

Successful Quality Improvement— MUSIQ to Your Ears



*Using the Model for
Understanding Success
in Quality (MUSIQ) to
Guide Quality
Improvement*

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Objectives

1. Identify important aspects of context that affect a QI project's likelihood of success using the Model for Understanding Success in Quality (MUSIQ)
2. Utilize MUSIQ to detect aspects of context that must be addressed before or during the execution of a QI project in order to increase the likelihood of success
3. Engage with the growing community of QI researchers to guide the future direction of tool development and the study of context in QI success.

Disclosures

- Heather Kaplan, Lloyd Provost, and Peter Margolis have no conflicts of interest and nothing to disclose

Successful Quality Improvement

55					
50					
45					
40					
35					
30					
25					
20					
15					
10					
5					
0					
#	0 – 20%	21-40%	41-60%	61-80%	81-100%
	Percent of Improvement Projects that are Successful				

What were the reasons for your failed QI projects?

1. X
2. X
3. X
4. X
5. X
6. X
7. X
8. X
9. X

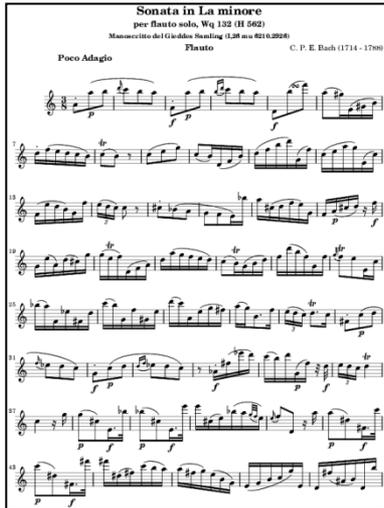
Reflecting on MUSIQ

- Individually choose a specific QI project that you have direct knowledge about.
- Can be either just starting, partially completed, or finished.
- Can be successful or unsuccessful (may learn more from unsuccessful)
- Use this project in the upcoming applications of MUSIQ

Outline

- Discuss the Role of Context in Improvement
- Review of Contextual Factors Identified as Important in QI Success
- Describe the Model for Understanding Success in Quality (MUSIQ)
- Use MUSIQ to identify aspects of context relevant to *your* QI work

Successful Quality Improvement is Like Making Beautiful Music...



PIECE OF MUSIC



INSTRUMENTS



PERFORMANCE SPACE

CHANGE CONTENT

Evidence-Based Care Processes and Bundles

CHANGE PROCESS

QI Methods—Model for Improvement, Six Sigma, PDSA Cycles...

CONTEXT

Culture, Leadership, Resources, Training, Motivation...



How do we develop a “QI symphony”?

- Limited understanding of how to guarantee success
 - Substantial variation in overall effectiveness
 - Significant heterogeneity
- Mixed results are likely due to differences in context

Context

“...characteristics of the organizational setting, of the individual, of his or her role in the organization, and of any other environmental factor that may shape [quality improvement effectiveness]”

ORIGINAL ARTICLE

Medication safety program reduces adverse drug events in a community hospital

M M Cohen, N L Kimmel, M K Benage, M J Cox, N Sanders, D Spence, J Chen

Qual Saf Health Care 2005;14:169-174. doi: 10.1136/qshc.2004.010942

DISCUSSION

We have shown that a medication safety program comprising simple, common sense measures targeted by the findings of a rich adverse event reporting system will produce a significant

- **A knowledgeable and committed safety specialist**
- **Strong and passionate leadership**
- **Endorsement by the hospital's senior executives**
- **A just and fair organizational culture**
- **Staff were encouraged and actively participated in the work of a variety of QI teams**

substantially increased event reporting. This essential to its success. It also required that a significant number of hospital staff was encouraged to and actively participated in the work of a variety of medication safety teams. We have not attempted to quantify the cost of this management commitment to free staff from their regular duties.

