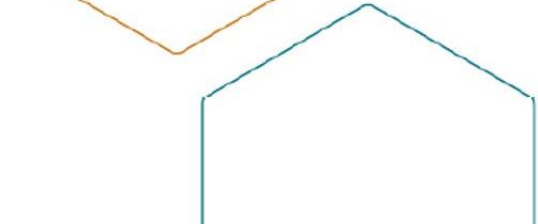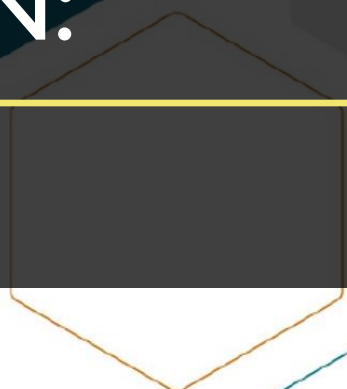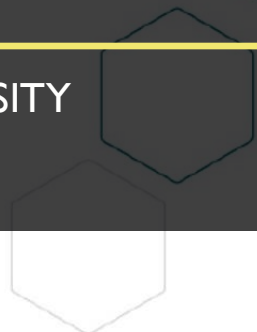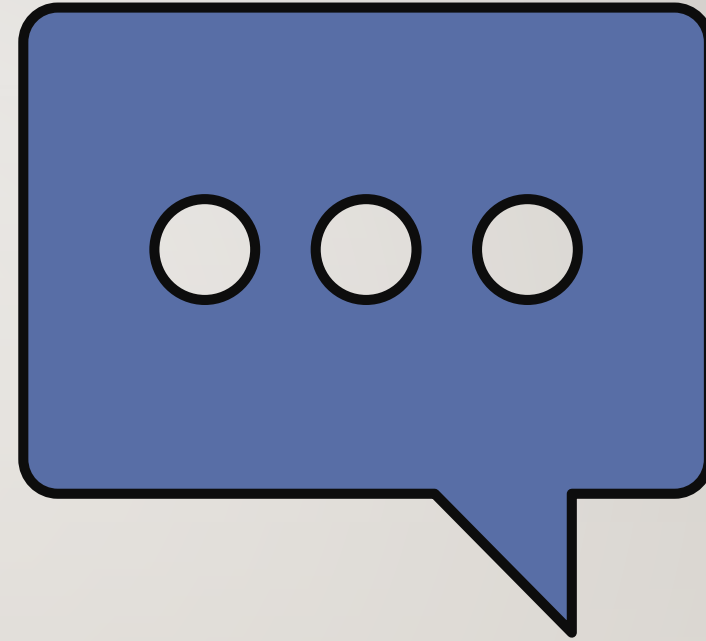# ENABLING DIGITAL TRANSFORMATION:

LEVERAGING COGNITIVE DIVERSITY

CHECK THE CHAT

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

Ahuja, S. B. (2019). Why Innovation Labs Fail, and How to Ensure Yours Doesn't. *Harvard Business Review, 22.*
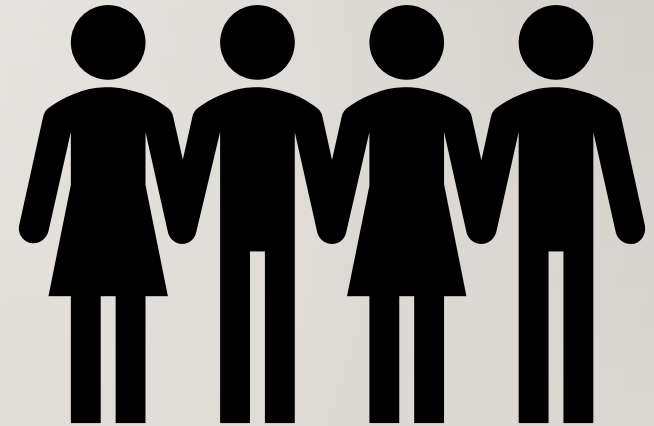
FAILURE TO LAUNCH

NOT THE RIGHT TEAM (29%)

THE TOP REASONS STARTUP FAILS
Most Frequently cited reasons for startup failure

Reason	Percent
LACK OF FUNDS	42%
INEFFICIENT TEAM	29%
OUTDONE BY COMPETITORS	23%
PRICING/ COST CONCERNS	19%
UNPRODUCTIVE PRODUCT	18%
INEFFECTIVE BUSINESS MODEL	17%
SHODDY MARKETING	17%
SIDETRACKING CUSTOMERS	14%
POOR PRODUCT TIME LAUNCH	14%
DIVIDED FOCUS	13%
TROUBLE WITH TEAM MEMBER/INVESTORS	13%
BAD STARTUP PIVOT	13%
LOCATION ISSUES	10%
LACK OF INVESTOR/FINANCING INTEREST	9%
LEGAL OBSTACLES	9%
LACK OF NETWORKS/ADVISORS	8%

WHAT DO YOU THINK THESE TERMS MEAN?

- Not the "right" team?

- Lack of "balance?"

YOU

YOUR TEAM?

DIVERSITY

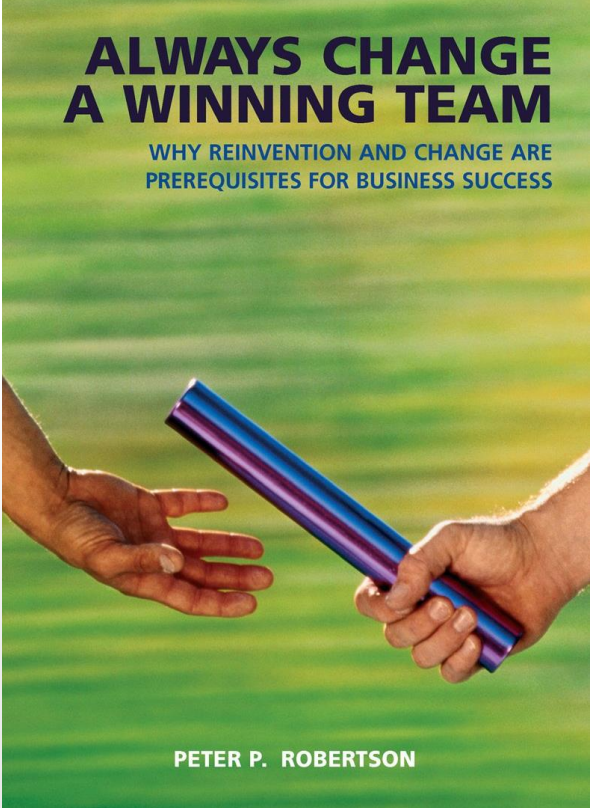WHY IS A DIVERSE TEAM IMPORTANT?

HOW DO WE DEFINE DIVERSITY?

THE WHAT: COGNITIVE 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.*

Page, S. E. (2008). *The difference: How the power of diversity creates better groups, firms, schools, and societies-new edition.* Princeton University Press.

STARTED SEARCHING FOR THE "HOW"
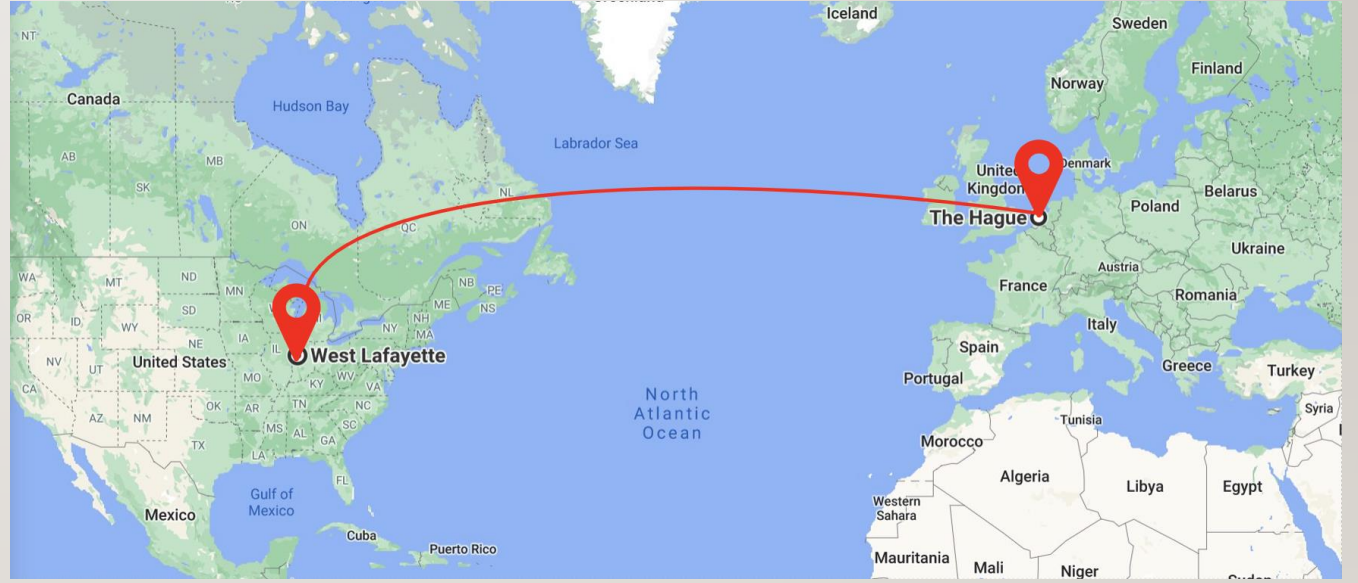
HUMAN INSIGHT

- 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
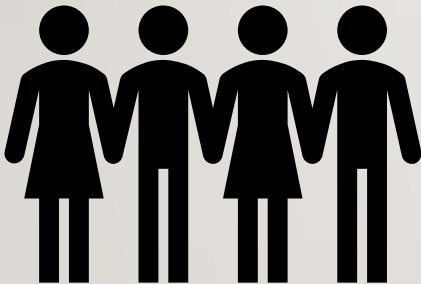
STRATEGIC TRANSFORMATION

- 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

ETHOLOGY

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.

(HUMAN) ETHOLOGY

- 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.
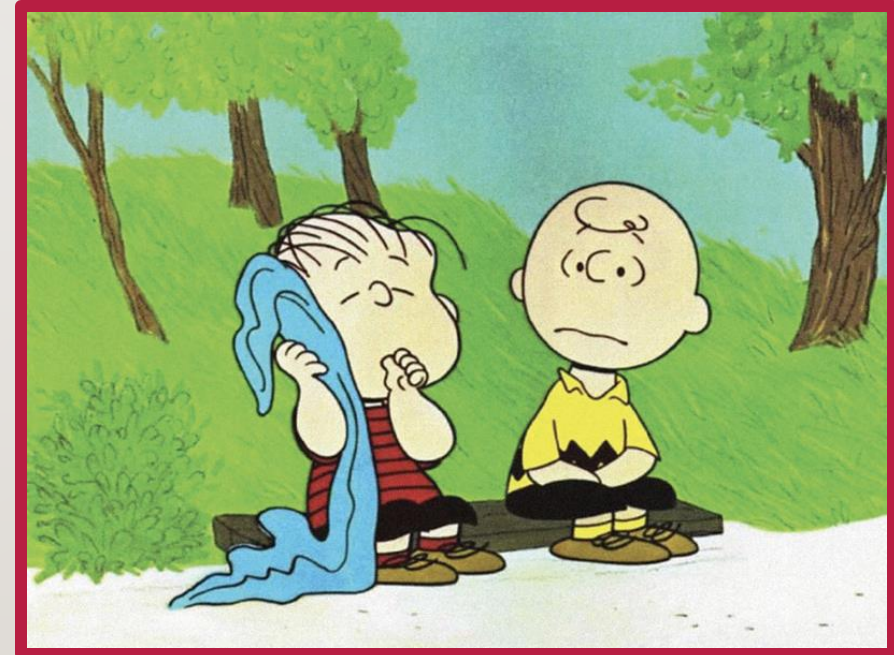
ATTACHMENT
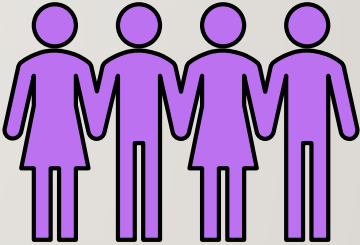
Content: I am more attached to the tools, technologies, & disciplines that can help me get things done ("how I do what I do")

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

People Attached

Content Attached
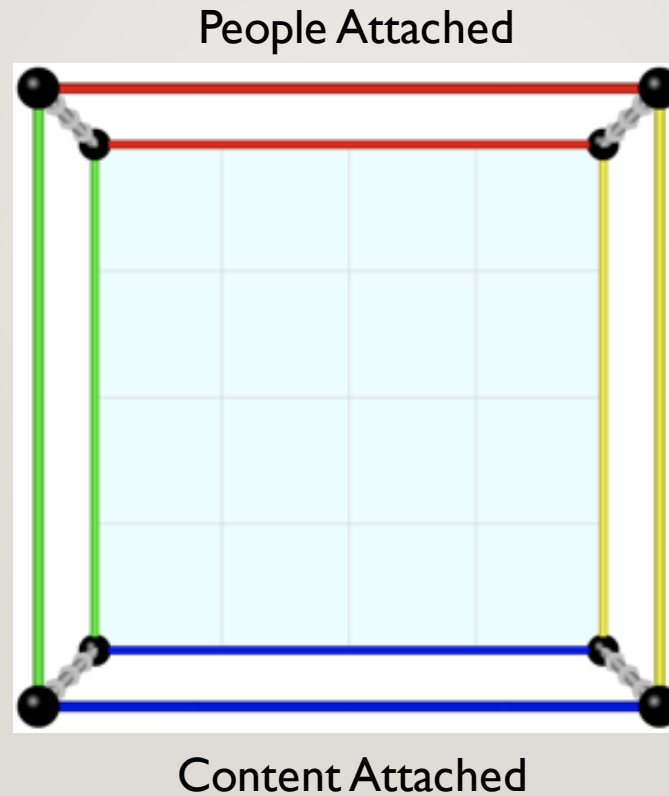
Why is it important for you're a digital transformation team to have an "attachment" to people (people = internal or external customers)

TAKE A LOOK AT YOUR AEM CUBE, SPECIFICALLY THE FLOOR

People Attached

Content Attached
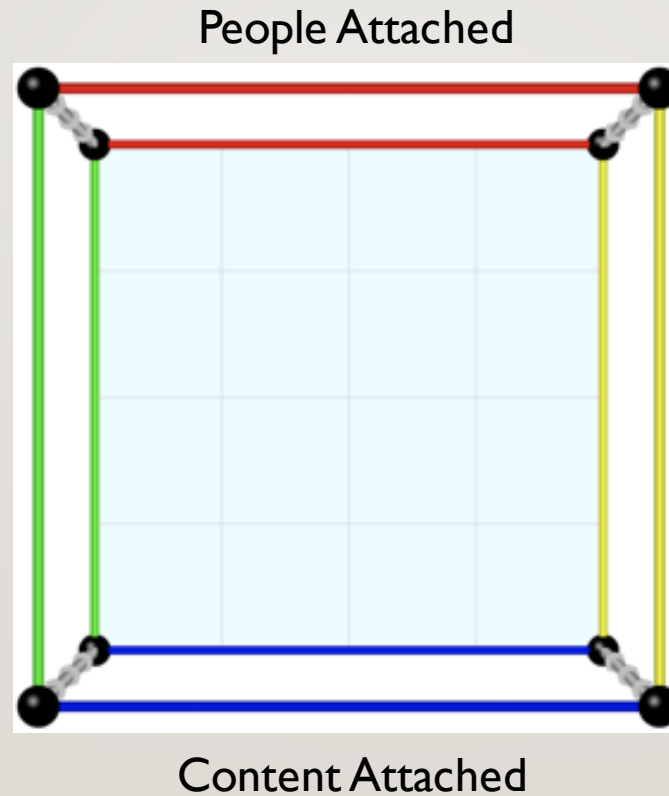
Why is it important for you team to have an "attachment" to content (i.e., subject matter and/or technology, etc.)?

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

ATTACHMENT & PRODUCT-MARKET FIT

- "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

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.

