ENABLING DIGITAL TRANSFORMATION:
LEVERAGING COGNITIVE DIVERSITY
I just put five links in chat. Please click on the link that corresponds with the first letter of your last name.
PHOTO

- Each of you received a photo of the same object.
- From the photo, what can you tell us about the object?
THE CUP

- What is the reality of the cup?
WHAT'S THE REALITY OF...

...the industry 4.0 version of your organization?

...the digital transformation of your operations?

...smart manufacturing?
FULL SPECTRUM

• Each of us is at least a little bit *color deficient*.
• Together, we are better able to see the full spectrum of what a *transformed* organization looks like.
MY EARLY CAREER EXPERIENCES...WITH FAILURE

• A $115 million failure at a Fortune 100
• A failed start up
LESSONS LEARNED

• The wrong frameworks and tools
• The wrong teams
WHY INTERNAL TRANSFORMATION TEAMS OFTEN FAIL

LACK OF BALANCE ON THE TEAM

FAILURE TO LAUNCH

NOT THE RIGHT TEAM (29%)
WHAT DO YOU THINK THESE TERMS MEAN?

• Not the "right" team?
• Lack of "balance?"
YOUR TEAM?
YOUR TEAM?
DIVERSITY

WHY IS A DIVERSE TEAM IMPORTANT?
HOW DO WE DEFINE DIVERSITY?
Cognitive diversity doesn’t improve performance when it comes to routine tasks, like flipping burgers. But when we are dealing with complex tasks like engineering problems, or tasks requiring creativity and innovation, or managerial issues, cognitive diversity is a key explanatory variable in levels of performance.

STARTED SEARCHING FOR THE "HOW"
HUMAN INSIGHT

- Psychiatrist Peter Robertson, MD.
- 50 years of experience helping large corporations with organizational performance
- Work is based on "human ethology." More on that later
CONNECTING PEOPLE TO GROWTH, INNOVATION, AND STRATEGIC TRANSFORMATION
STRATEGIC TRANSFORMATION

• Growth
• Innovation
• Strategy
• Change
COGNITIVE DIVERSITY IN THE CONTEXT OF STRATEGIC TRANSFORMATION
RETHINKING ORGANIZATIONS
A TALE OF TWO SYSTEMS

A Natural Prairie

A Manicured Garden
WHICH IS MORE RESILIENT?

A Natural Prairie

A Manicured Garden
WHICH IS MORE VALUABLE?

A Natural Prairie

A Manicured Garden
WHICH IS THE **BETTER METAPHOR FOR OUR ORGANIZATIONS?**

**A Natural Prairie**

**A Manicured Garden**
The field of ethology can be defined as "the biology of behavior." It places emphasis on the notion that the behavior of animals and humans has evolved and can be studied as one aspect of evolution.
Humans are social animals. Just as wolves and lions create packs or hunting groups for self-preservation, humans create complex social structures, including families, organizations, communities, and nations.

Humans must adapt in order to survive.

Cognitive thinking and communication evolved to facilitate cooperation among individuals.

The combination of attachment and exploration defines a large part of human behavior in complex systems.
OUR ORGANIZATIONS AND TEAMS...

...ARE COMPLEX SOCIAL STRUCTURES
TWO FUNDAMENTAL ELEMENTS OF ORGANIZATIONS, TEAMS, AND ALL OTHER COMPLEX SOCIAL STRUCTURES

Attachment  Exploration
ATTACHMENT

• The instinctive drive each of us has to develop bonds with people and content/objects in order to feel secure.