ORIGINAL ARTICLE

A statewide quality improvement collaborative to reduce neonatal central line-associated blood stream infections

DD Wirtschafter¹, J Pettit², P Kurtin³, M Dalsey⁴, K Chance⁴, HW Morrow⁴, M Seid^{5,12}, TL Byczkowski^{6,12}, TP Huber⁷, JM Milstein⁸, SM Bowles⁹, S Fichera¹⁰ and S Kloman^{11,13}

Our project has generated many observations reflective on the collaborative processes at the heart of every QI effort. Strategic collaboration by state-level payers and provider organizations closely affected agenda setting at the individual center level. This

- **Collaboration between state payers & provider organizations made this QI effort a priority**
 - **Administration support to mobilize resources & provide recognition to participants**
 - **Hospital leadership to aide collaboration among departments**
- organizations. For example, many NICUs related how leadership interest was translated into improved collaboration between departments and services within their hospital (such as better working relationships were developed with anesthesia, radiology and infection control departments). At the operational level, QI

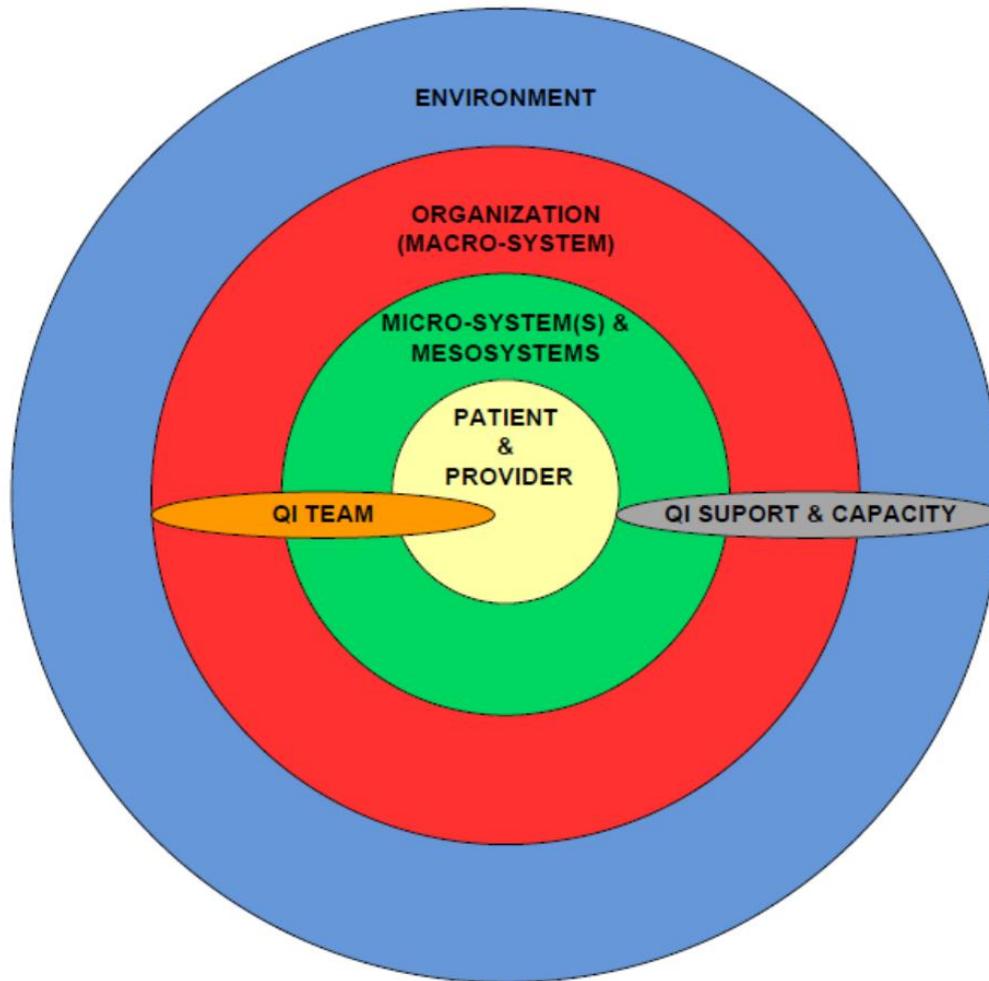
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What Evidence is in the Literature?