Was this team likely more **CONTENT** attached, or **PEOPLE** attached?

PRODUCT-MARKET FIT ALIGNMENT

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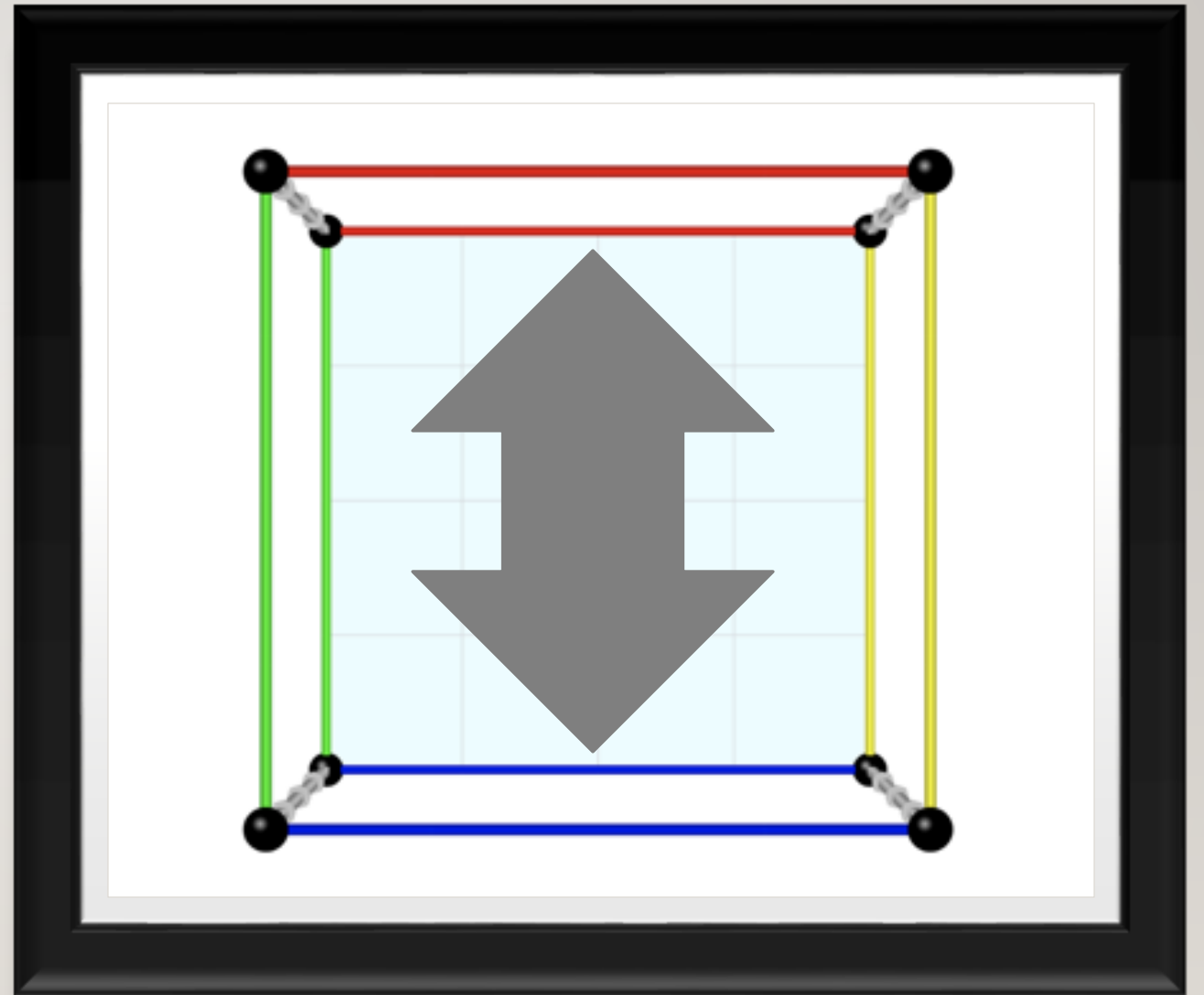
WHICH TEAM HAS BETTER PRODUCT-MARKET FIT ALIGNMENT?
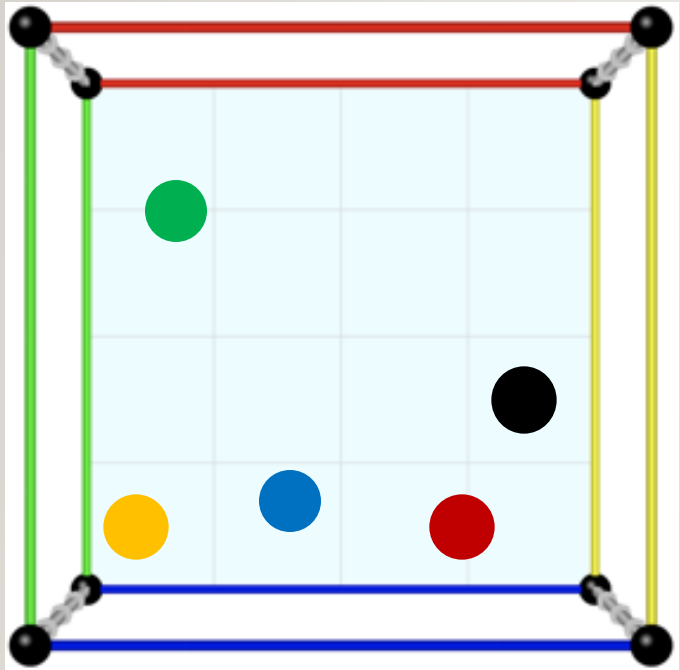
People Attached

Content Attached

People Attached

Content Attached

WHICH TEAM HAS BETTER PRODUCT-MARKET FIT ALIGNMENT?

People Attached

People Attached
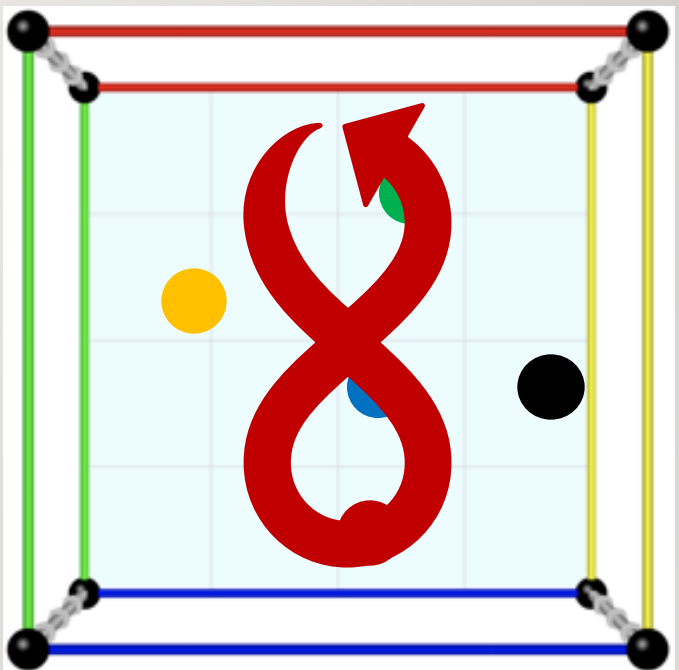
Content Attached

Content Attached

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
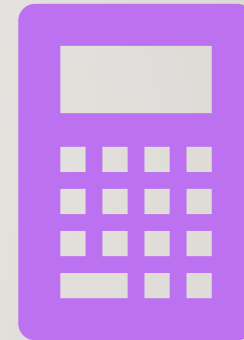
Exploration: Looking to future possibilities (feedforward focused)

Optimization: Looking at past performance (feedback focused)

THE CHAIR EXERCISE

OPENING SOON

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.