• Content/Objects” can include a physical object (like a computer) or a non-tangible concept (like science)

• Most of us have these bonds with BOTH people AND objects

• Each of us has an orientation that is either more people focused than content/object focused or more content/object focused than people focused.
**Content:** I am more attached to the tools, technologies, & disciplines that can help me get things done (“how I do what I do”)

**People:** I am more attached to people (“those with whom I do the things that need to get done”)
TAKE A LOOK AT YOUR AEM CUBE, SPECIFICALLY THE FLOOR

Why is it important for you're a digital transformation team to have an "attachment" to people (people = internal or external customers)
TAKE A LOOK AT YOUR AEM CUBE, SPECIFICALLY THE FLOOR

Why is it important for your team to have an "attachment" to content (i.e., subject matter and/or technology, etc.)?
POLL #1: ATTACHMENT

Based on your AEM-Cube report and/or our discussion where do you fall along the content/people attachment dimension?

• I am likely more “content” attached
• I am likely more “people” attached
CONTENT AND PEOPLE
ATTACHMENT: WHEN YOU HAVE ONE WITHOUT THE OTHER
"Products" can be for external or internal "markets."

Is there a good fit between what we are developing and for whom we are developing it?
THE COOLEST COOLER

- The company initially raised $13 million from 60,000 customers pledging $165 and more for a cooler, making it the highest funded Kickstarter campaign of 2014.
- But 20,000 early backers had still not received their coolers two years after the promised delivery date.
- Cost of development, manufacturing and shipping each cooler was $235, far exceeding what customers pledged on Kickstarter.

Was this team likely more CONTENT attached, or PEOPLE attached?
PRODUCT-MARKET FIT?

GOOGLE GLASS
CONSUMERS did not know what problems a wearable computer would solve for them and why they needed a $1,500 pair of glasses.

The design was not aesthetically appealing. As *The Guardian* put it, users of the product looked like “dorks,” the “contemporary version of those 1950s engineers who always had several pens and a propelling pencil in their top jacket pockets.”

There was a public backlash over privacy concerns. Because the glasses allowed wearers to clandestinely record video — unlike the obvious presence of cell phone cameras — the product made bystanders uncomfortable. Nightclub bouncers, for example, banned patrons from wearing them.

The same safety fears about cell phones and radio frequency radiation were magnified with Google Glass, because it was meant to be worn on your face all the time.
PRODUCT-MARKET FIT ALIGNMENT

How well aligned the team is to design products, services, and/or solutions that will meet a market need?
WHICH TEAM HAS BETTER PRODUCT-MARKET FIT ALIGNMENT?
WHICH TEAM HAS BETTER PRODUCT-MARKET FIT ALIGNMENT?
EXPLORATION

• Level of interest in the unknown.
• Level of curiosity about new things.
• Level of interest in collecting information about one’s environment.
• The extent to which someone seeks change (sometimes simply and only) because the existing state has become too common.
EXPLORATION

Exploration: Looking to future possibilities (feedforward focused)

Optimization: Looking at past performance (feedback focused)
THE CHAIR EXERCISE
We've noticed that the business of cutting and styling hair is pretty old fashioned. We think the timing is right to disrupt this industry through digital innovation. Take two minutes and use the chat to list as many novel and innovative digital transformation ideas for the hair cutting and styling industry you can think of.
I always come up with new ideas. I can’t help it. I love working in fast moving environments and tend to get bored quickly with routines.
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I like to test new ideas to see if and how they could work.
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I like to roll up my sleeves. Give me a job and I’ll make sure it is done.
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Who do you think will be the next to leave?
I like to focus on results and goals.

I like to make sure quality and values are preserved. Change is fine, but we should not throw the baby out with the bathwater.
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I like to focus on results and goals.

I like to make sure quality and values are preserved. Change is fine, but we should not throw the baby out with the bathwater.

Every individual contributes to a specific part of the Growth-Curve.

Nobody contributes optimally to the whole curve.

Growth requires knowledge and insights about both human behavior and the material world.