- Systematic search identified 47 studies empirically examining context in QI
- Synthesized the findings to:
 1. Identify factors associated with QI success
 2. Categorize and summarize factors

Context is like Russian Dolls...



66 Contextual Factors Identified

Environment

- Competition
- Managed Care Penetration
- Medicare/Medicaid Influence
- Regulation
- TQM Adoption by Others
- Accreditation
- P4P

Organization

- Size
- QI Leadership
- Culture
- Ownership
- Teaching Status
- QI Maturity
- System Affiliation
- Location
- Physician Involvement
- Customer Focus
- Financial Health
- Organizational Structure
- Service Mix
- Physician Arrangements
- Volume
- Implementation Approach
- Motivation to Implement QI
- Innovativeness
- Process Management

Microsystem

- Motivation to Change
- Champion
- Physician Leadership
- Culture/Climate
- Capability for Change

QI Team

- Physician Involvement on Team
- Group Process
- Team Leadership
- Team QI Skills
- Group Climate
- Support
- Prior QI Experience
- Prior Experience Working Together

QI Support & Capacity

- Data Infrastructure
- Resources
- Infrastructure for QI
- QI Consultants
- QI Workforce Focus

Miscellaneous

- Strategic Importance to Organization

Is this the entire story?

- Approach to understanding the role of context has not been systematic
 - Inconsistencies in measuring and defining contextual factors
 - Little understanding of the combined and relative effects of multiple factors together



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MUSIQ: Model for Thinking About Context

- Panel of 10 Experts
 - Leading thinkers in QI research
 - Quality management academician
 - QI advisor at an international IT corporation
 - Health care QI leaders—supervisory & frontline
 - QI consultant
- Final model reflects relationships where there was agreement among a majority of panelists

MUSIQ: Model for Thinking About Context

- Key features of MUSIQ include:
 - Applicable to QI in a health care setting using a broad range of QI approaches
 - Useful for QI projects within a single or multiple microsystems
 - Organized based on nested levels of the health care system
 - Focus on modifiable factors
 - Makes relationships among contextual factors explicit