Growth Curves Applications

Growth

Time

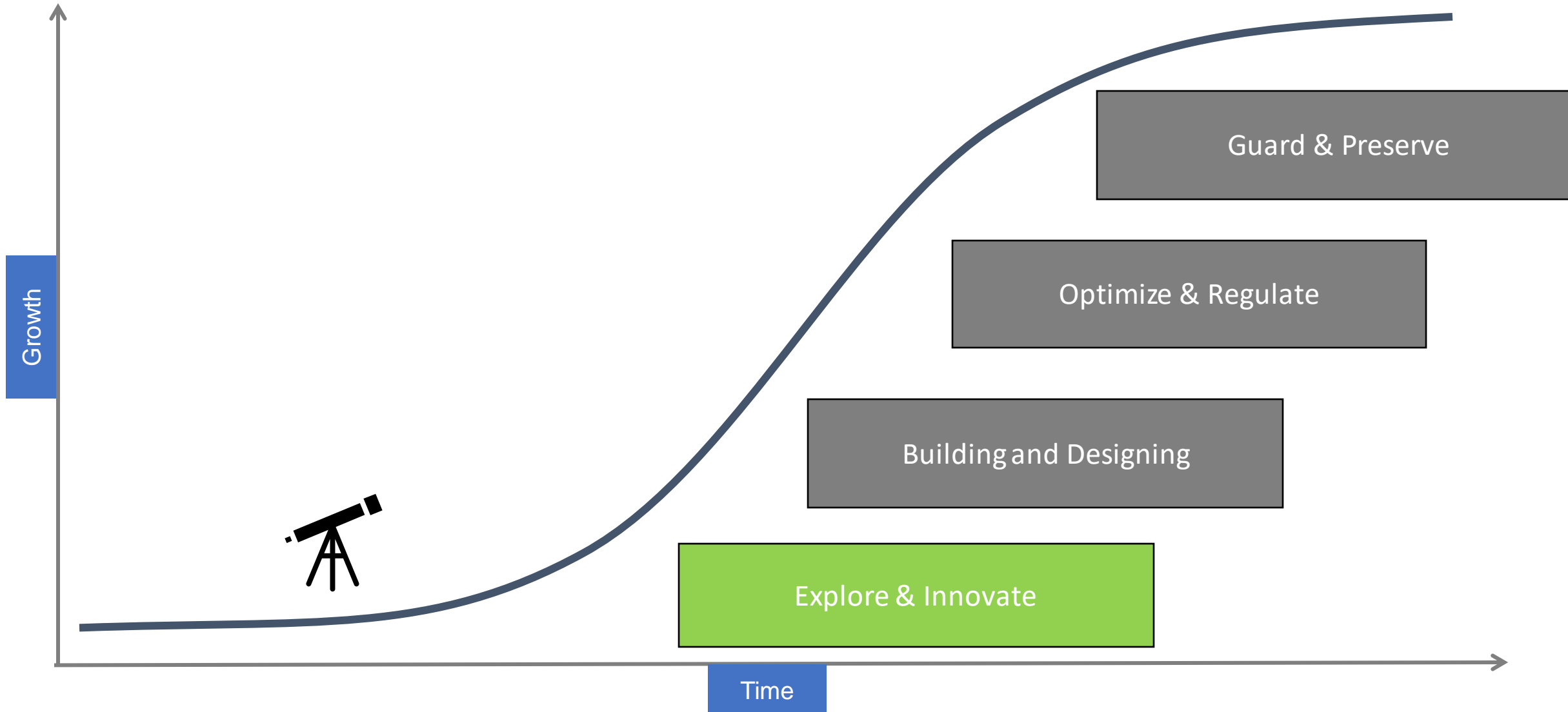Technologies

Organizations

Communities

Economies

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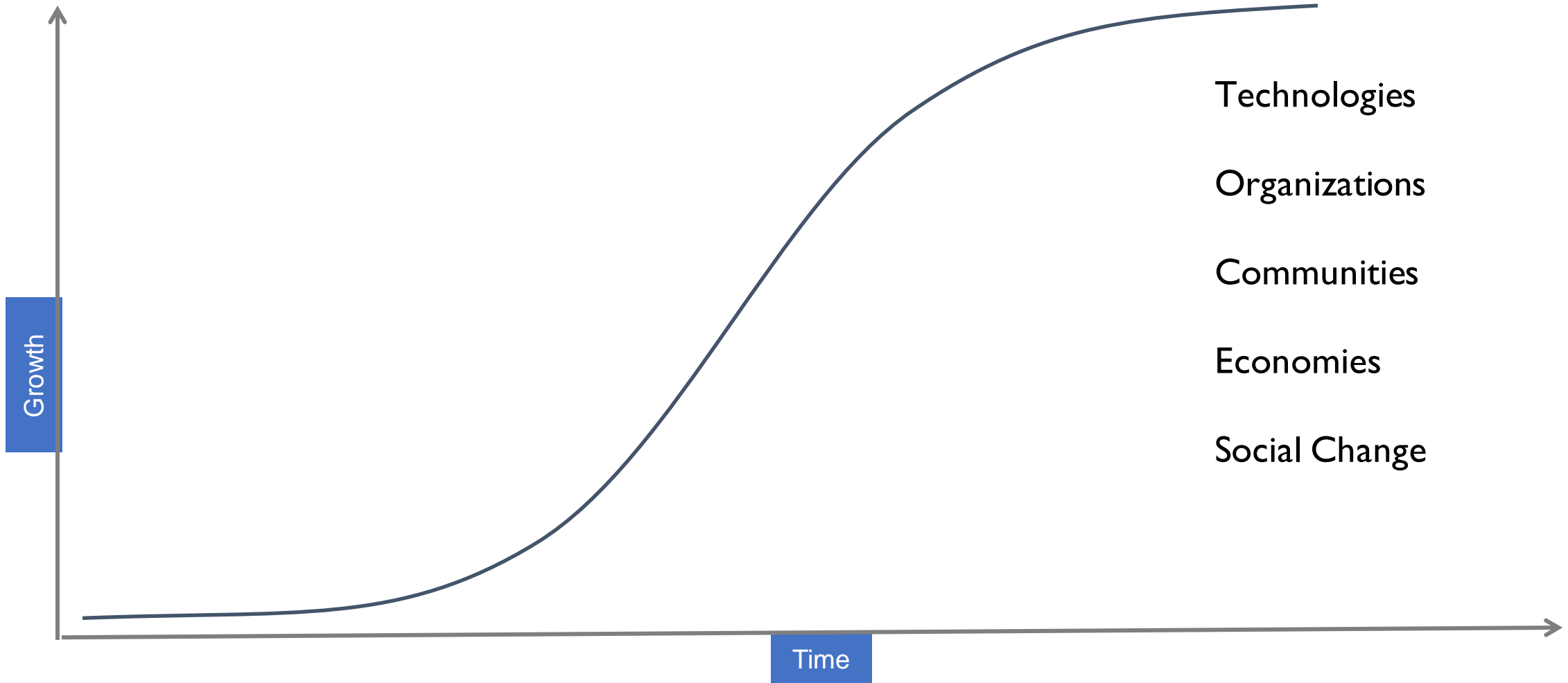
Navigating the Growth Curve
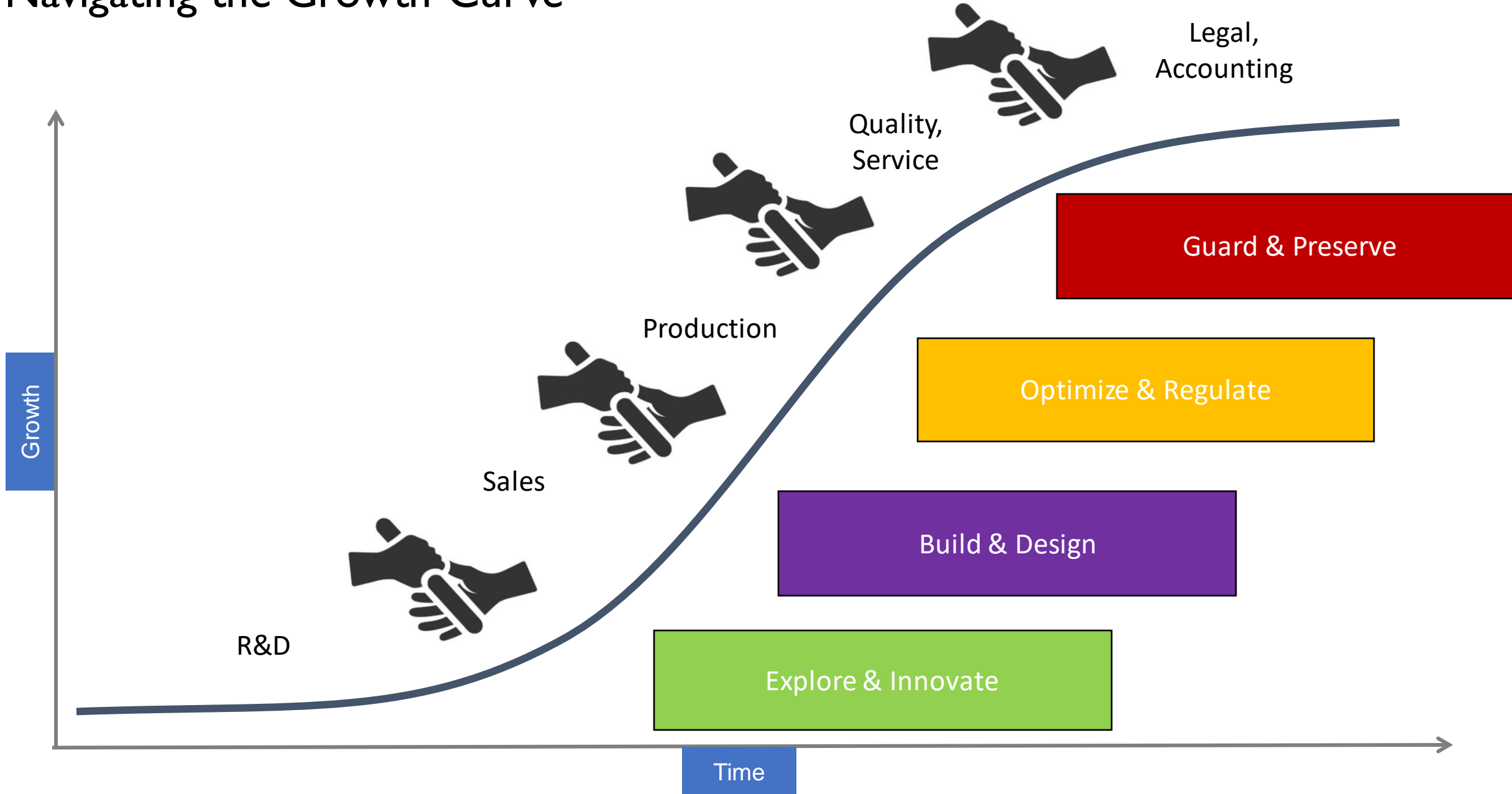
Navigating the Growth Curve
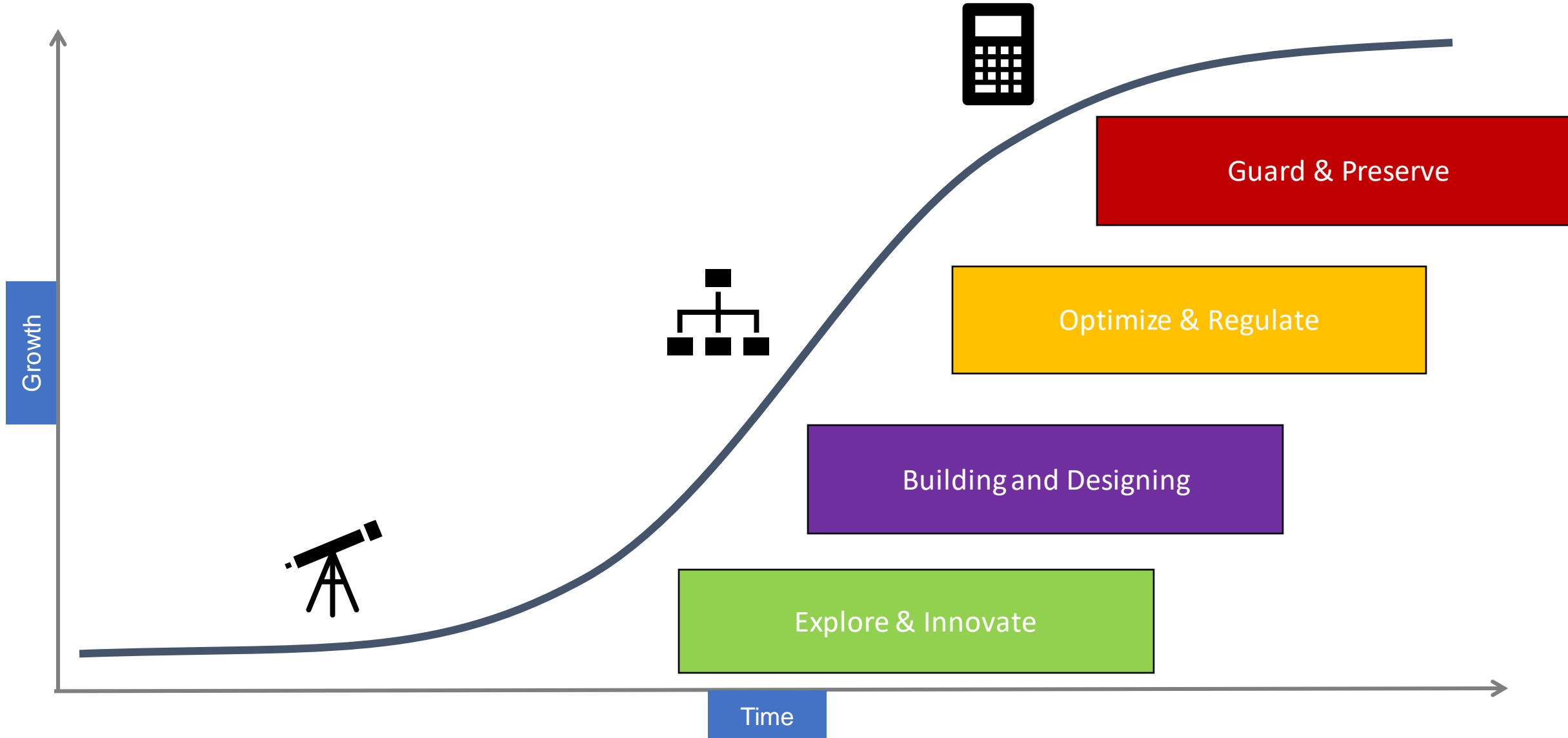Focusing solely on the beginning of the growth curve is expensive and yields nothing

Growth

Guard & Preserve

Optimize & Regulate

Building and Designing

Explore & Innovate

Time

Navigating the Growth Curve

Focusing solely on the end of the growth curve yields lots of money but no future (next growth curve)
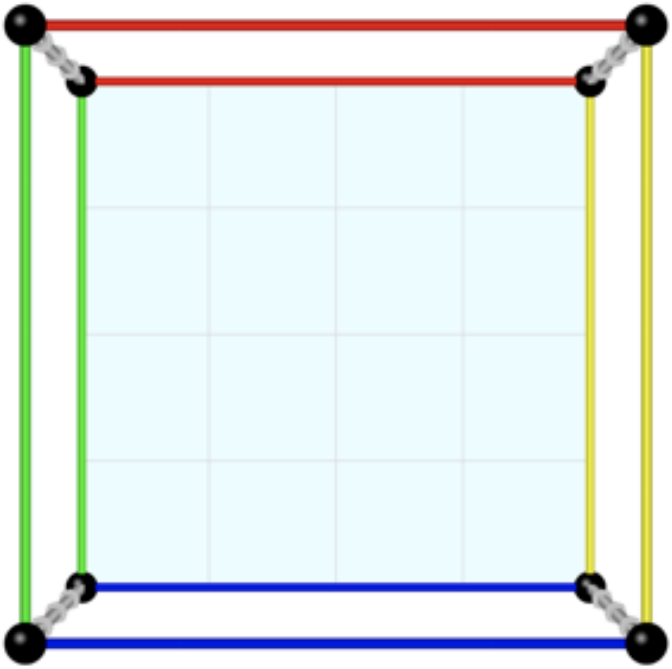
Growth

Guard & Preserve

Optimize & Regulate

Building and Designing

Explore & Innovate

Time
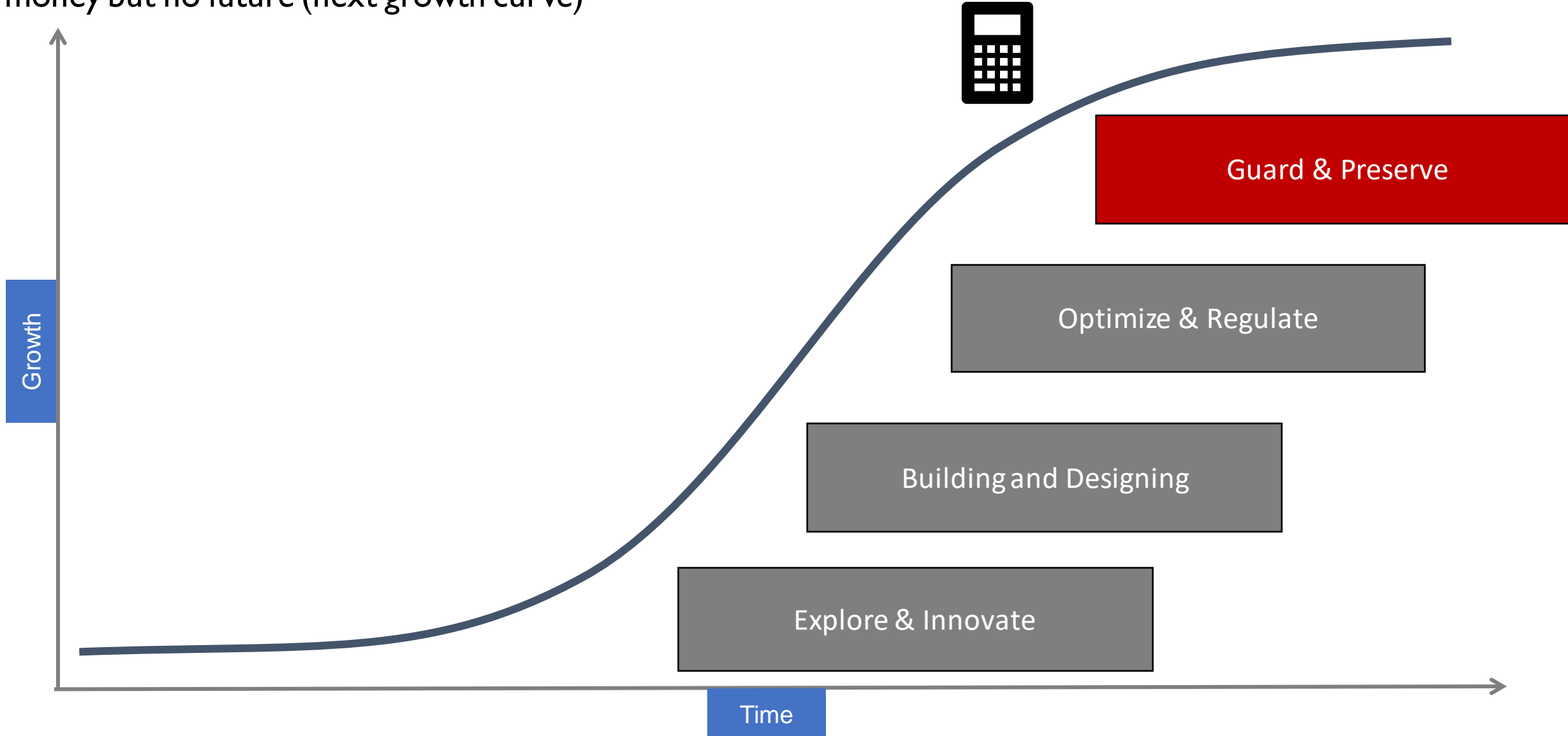
Navigating the Growth Curve
Pay attention to all parts of the growth curve

