twelve teams (4- 8 people per team) worked from Sept to Jan.
- Equity included in strategy development.
- Developed over 80 strategies to reduce risk profile.
- Organized now into 5 goal areas for the SBP.



89

Strategic Risk Management Goals:

I. Service Delivery Resilience

II. Community Relationships

III. Workforce & Culture

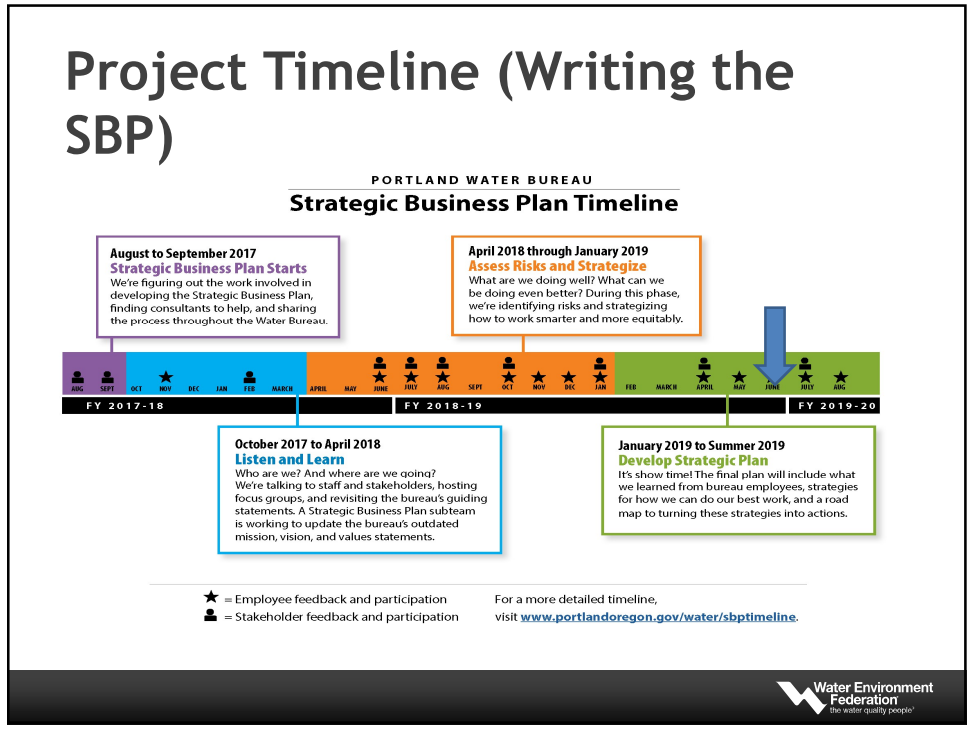
IV. Business Processes

V. Accountability & Leadership



90

Project Timeline (Writing the SBP)



91

Notable Quotes

- “This is an opportunity to change how employees see a strategic plan.” - PWB Employee
- “That an equity lens is being talked about, considered, included in the discussion is a big step forward.” - Bureau Equity Committee Member
- “I really enjoyed being invited into bureau future decision making. I really valued the interaction with others in different parts of the organization.” - Risk Management Strategy Team Member
- “The strategic risk process has really highlighted our need to improve cross-departmental communication and start to have the “hard” conversations we have needed to have.” - PWB Employee
- “The collaboration and conversations with one another have been invaluable. That process has already initiated change on its own.” -Risk Management Strategy Team Member
- “PWB is an inspiration to other City bureaus in asset management.” - Community Member

92