Outline

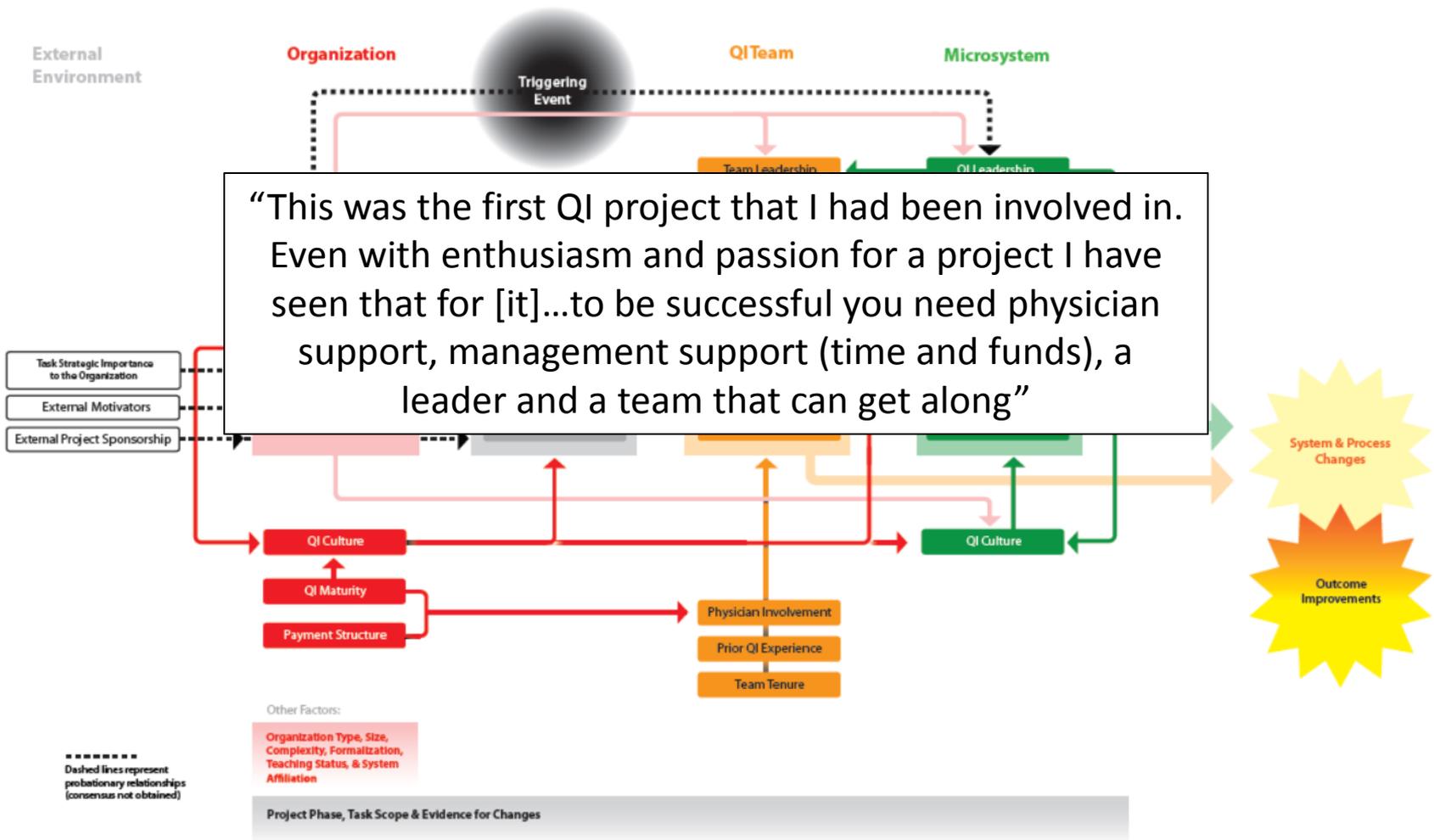
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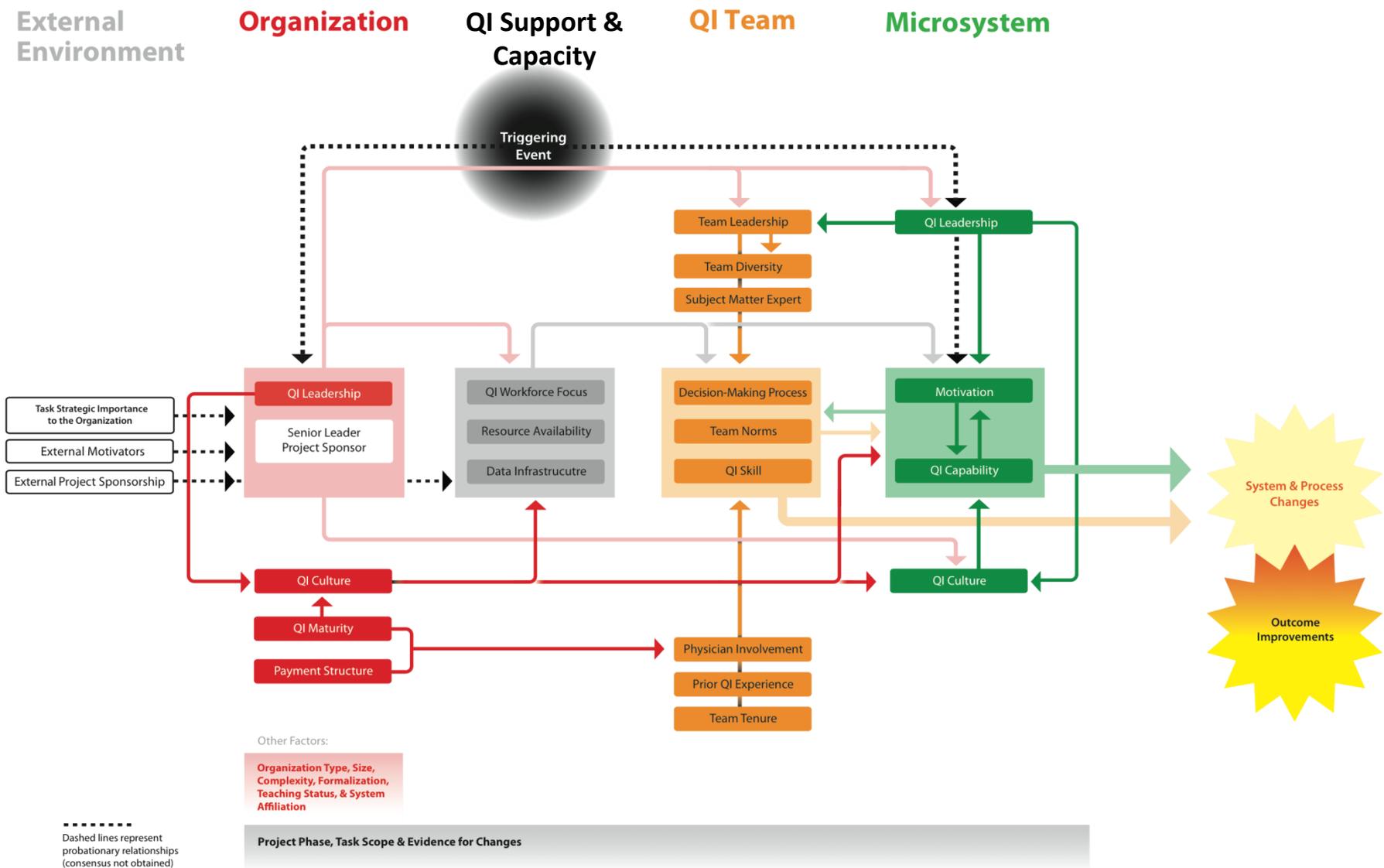
Let's play the MUSIQ....