Growth

Guard & Preserve

Optimize & Regulate

Building and Designing

Explore & Innovate

Time
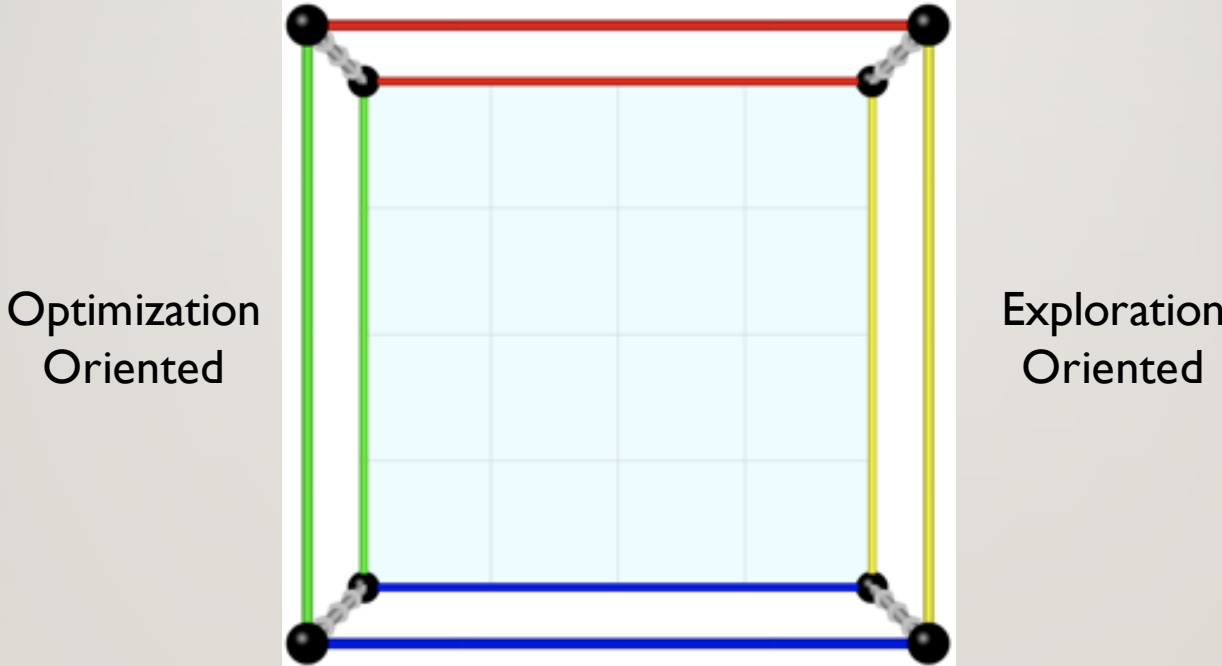
TAKE A LOOK AT YOUR AEM CUBE AGAIN

Optimization Oriented

Exploration Oriented

TAKE A LOOK AT YOUR AEM CUBE AGAIN

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

Optimization Oriented

Exploration Oriented

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

POLL #2: EXPLORATION

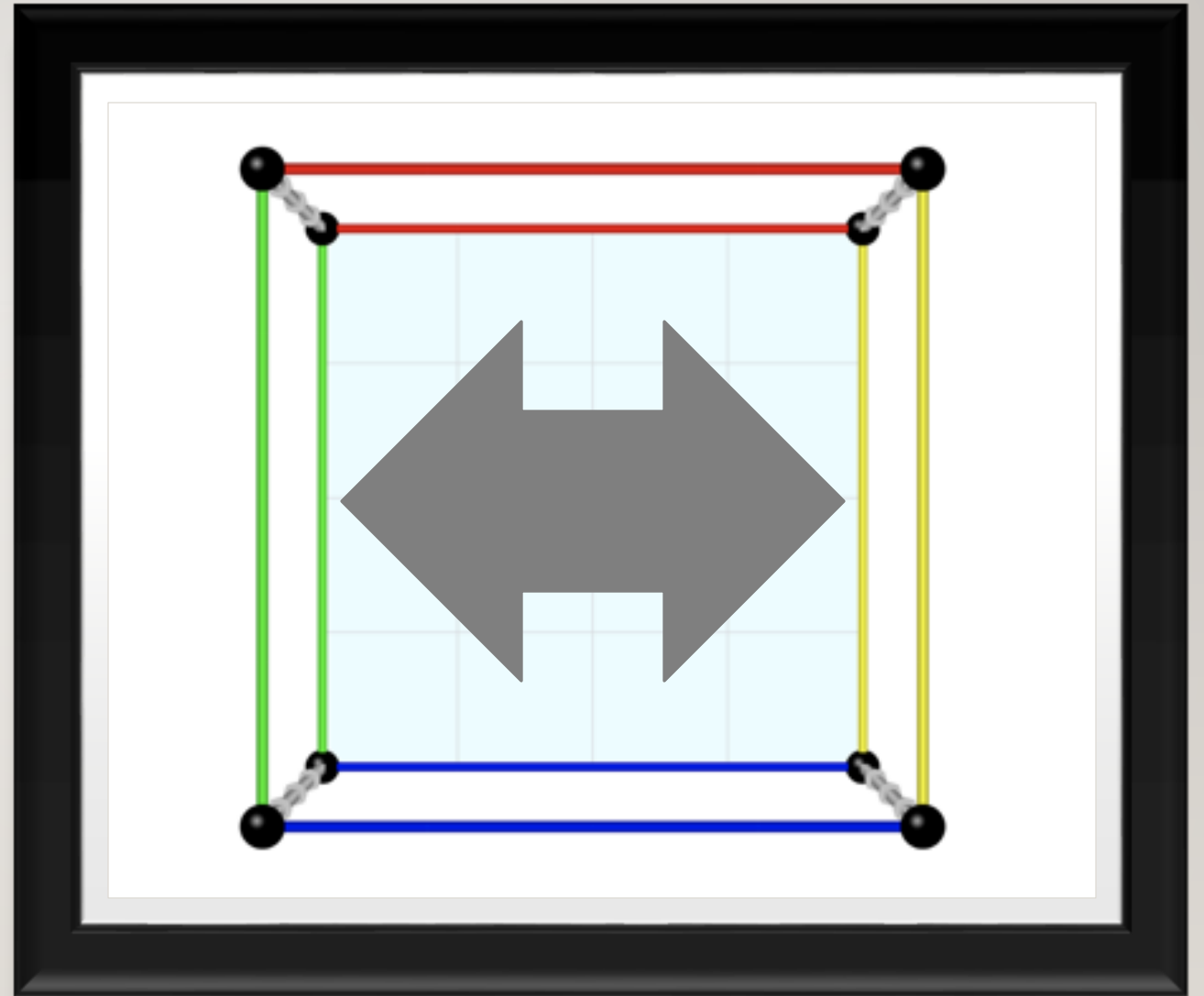Based on your AEM-Cube report and/or our discussion where do you fall along the exploration/optimization dimension?

- I am likely more "exploration" focused

- I am likely more "optimization" focused
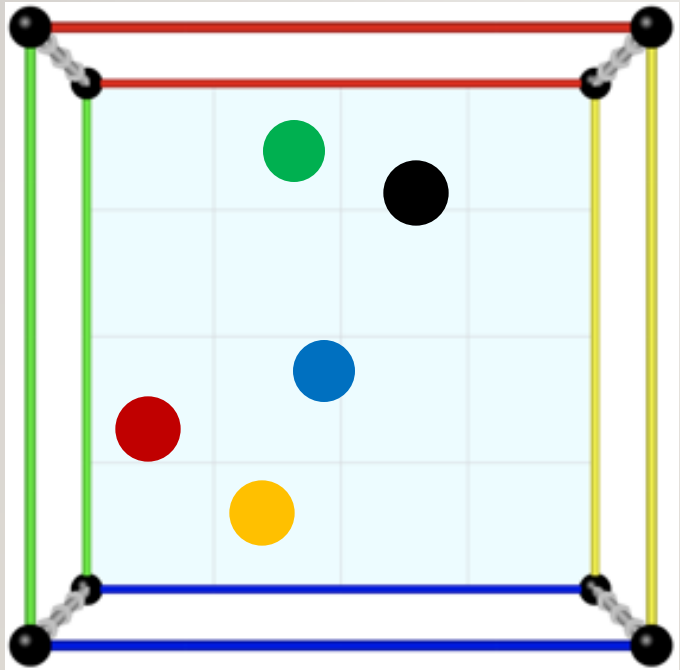
SPEED-TO-MARKET ALIGNMENT

How well aligned the team is to move quickly through the stages of the S-curve (i.e., R&D, production, and distribution)

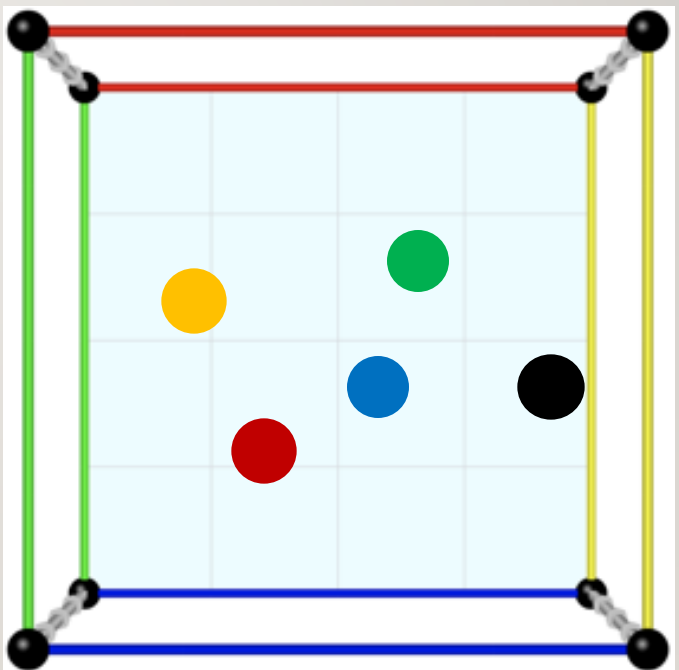# WHICH TEAM HAS BETTER SPPED-TO-MARKET ALIGNMENT?

WHICH TEAM HAS BETTER SPPED-TO-MARKET ALIGNMENT?
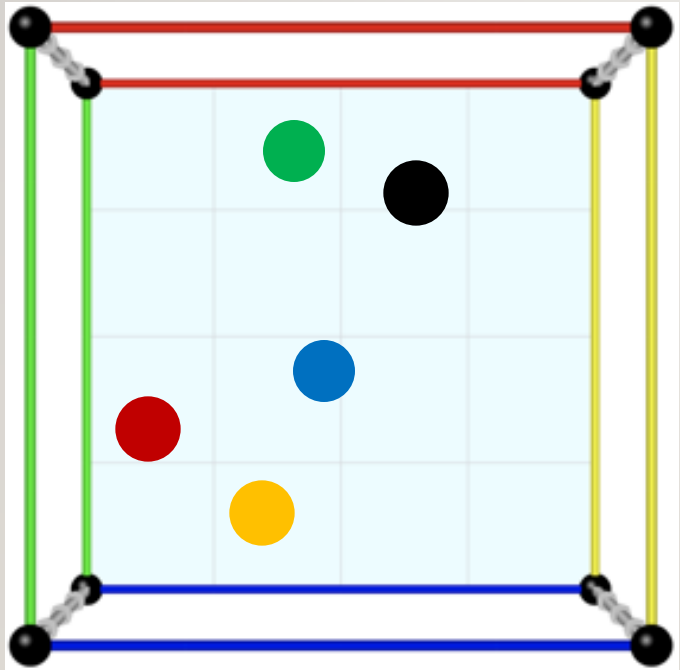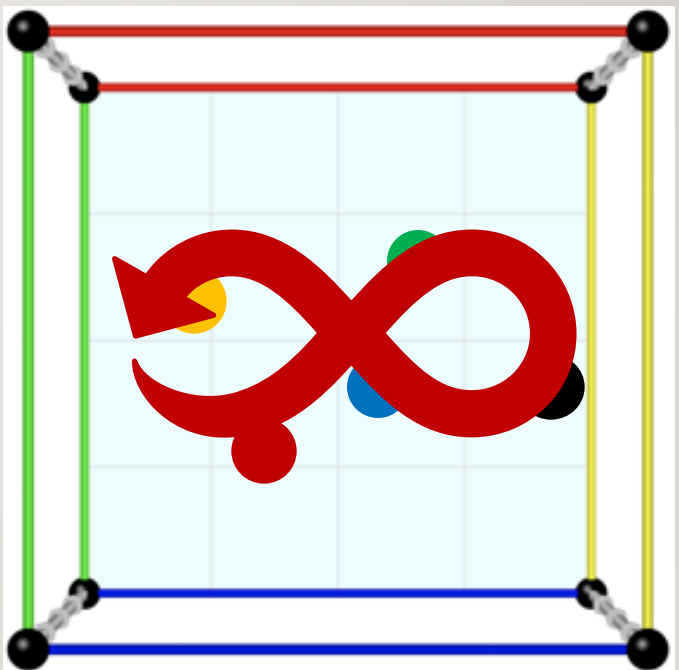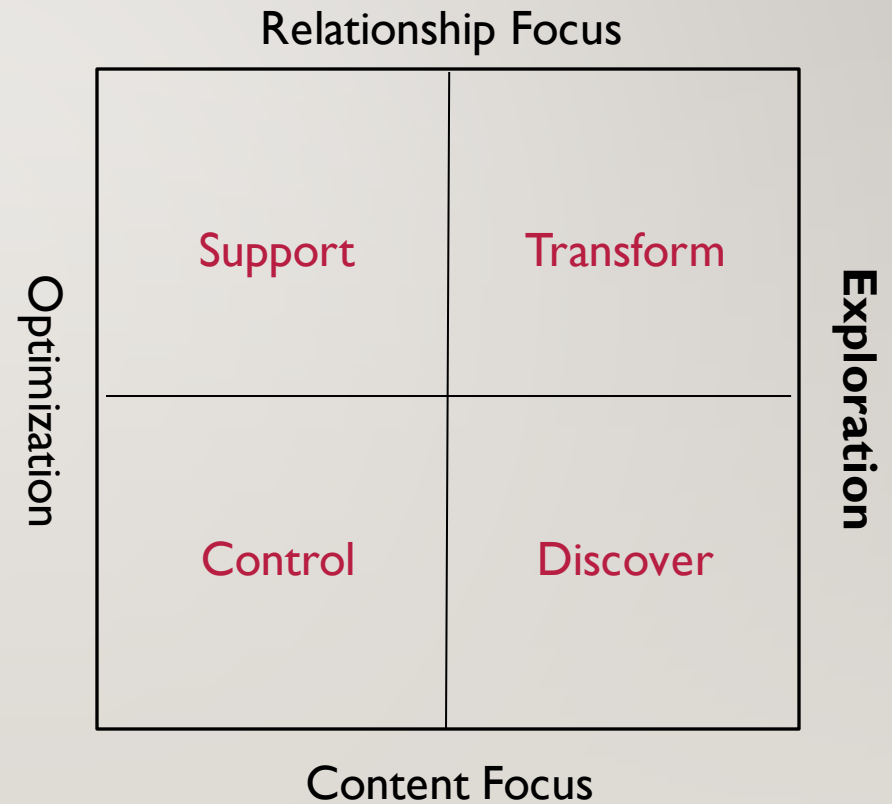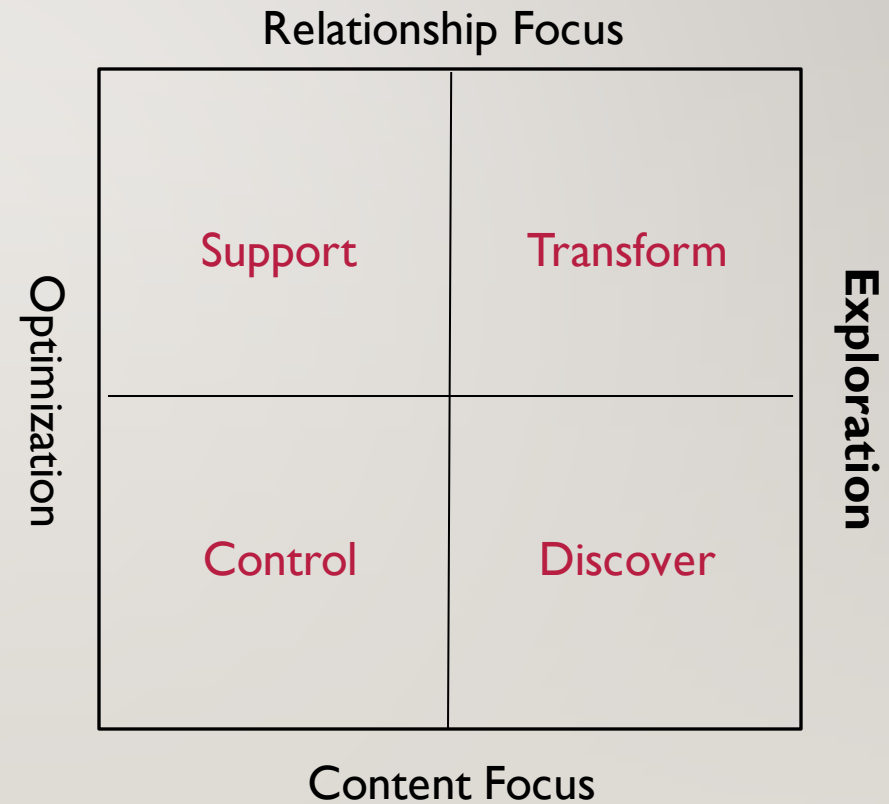
QUADRANTS

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?

Relationship Focus

|	
Support	Transform
Control	Discover

Optimization

Exploration

Content Focus

QUADRANTS

In which quadrant would you expect to see how digital transformation will help us sense the earlist signs of customer dissatisfaction, and help ease their discomfort?

Relationship Focus

| Optimization	Support	Transform	Exploration
	Control	Discover	

Content Focus

QUADRANTS

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?