Without strategic diversity there is no Growth-Curve.
Growth Curves Applications

- Technologies
- Organizations
- Communities
- Economies
- Social Change
Navigating the Growth Curve

- R&D
- Sales
- Production
- Quality, Service
- Explore & Innovate
- Build & Design
- Optimize & Regulate
- Guard & Preserve
- Legal, Accounting
Navigating the Growth Curve

Focusing solely on the beginning of the growth curve is expensive and yields nothing.
Navigating the Growth Curve

Focusing solely on the end of the growth curve yields lots of money but no future (next growth curve)
Navigating the Growth Curve
Pay attention to all parts of the growth curve
TAKE A LOOK AT YOUR AEM CUBE AGAIN
TAKE A LOOK AT YOUR AEM CUBE AGAIN

Why is it important for a digital transformation team to explore?

Why is it important for a digital transformation team to optimize?
POLL #2: EXPLORATION

Based on your AEM-Cube report and/or our discussion where do you fall along the exploration/optimization dimension?

- I am likely more “exploration” focused
- I am likely more “optimization” focused
SPEED-TO-MARKET ALIGNMENT

How well aligned the team is to move quickly through the stages of the S-curve (i.e., R&D, production, and distribution)
WHICH TEAM HAS BETTER SPPED-TO-MARKET ALIGNMENT?
WHICH TEAM HAS BETTER SPEED-TO-MARKET ALIGNMENT?

Optimization Oriented Exploration Oriented
Optimization Oriented Exploration Oriented
In which quadrant would you expect to find individuals with good insights about how digital transformation can make a positive difference for our customers and be able to effectively communicate that value?
In which quadrant would you expect to see how digital transformation will help us sense the earliest signs of customer dissatisfaction, and help ease their discomfort?
In which quadrant would you expect to see a solid understanding of how to execute our digital transformation efforts efficiently and with attention to quality?
In which quadrant would you expect to find those who can clearly see how the latest digital technology advances could transform our organization?
QUADRANTS & CONFLICT

- Support
- Transform
- Control
- Discover

Optimization

Relationship Focus

Content Focus

Exploration
QUADRANTS & CONFLICT
Why do you think operations expertise is often positioned here?
THE THIRD DIMENSION: MANAGEMENT OF COMPLEXITY
HOW MUCH OF A COMPLEX SYSTEM ARE WE INTERESTED IN SEEING AND UNDERSTANDING?
MANAGEMENT OF COMPLEXITY

**SPECIALIST**
- Prefer to manage a narrower slice of complexity.
- Can understand that narrow slice with great depth and granularity.
- Often a better player than coach.

**GENERALIST**
- Prefer to manage a broader swath of complexity.
- Can see a wider area but not in much depth or granularity.
- Often a better coach than player.
Management of Complexity & the Growth Curve

Growth

Time

Guard & Preserve

Optimize & Regulate

Building and Designing

Explore & Innovate
Management of Complexity and the Growth Curve
GENERALIST OR SPECIALIST: FOREST OR TREE?
WHO IS THE SPECIALIST AND WHO IS THE GENERALIST?
TAKE A LOOK AT YOUR AEM-CUBE AGAIN
TAKE A LOOK AT YOUR AEM-CUBE AGAIN

Why is it important to have "generalist" as part of a digital transformation team?
TAKE A LOOK AT YOUR AEM-CUBE AGAIN

Why is it important to have "specialists" as part of a digital transformation team?
TAKE A LOOK AT YOUR AEM-CUBE AGAIN

How might someone near the middle on this dimension add unique value?
POLL #3: MANAGEMENT OF COMPLEXITY

Based on your AEM-Cube report and/or our discussion where do you fall along the exploration/optimization dimension?

- I am likely more “exploration” focused
- I am likely more “optimization” focused
AEM-CUBE: THE THREE DIMENSIONS

ATTACHMENT  EXPLORATION  MANAGEMENT OF COMPLEXITY
Transformation Team A: What observations could you make about this team?