- Review MUSIQ to understand how contextual factors interact and work together to influence QI success
- Discuss how to use MUSIQ to think about altering context over the course of your QI project

MUSIQ: Model for Understanding Success in Quality



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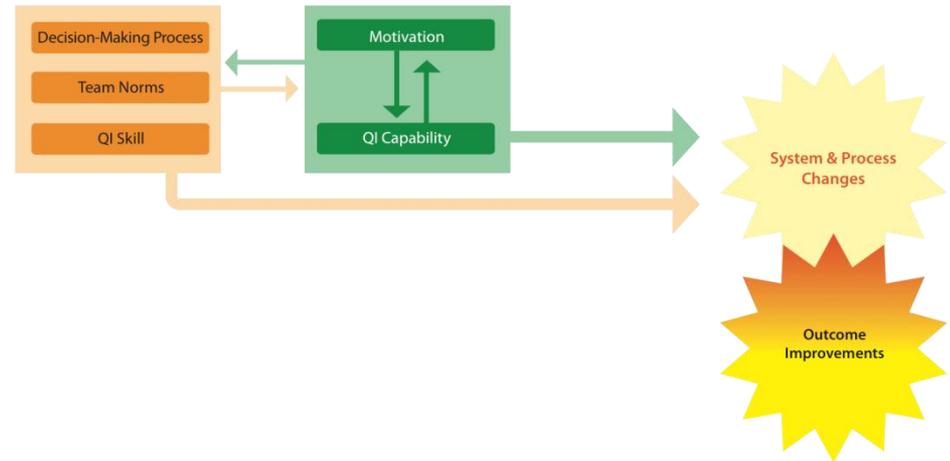
External Environment