Relationship Focus

Support	Transform
Control	Discover

Optimization

Exploration

Content Focus
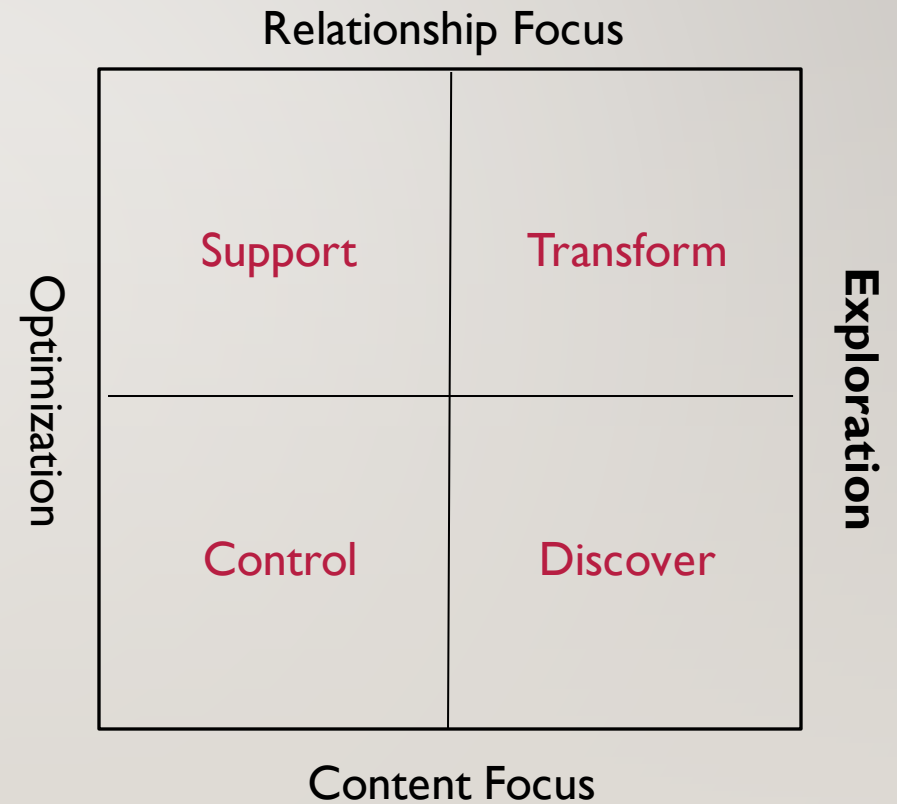
QUADRANTS
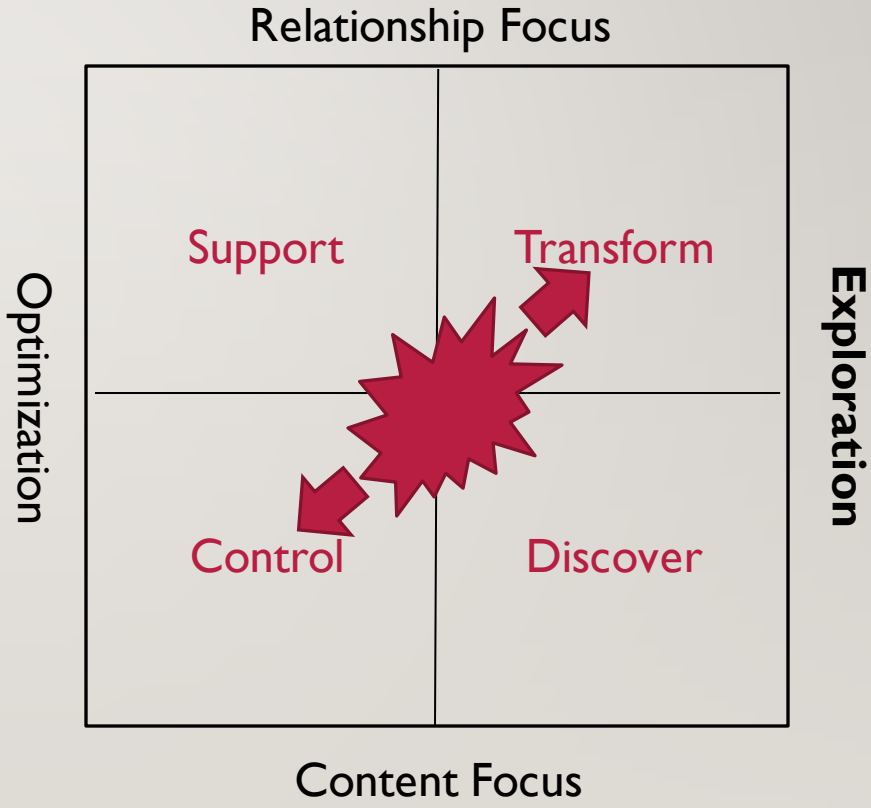
In which quadrant would you expect to find those who can clearly see how the latest digital technology advances could transform our organization?
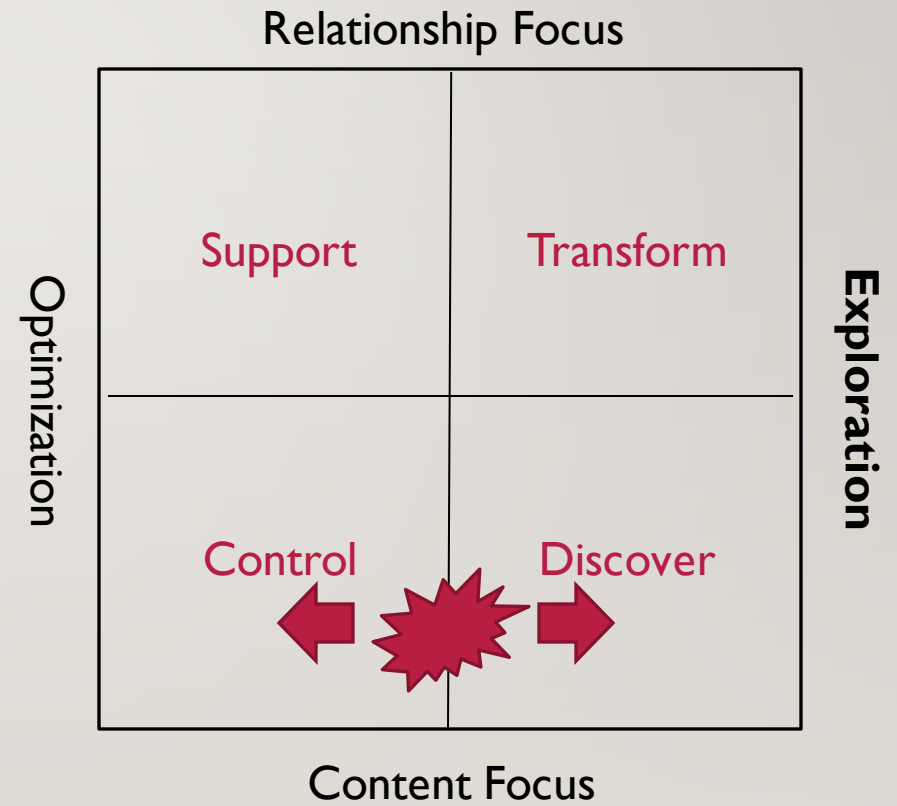
Relationship Focus

Support	Transform
Control	Discover

Optimization

Exploration
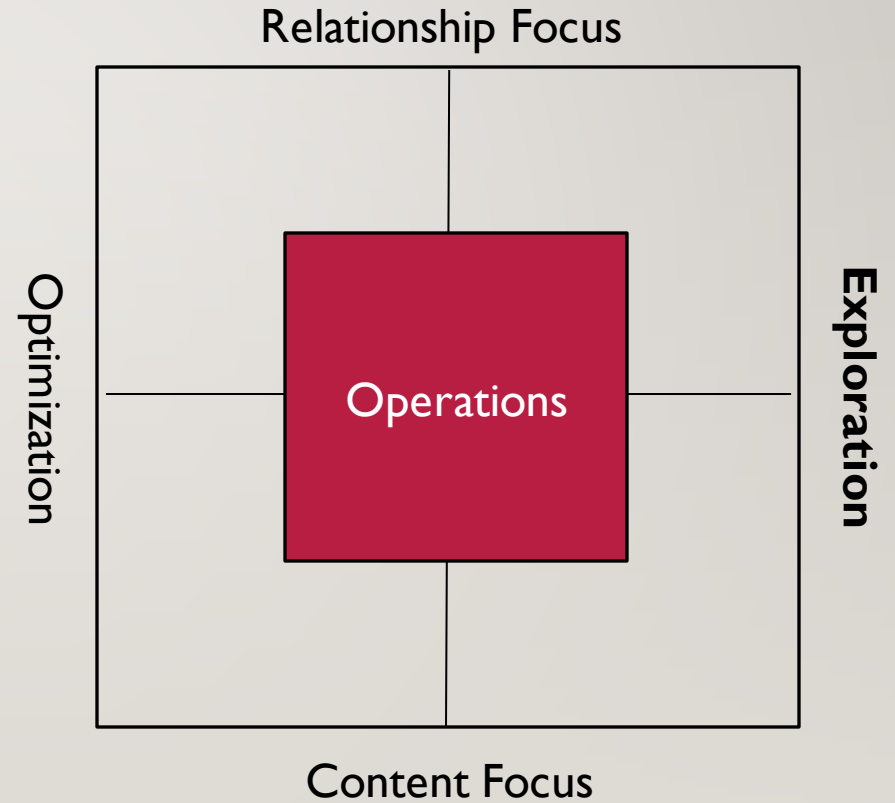
Content Focus
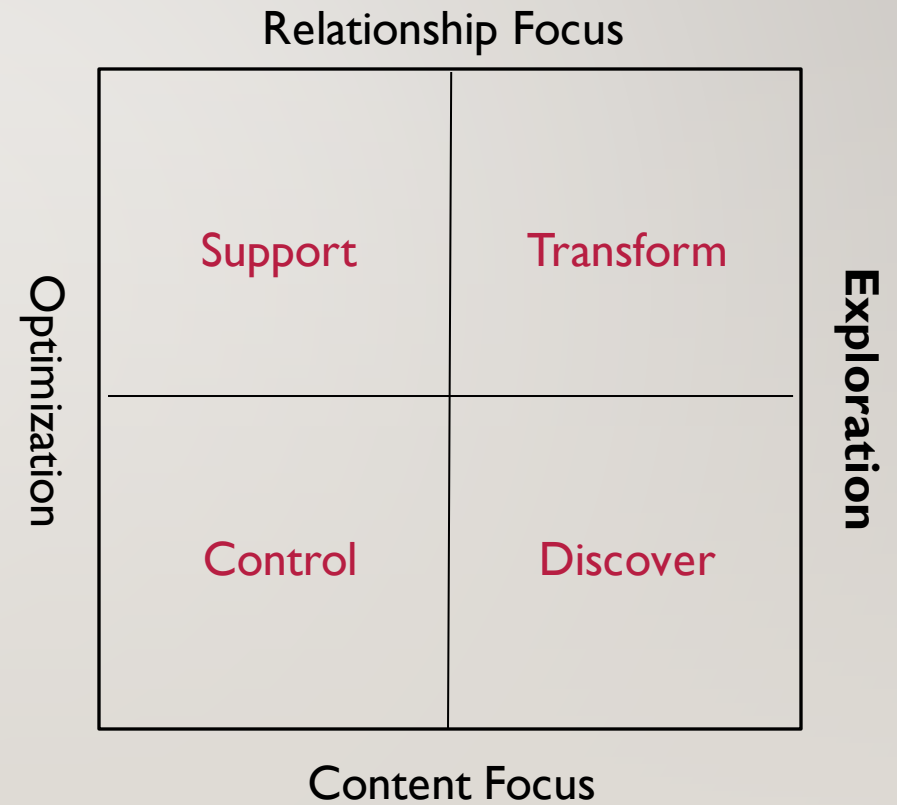
QUADRANTS & CONFLICT

QUADRANTS & CONFLICT

THE "FIFTH" QUADRANT

Why do you think operations expertise is often positioned here?
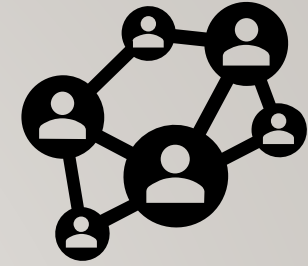
THE THIRD DIMENSION: MANAGEMENT OF COMPLEXITY

HOW MUCH OF A COMPLEX SYSTEM ARE WE INTERESTED IN SEEING AND UNDERSTANDING?
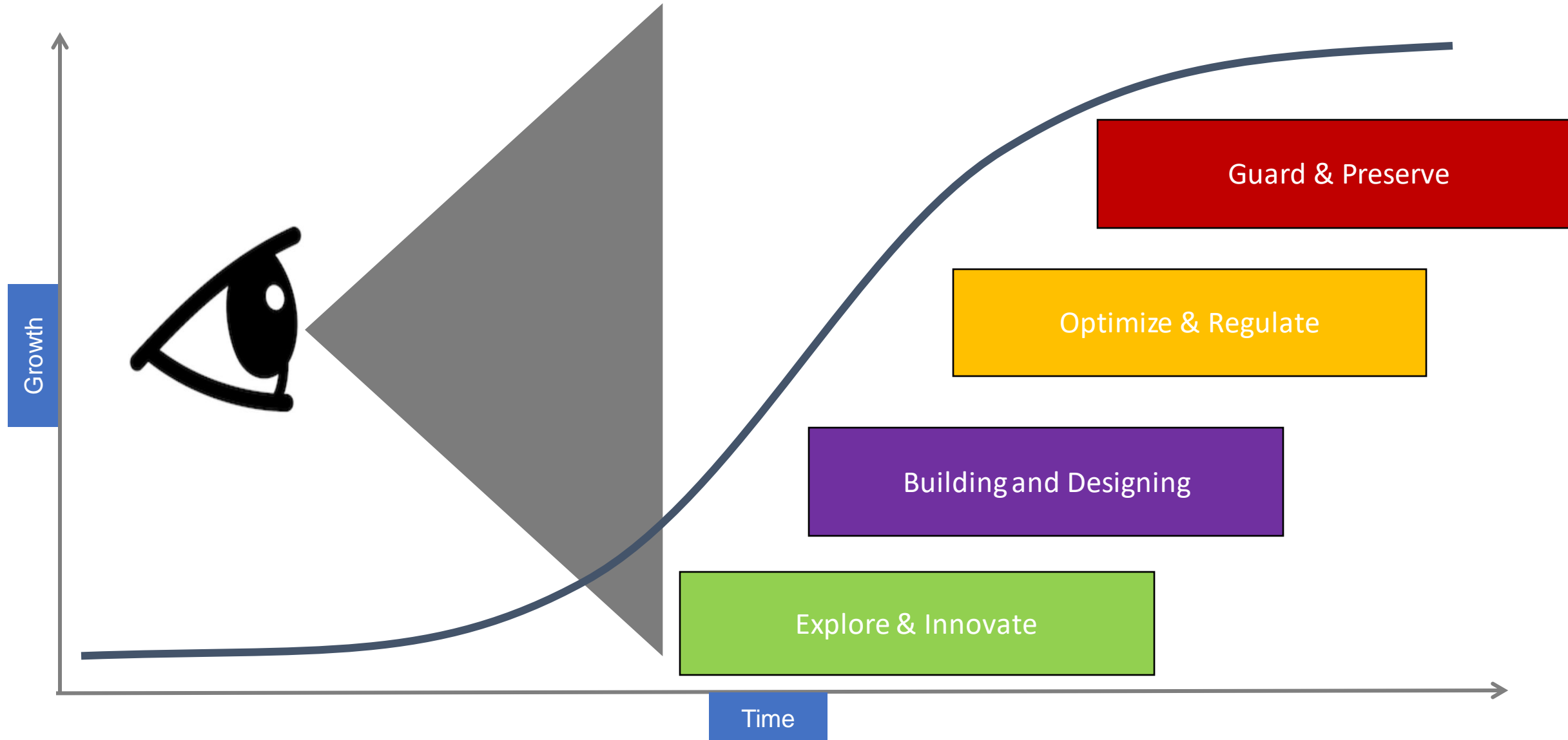
MANAGEMENT OF COMPLEXITY

SPECIALIST

- Prefer to manage a narrower slice of complexity.

- Can understand that narrow slice with great depth and granularity.
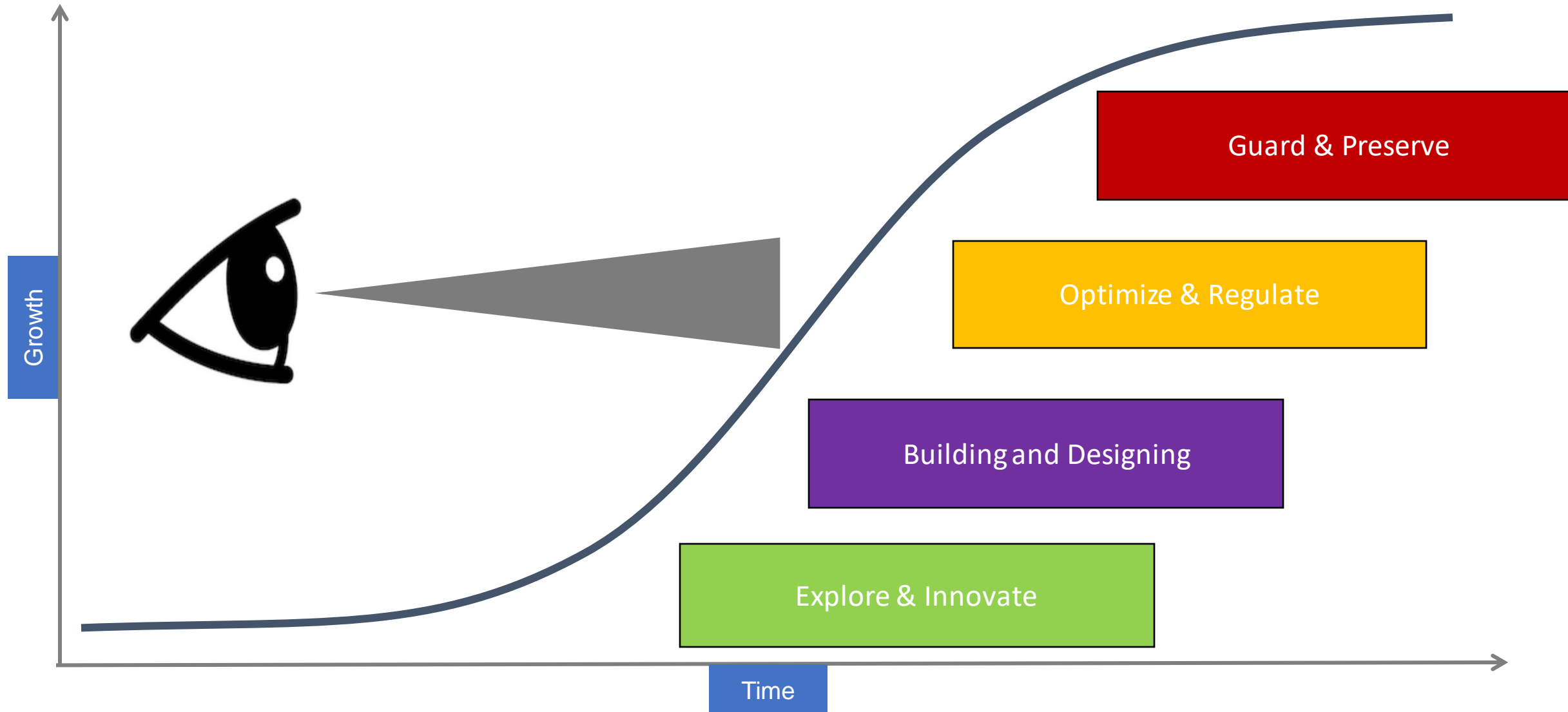
- Often a better player than coach.