People Attachment

Optimization Oriented

Content Attachment

Exploration Oriented
TEAM A: STRATEGIC STRENGTHS

- Balance between content and people attachment.
- Balance between exploration and optimization
- Balance between integration and specialization
- Some ”product-to-market” capacity.
- Some “speed-to-market” capacity.
- High level of emotional intelligence
TEAM A: STRATEGIC VULNERABILITIES

- Lacking operations capacity.
- May lack capacity for customer cultivation and acquisition.
- May have difficulty with quality and efficiency.
TEAM A: MITIGATION PLAN

- Consult with operations expert as needed
- Add capacity in the transform quadrant, if possible.
- Secure a quality and efficiency advisor
TRANSFORMATION TEAM B: WHAT OBSERVATIONS COULD YOU MAKE ABOUT THIS TEAM?
TEAM B: STRATEGIC STRENGTHS

- Balance between content and client attachment.
- Customer service capacity
- Emotional intelligence
- Customer cultivation and acquisition capacity
- Balance between exploration and optimization
- Balance between integration and specialization
- Product-to-market” capacity.
- Speed-to-market” capacity.
- Operations capacity.
TEAM B: POTENTIAL STRATEGIC VULNERABILITIES

- Potential for conflict based on differing cognitive signatures
TEAM B: MITIGATION PLAN

• Anticipate potential conflict between the transform and control quadrants
• Recognize it as a potential strength if you have a psychologically safe environment where interpersonal risk is minimized.
• Provide time and opportunity for dialogue
SMALL GROUP (4 PEOPLE) EXERCISE

You’ve been asked to be part of an inventory management innovation team. You are charged with designing and implementing a new system for automated inventory detection that will also trigger purchase orders for new inventory when needed. Assume your team has the required technical expertise and resources needed. You’ve used the AEM-Cube to better understand the level of strategic diversity represented in your team. When you break into your groups, do the following:

1. Share with one another where you are located in the cube. If you’ve not completed the AEM-Cube, guess where you likely are based on our discussions thus far. One of your group members can use the empty cube to plot everyone’s positions using PowerPoint. Don’t worry too much about making it look perfect.

2. Based on your team positions, what are two strategic strengths your team is likely to have that could contribute to your success in designing and implementing an automated inventory system?

3. Based on your team positions, what are two potential strategic vulnerabilities (blind spots) your team is likely to have that might limit your ability to successfully designing and implementing an automated inventory system?

4. How might you mitigate your potential vulnerabilities?
OUR TEAM STRATEGIC DIVERSITY ASSESSMENT

Our Strengths
• ______________________
• ______________________

Our Potential Vulnerabilities
• ______________________
• ______________________

Mitigation Plan
________________________________________________
________________________________________________
STRATEGIC AGILITY INDEX

A predictor of how well-suited a team is to deal with uncertainty and disruption.
TEAM A: STRATEGIC AGILITY INDEX SCORE

50 and Below
Ill-suited for uncertainty and disruption

51-80
Somewhat well-suited for uncertainty and disruption

81 and Above
Well-suited for uncertainty and disruption

72
COMPANY B: STRATEGIC AGILITY INDEX SCORE

50 and Below
Ill-suited for uncertainty and disruption

51-80
Somewhat well-suited for uncertainty and disruption

81 and Above
Well-suited for uncertainty and disruption

86
TEAM A & B: STRATEGIC AGILITY INDEX SCORES: COVID 19 HITS...

One was successful, the other was not. Guess which was which.
Teams A & B: Strategic Agility Index Scores: COVID 19 Hits...

Both were data security projects

Project was late and over budget

Project was early and under budget

KEY TAKEAWAYS

• Recognize your own bright spots and blind spots, keeping in mind that we are all somewhat *color deficient*.

• Use tools like the AEM-Cube to visualize the cognitive diversity of your teams (we can help with that)

• Learn more about cognitive diversity and make mental check lists about those with whom you work (i.e., *does this person seem more content attached, or people attached?*) and adjust the way you communicate and interact with them accordingly).
"I'M NO GENIUS. I'M SMART IN SPOTS--BUT I STAY AROUND THOSE SPOTS."

TOM WATSON, SR.
FOUNDER OF IBM
THANK YOU!

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