Organization

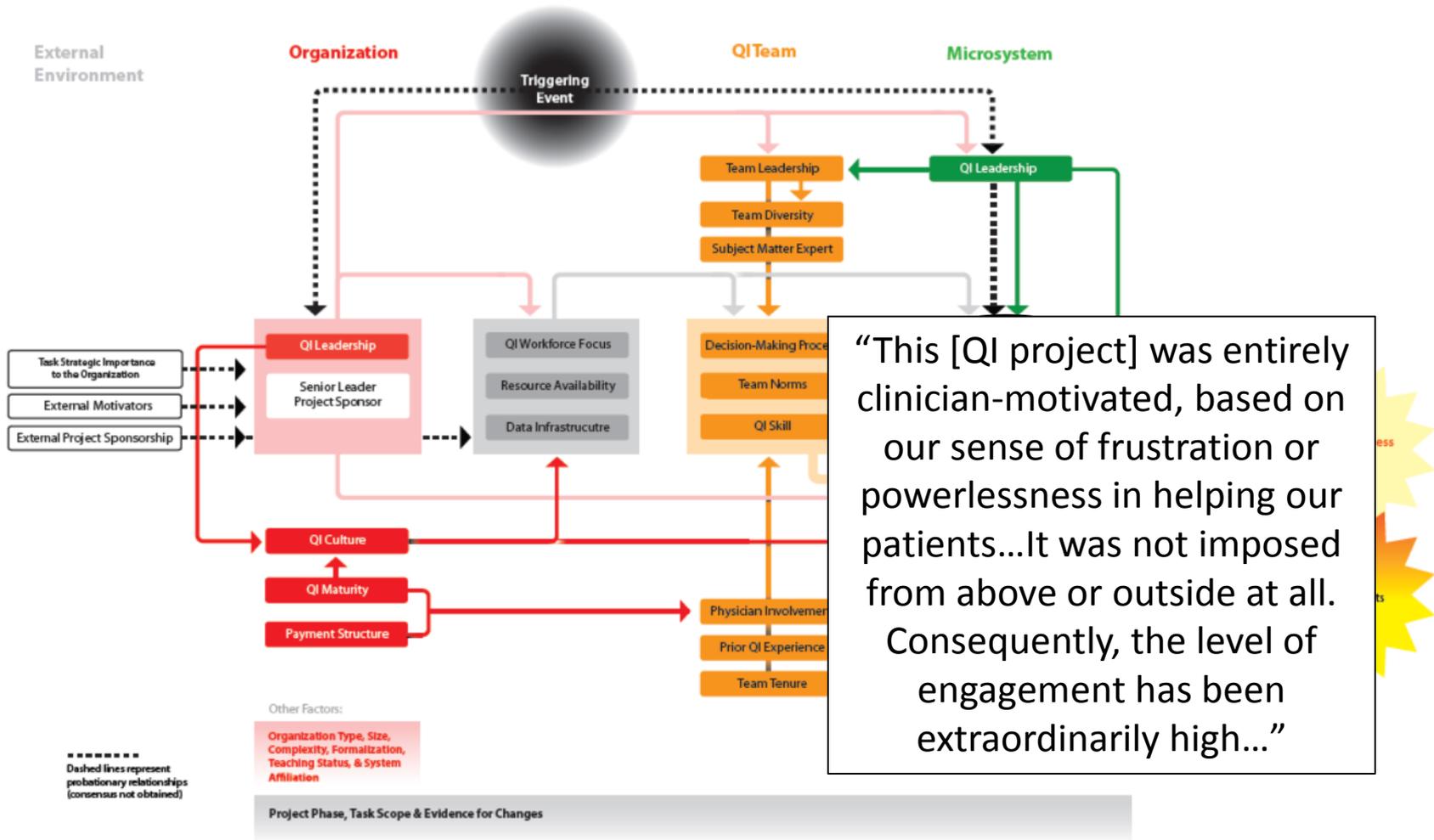
QI Support & Capacity

QI Team

Microsystem



MUSIQ: Model for Understanding Success in Quality



Assess Your Local Setting

- Microsystem: a small group of people working together on a regular basis to provide care to discrete populations of patients.
 - (ex) doctor's offices or clinics, hospital units or ward, departments within a business/billing office
- To what extent do microsystem staff have a desire to improve performance in the area of focus of your QI project?