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 then player.

Management of Complexity & the Growth Curve

Management of Complexity and the Growth Curve

Growth

Guard & Preserve

Optimize & Regulate

Building and Designing

Explore & Innovate
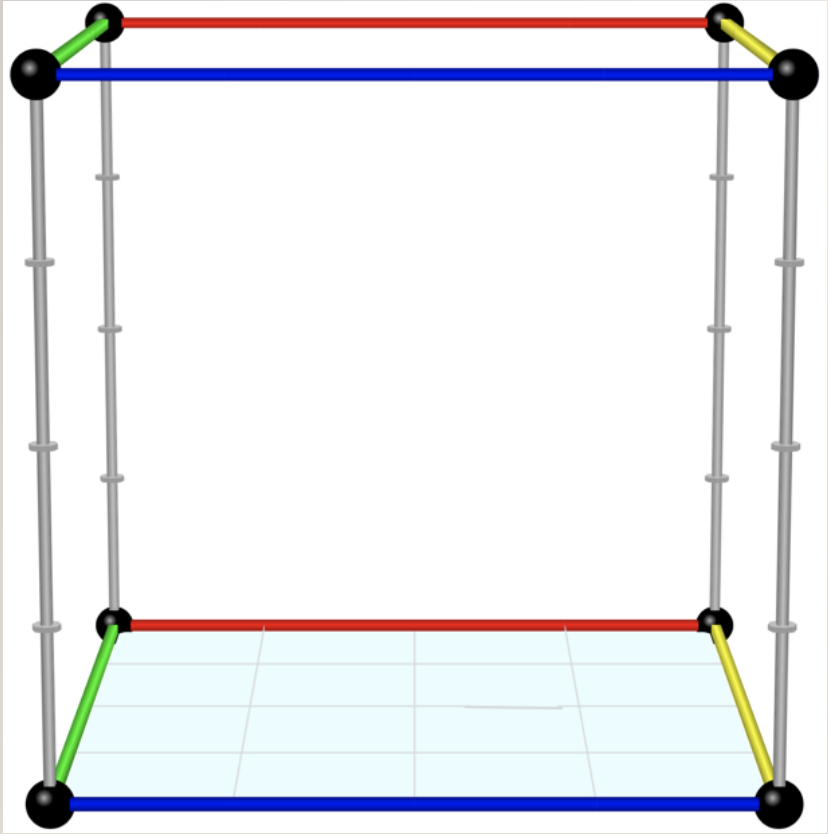
Time

GENERALIST OR SPECIALIST: FOREST OR TREE?

WHO IS THE SPECIALIST AND WHO IS THE GENERALIST?
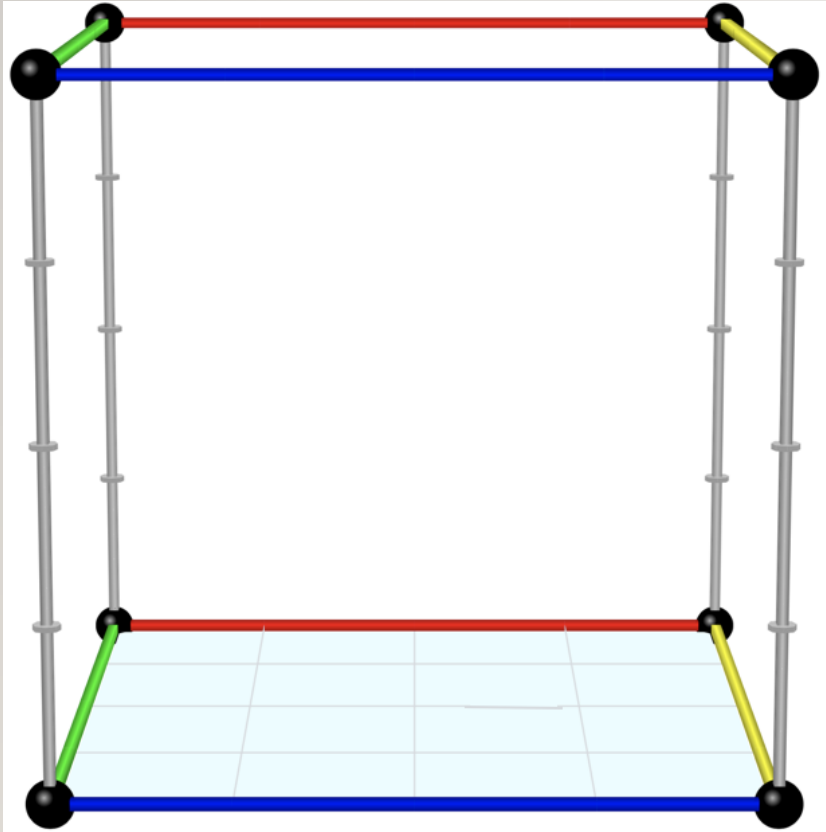
TAKE A LOOK AT YOUR AEM-CUBE AGAIN

Generalist

Specialist

TAKE A LOOK AT YOUR AEM-CUBE AGAIN

Generalist
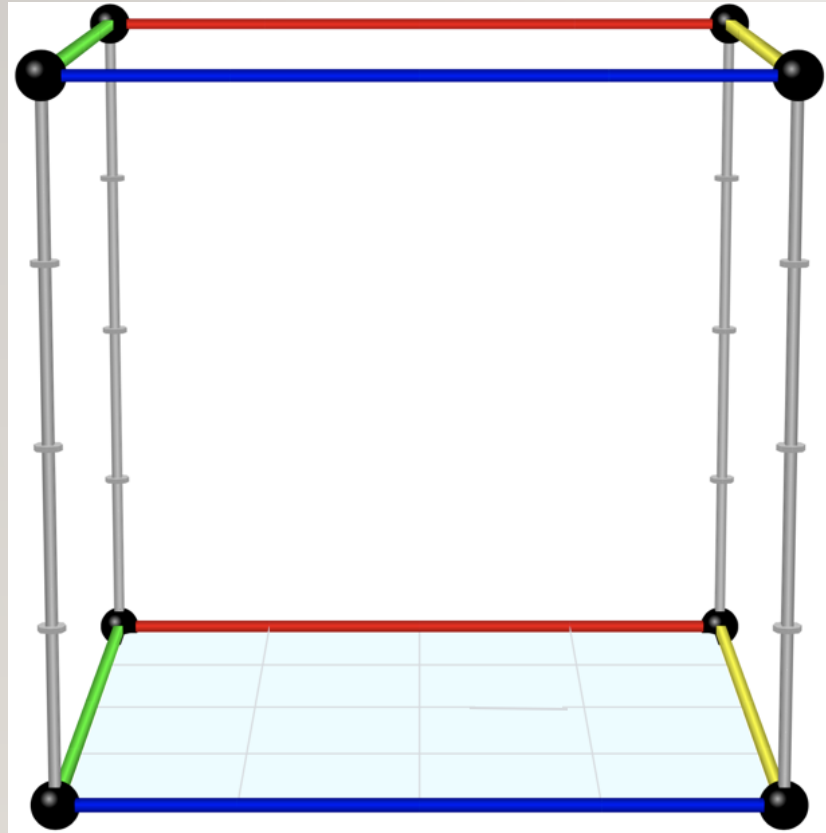
Specialist

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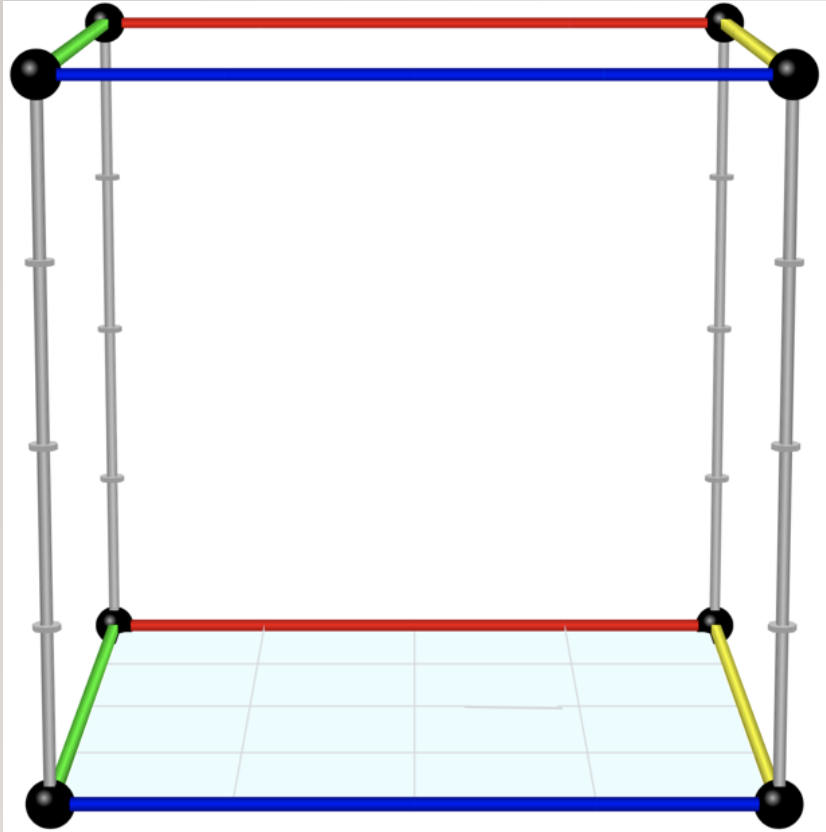
TAKE A LOOK AT YOUR AEM-CUBE AGAIN

Generalist

Specialist

Why is it important to have "specialists" as part of a digital transformation team?

TAKE A LOOK AT YOUR AEM-CUBE AGAIN

Generalist

Specialist

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

TRANSFORMATION TEAM A: WHAT OBSERVATIONS COULD YOU MAKE ABOUT THIS TEAM?

People Attachment

Optimization Oriented

Exploration Oriented

Content Attachment
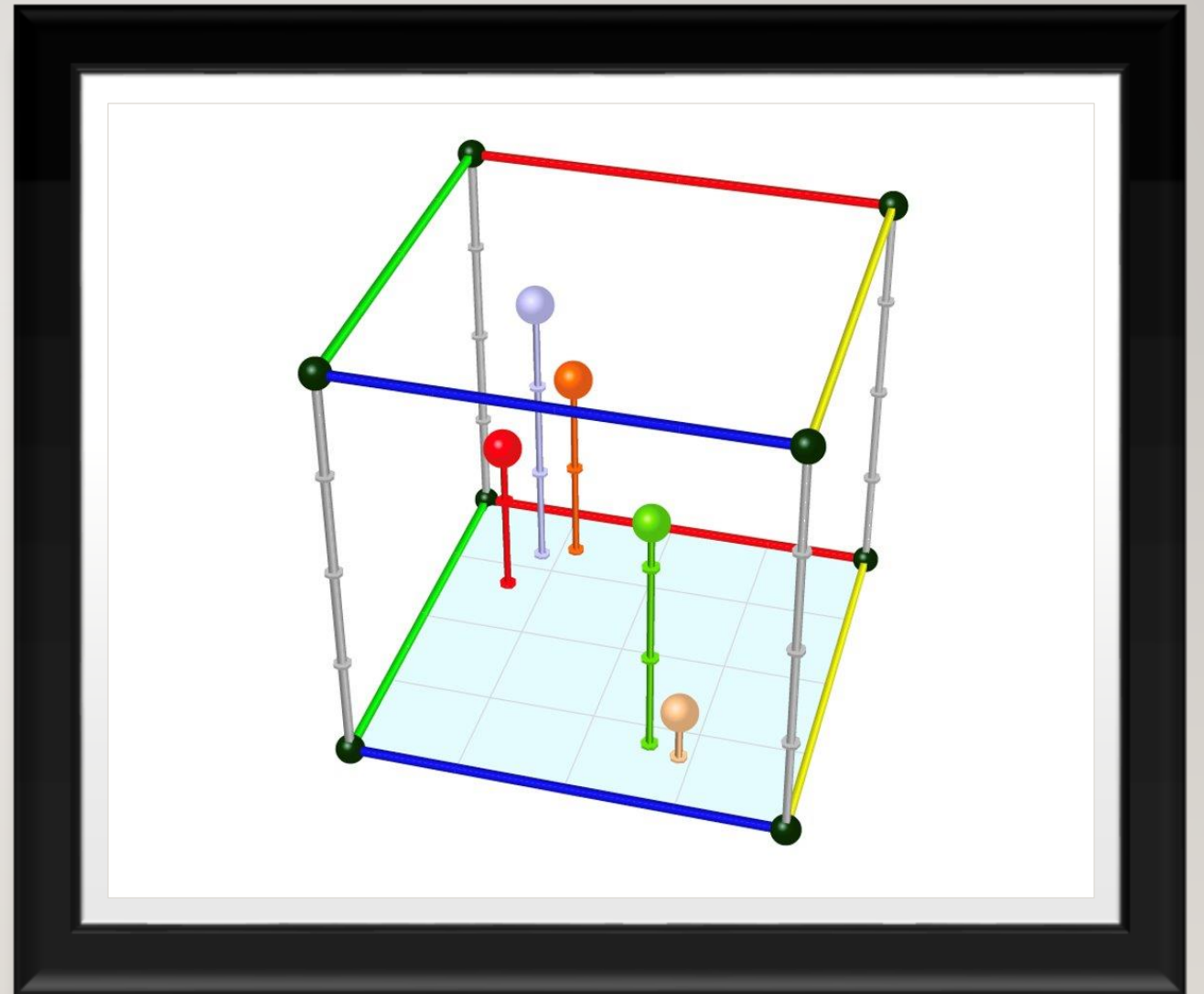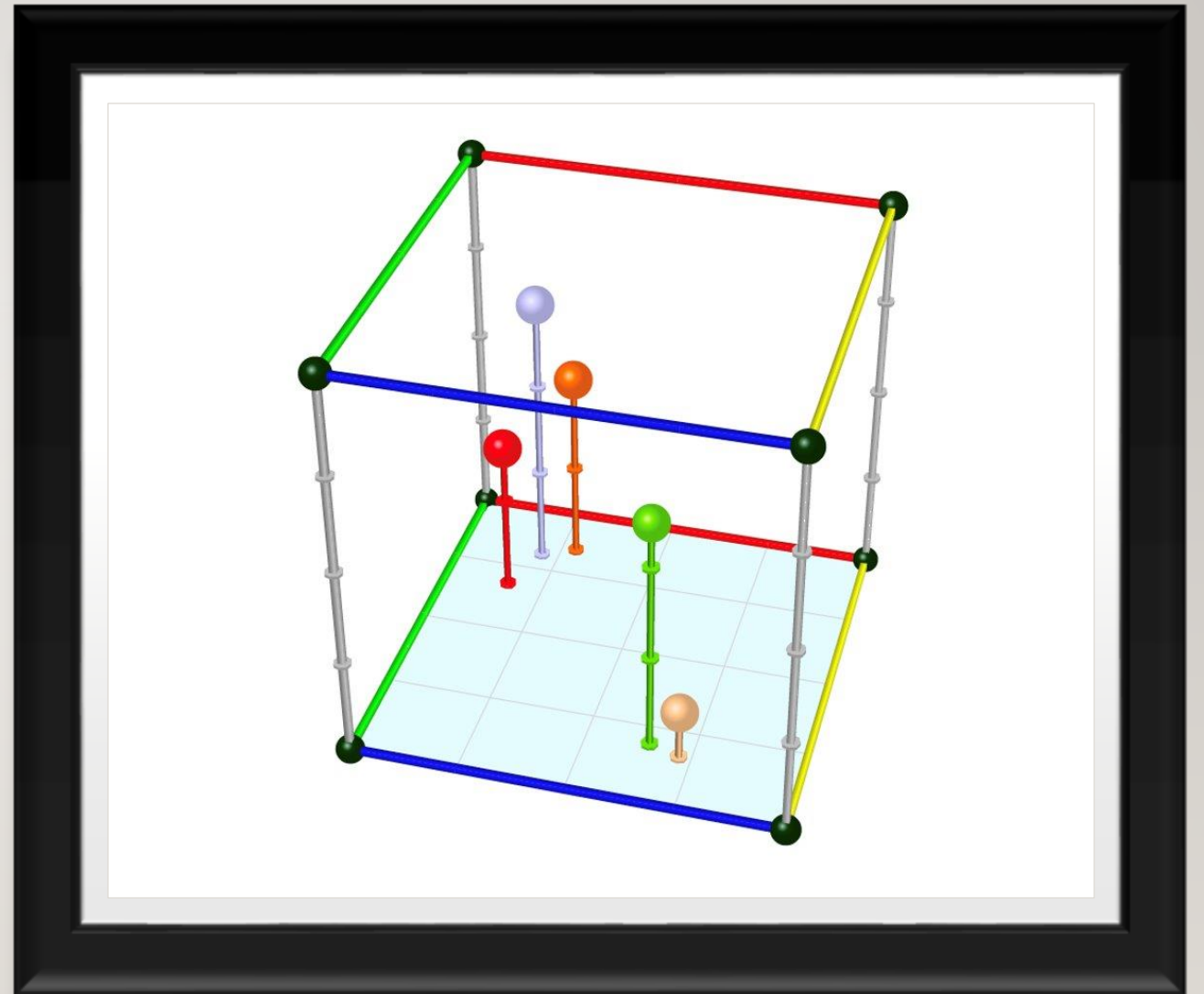
TEAM A: STRATEGIC STRENGTHS

- 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
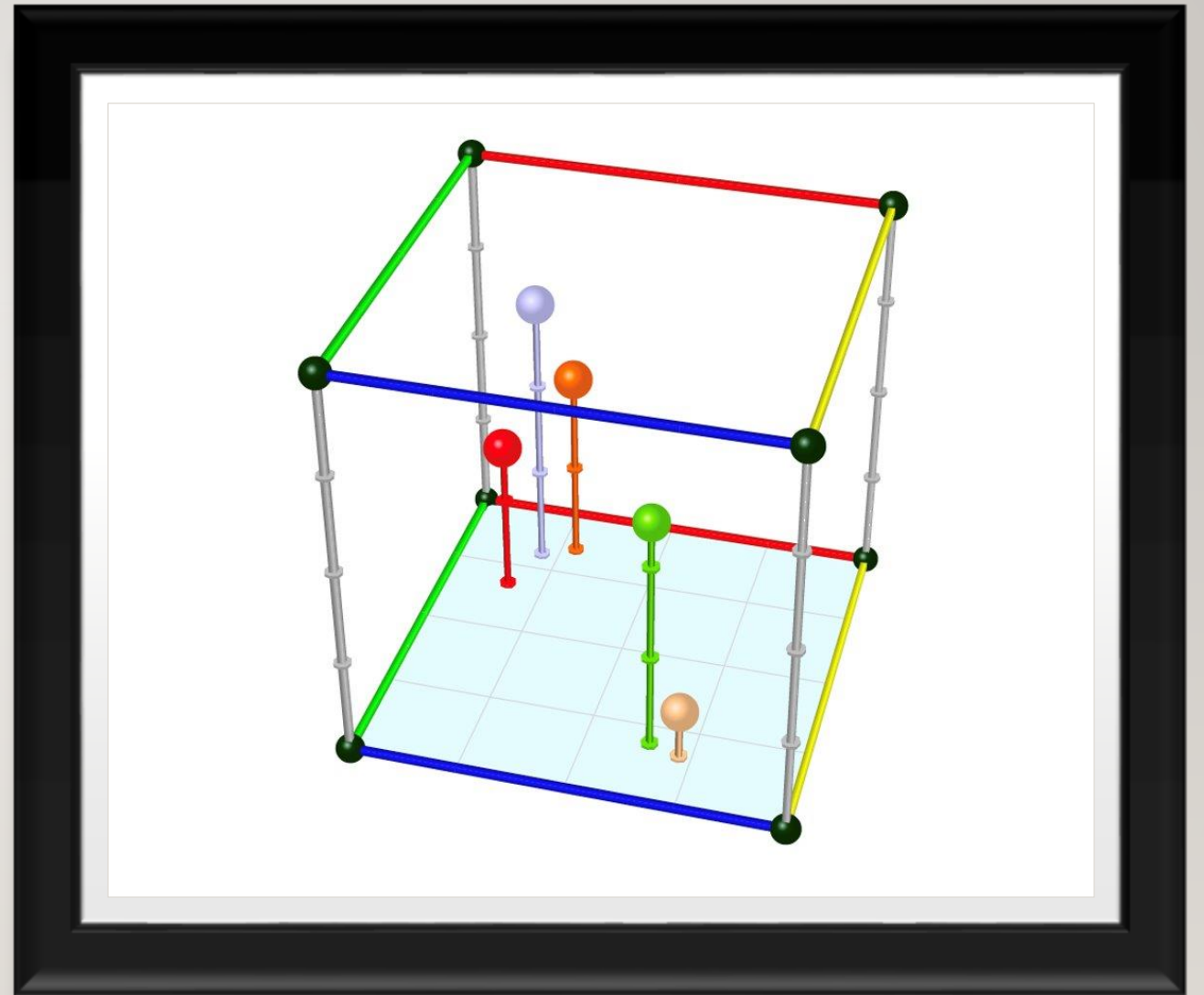
TEAM A: STRATEGIC VULNERABILITIES

- 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.
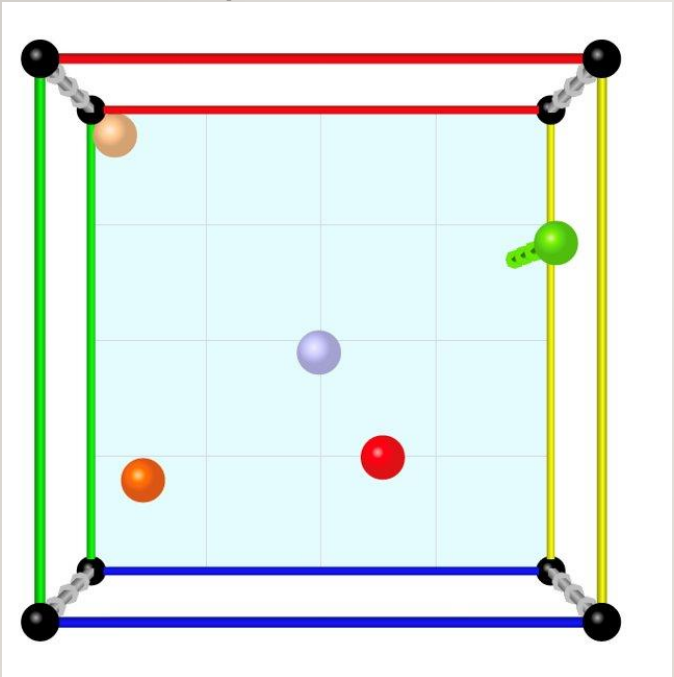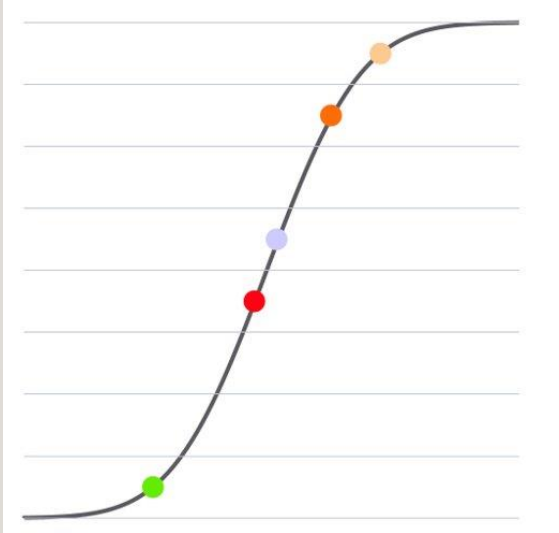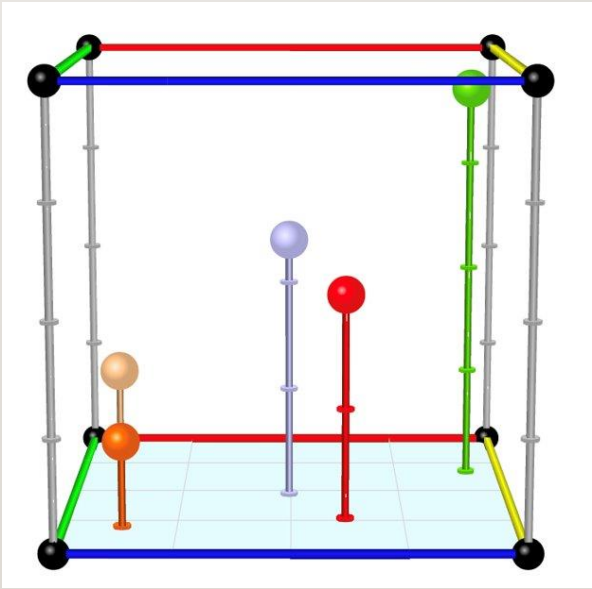
- Secure a quality and efficiency advisor

TRANSFORMATION TEAM B: WHAT OBSERVATIONS COULD YOU MAKE ABOUT THIS TEAM?

People Attachment

Optimization Oriented

Content Attachment

Exploration Oriented

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.
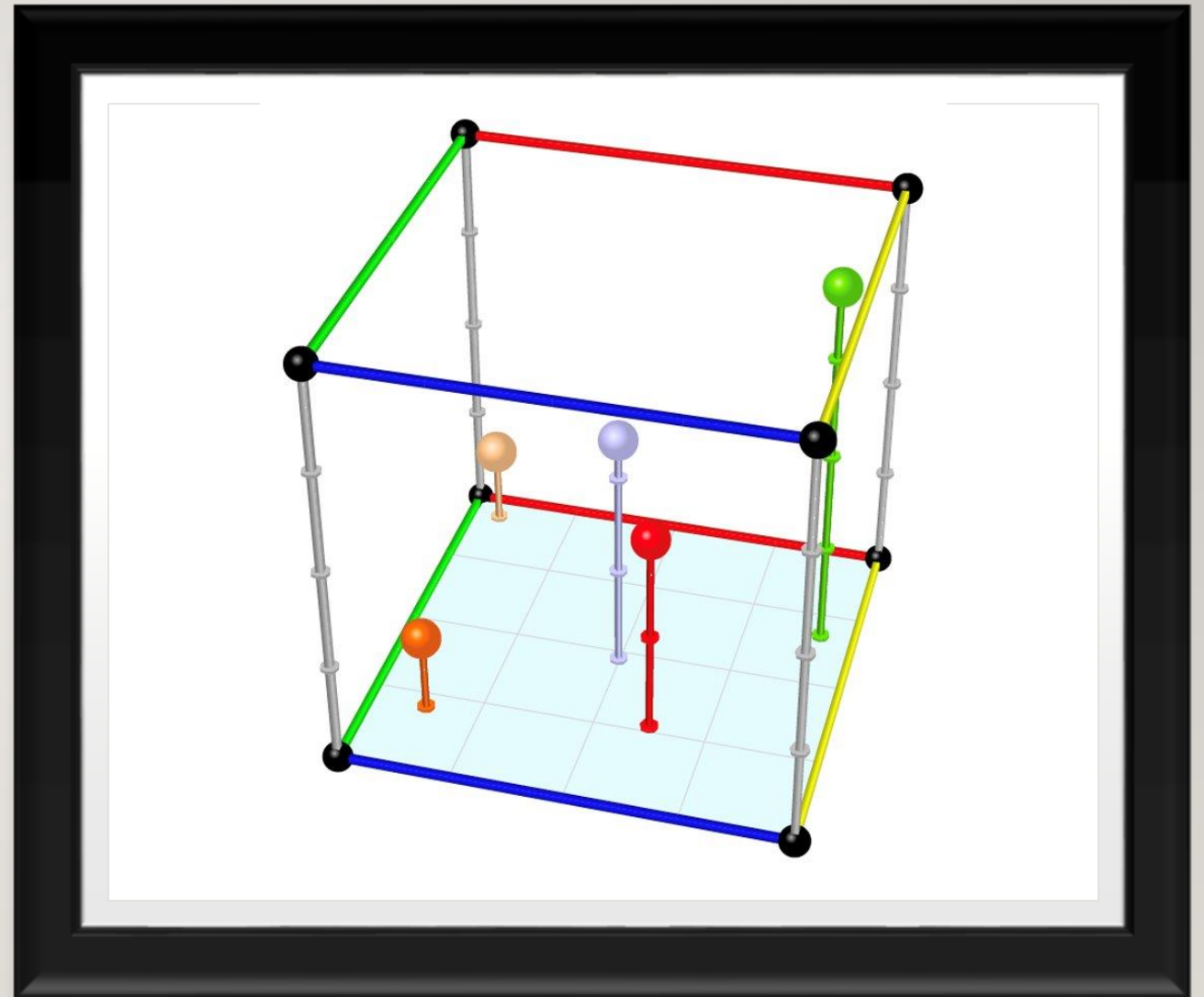
TEAM B: POTENTIAL STRATEGIC VULNERABILITIES