Microsystem Motivation

Indicate the extent to which you agree or disagree with this statement on a 1-7 scale:

Microsystem staff who are not members of the QI team have a strong desire to improve performance in the area of focus of this QI project

**Totally
Agree**

7

6

5

**Neither Agree
nor Disagree**

4

3

2

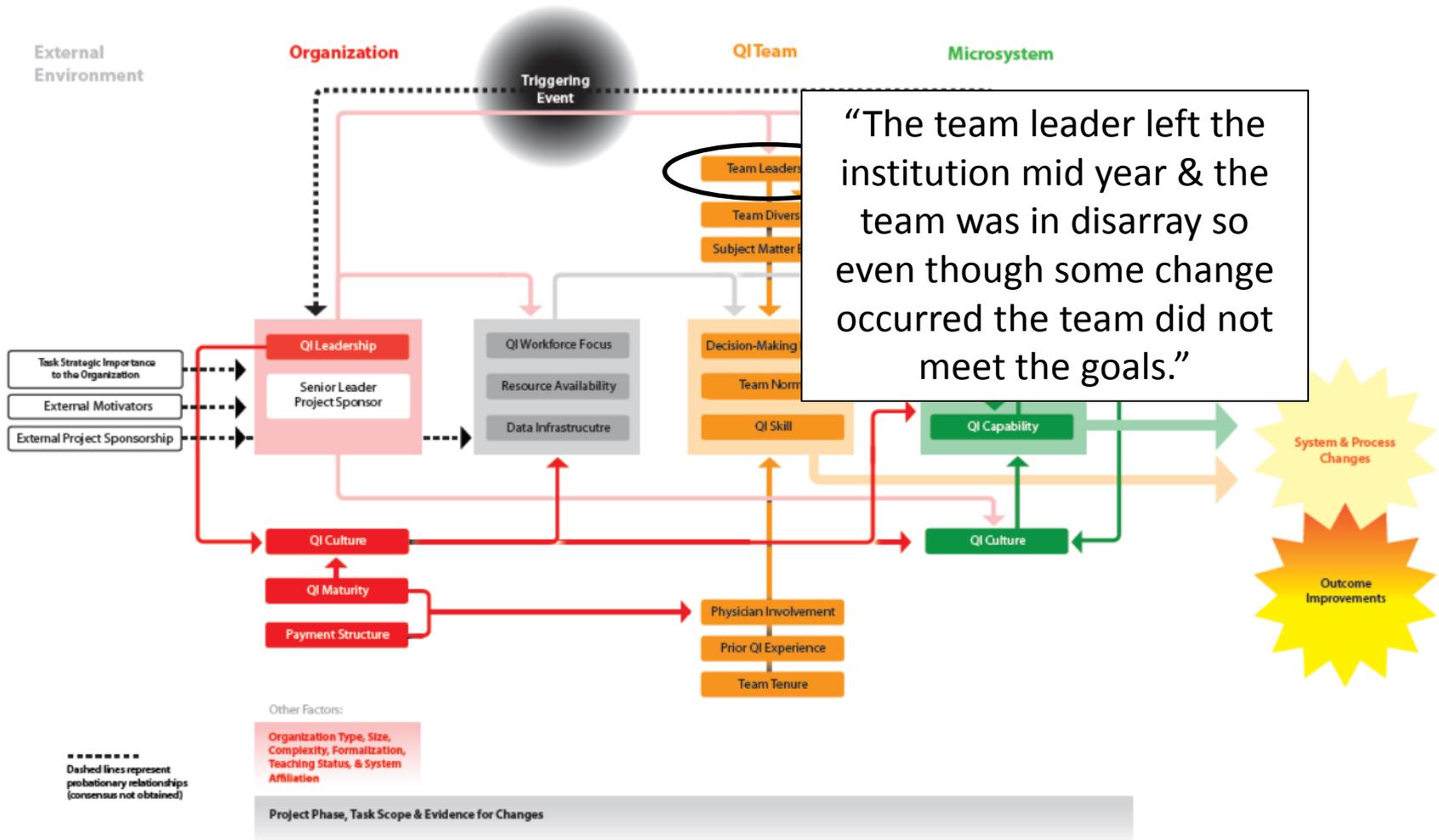
**Totally
Disagree**

1

Discussion: Variation in Local Settings

- How high (or low) did you score on microsystem motivation?
- Why did you assign this score to your QI project?
- How is this affecting the success of your QI project thus far?