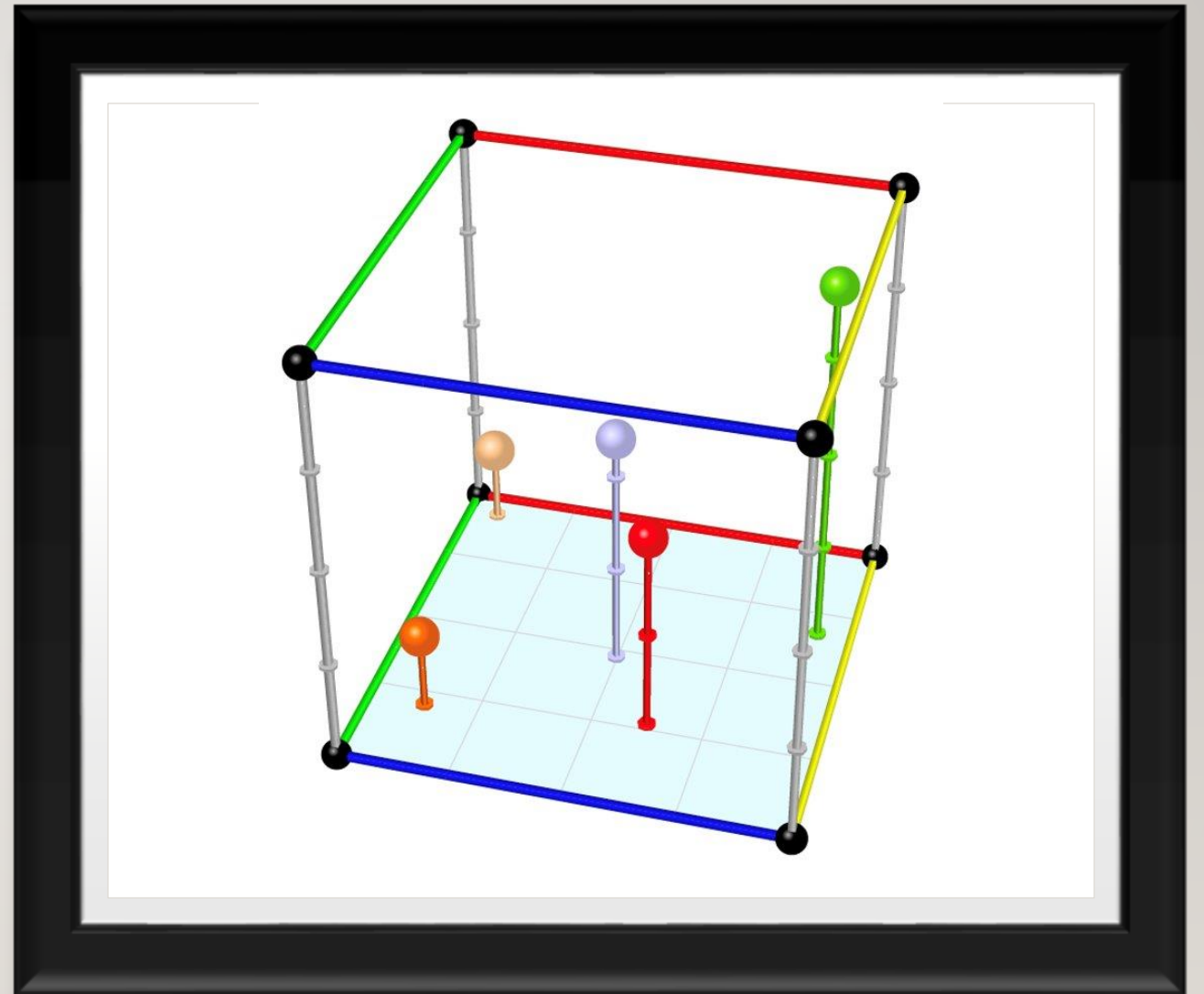- Potential for conflict based on differing cognitive signatures
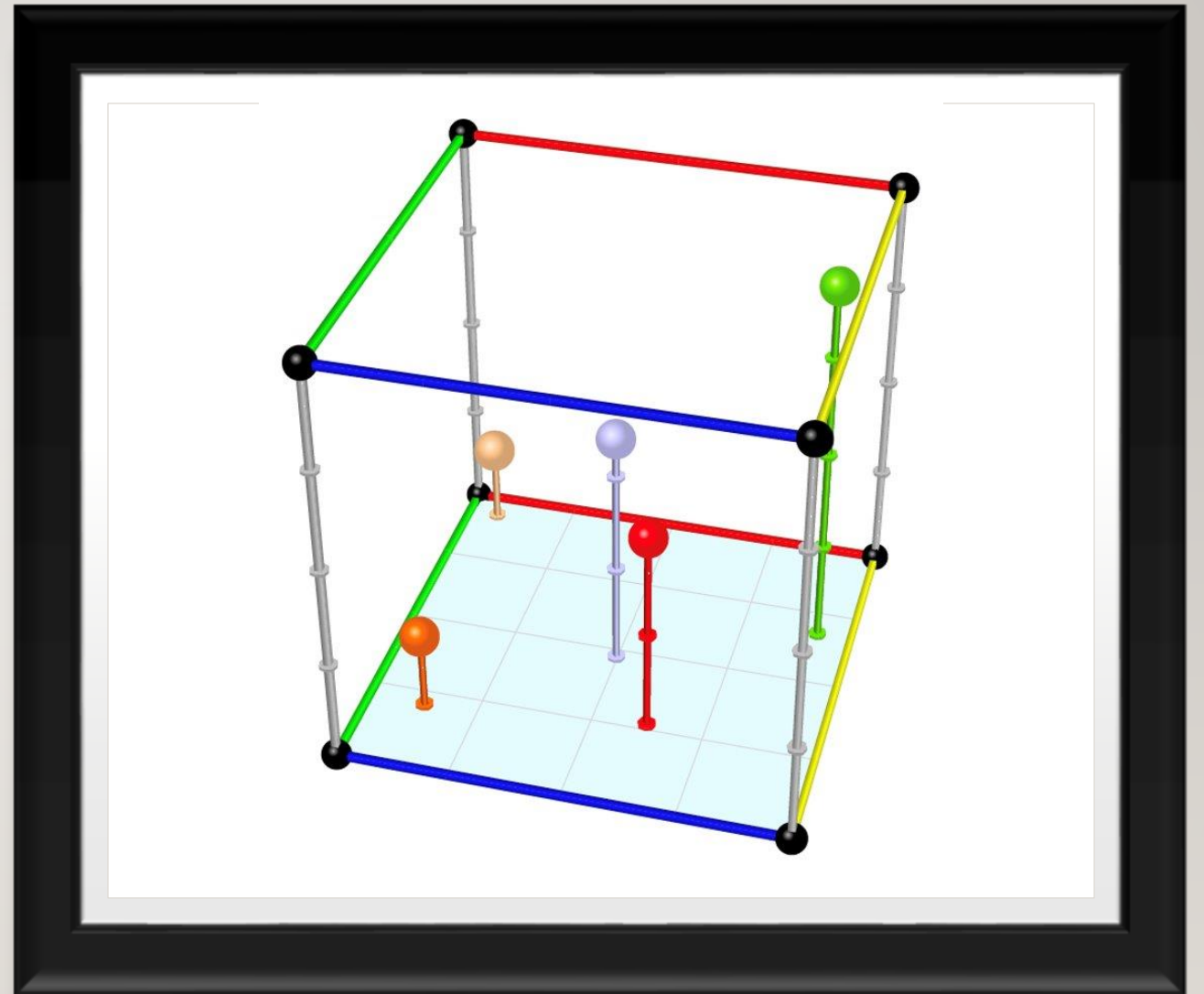
TEAM B: MITIGATION PLAN

- Anticipate potential conflict between the transform and control quadrants

- Recognize it as a potential strength if you have a psychologically safe enviroment 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 Strenghts

- _____
- _____

Our Potential Vulnerabilities

- _____
- _____

Mitigation Plan

_____

_____

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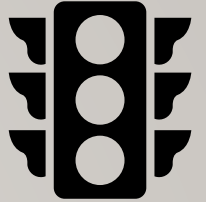
A predictor of how well-suited a team is to deal with uncertainty and disruption.

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

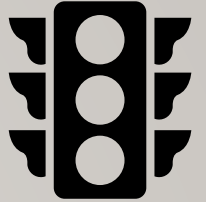**50 and Below**
Ill-suited for uncertainty and disruption

51-80
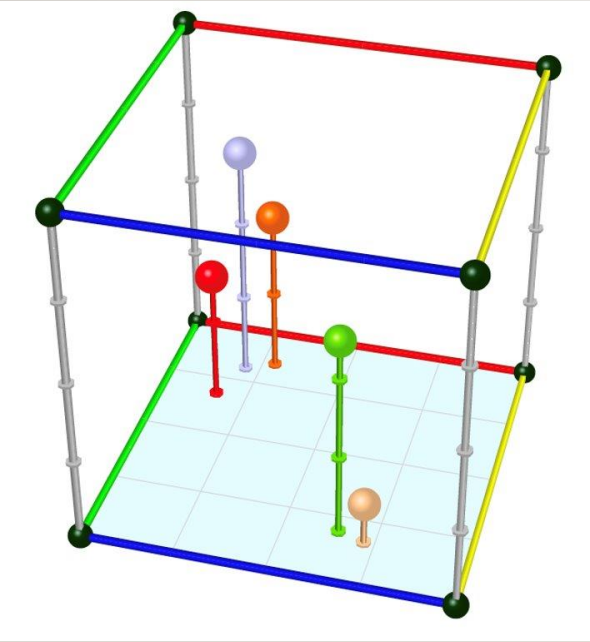Somewhat well-suited for uncertainty and disruption

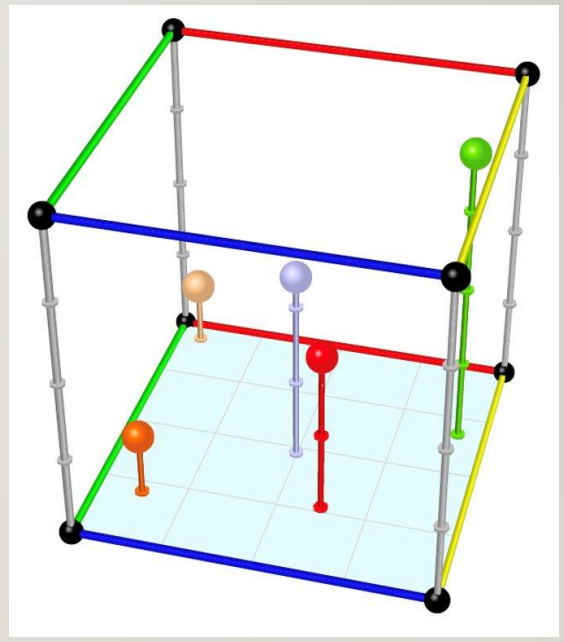**81 and Above**
Well-suited for uncertainty and disruption

86

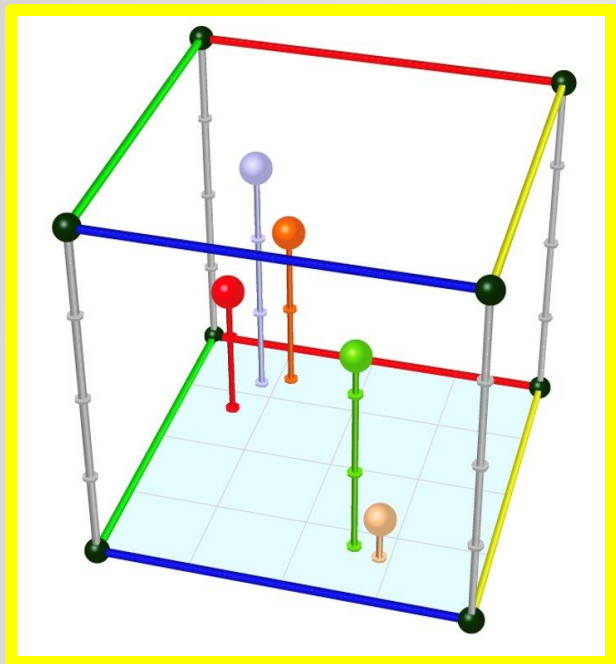# TEAM A & B: STRATEGIC AGILITY INDEX SCORES: COVID 19 HITS…

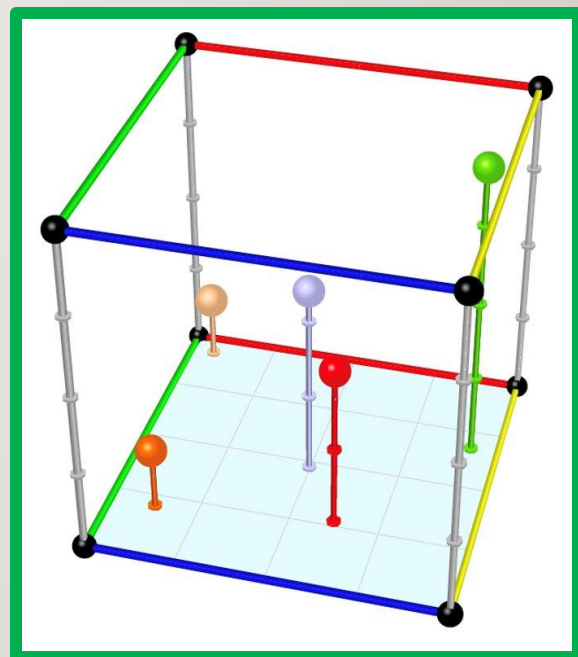One was successful, the other was not. Guess which was which.

Reynolds, A., & Lewis, D. (2017). Teams solve problems faster when they're more cognitively diverse. *Harvard Business Review, 30.*

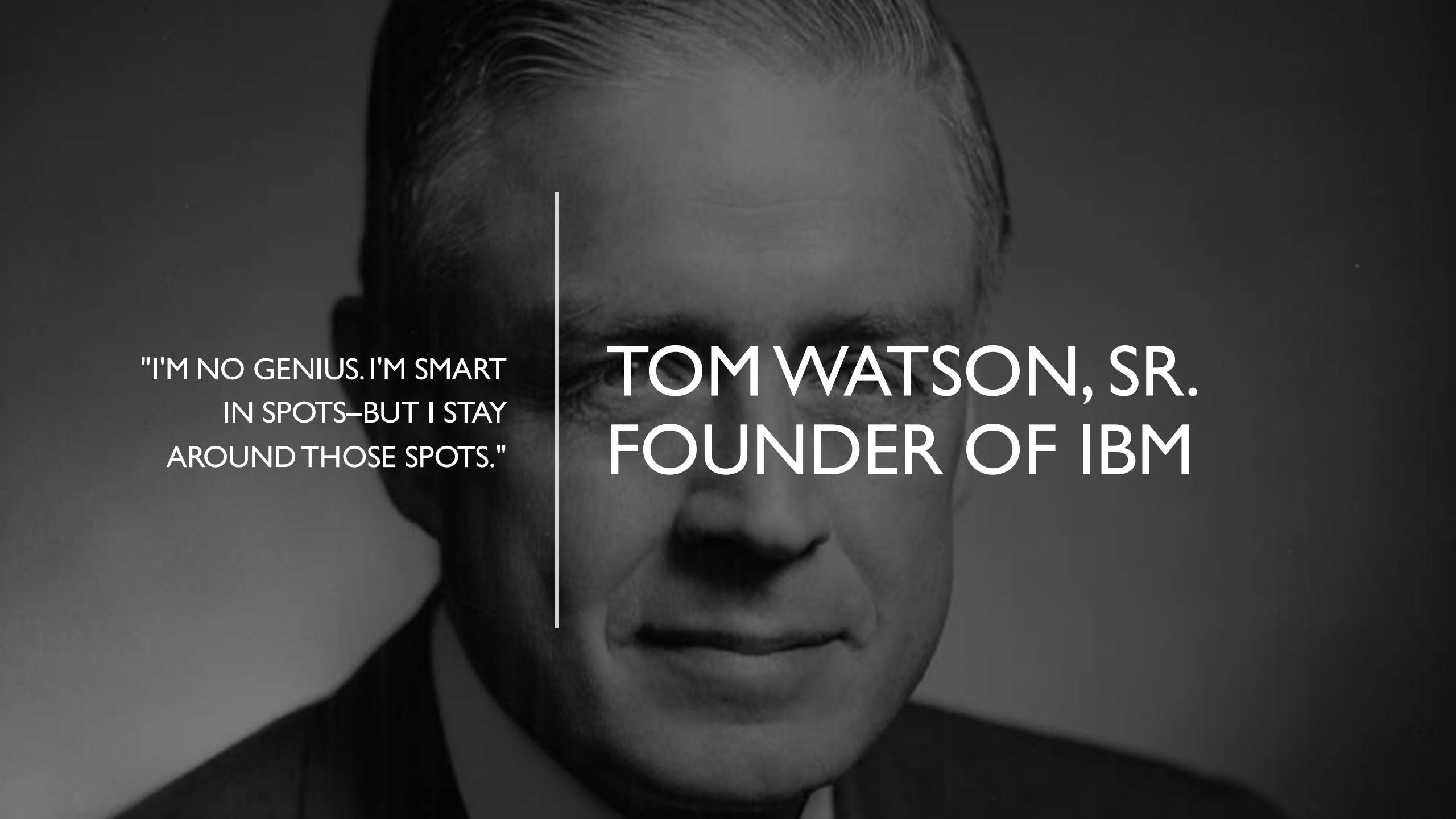Project was late and over budget

Both were data security projects

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!

Just point your camera here to find me on Linkedin

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