MUSIQ: Model for Understanding Success in Quality



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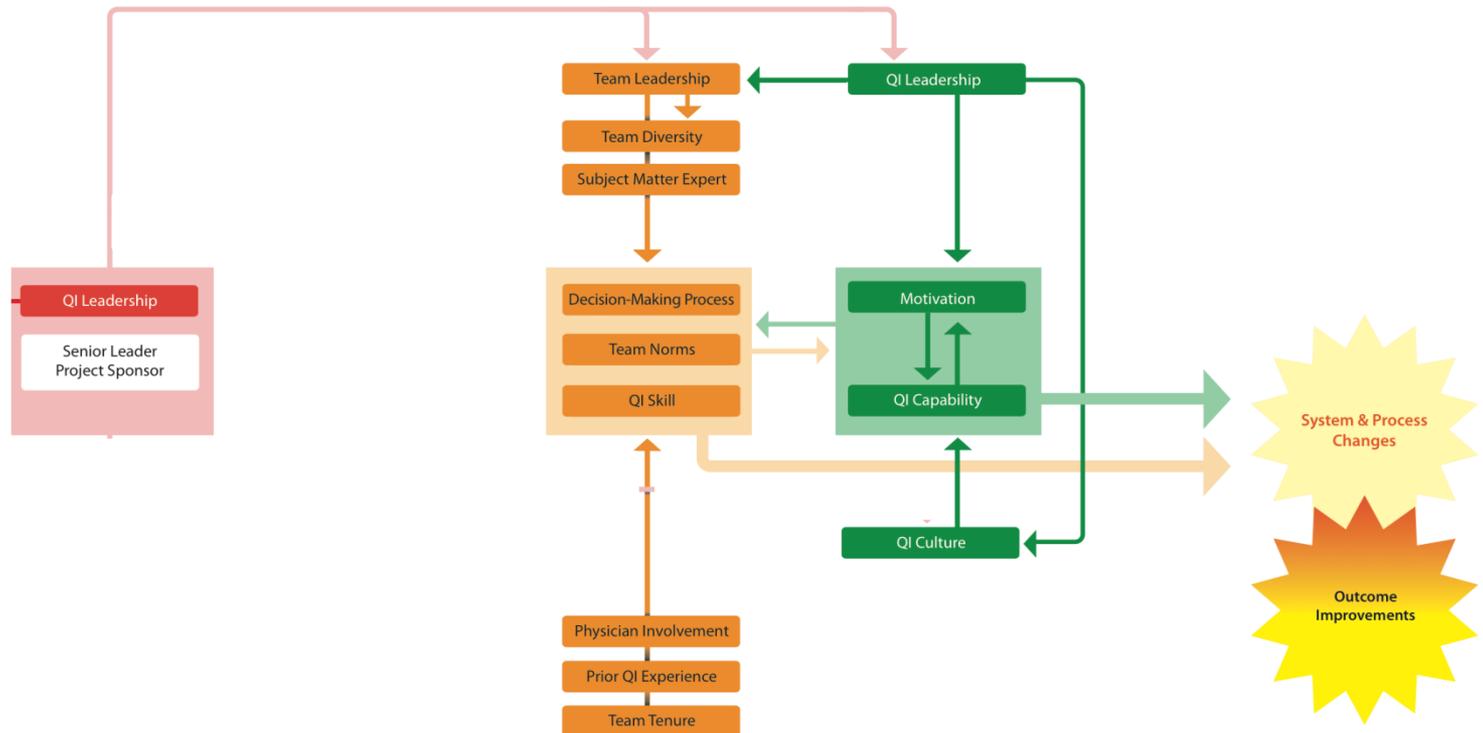
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Discussion: Modifying Context

- How might you increase microsystem staff motivation?
 - At the organization level?
 - At the microsystem level?
 - At the QI Team level?
 - Other?

MUSIQ: Model for Understanding Success in Quality

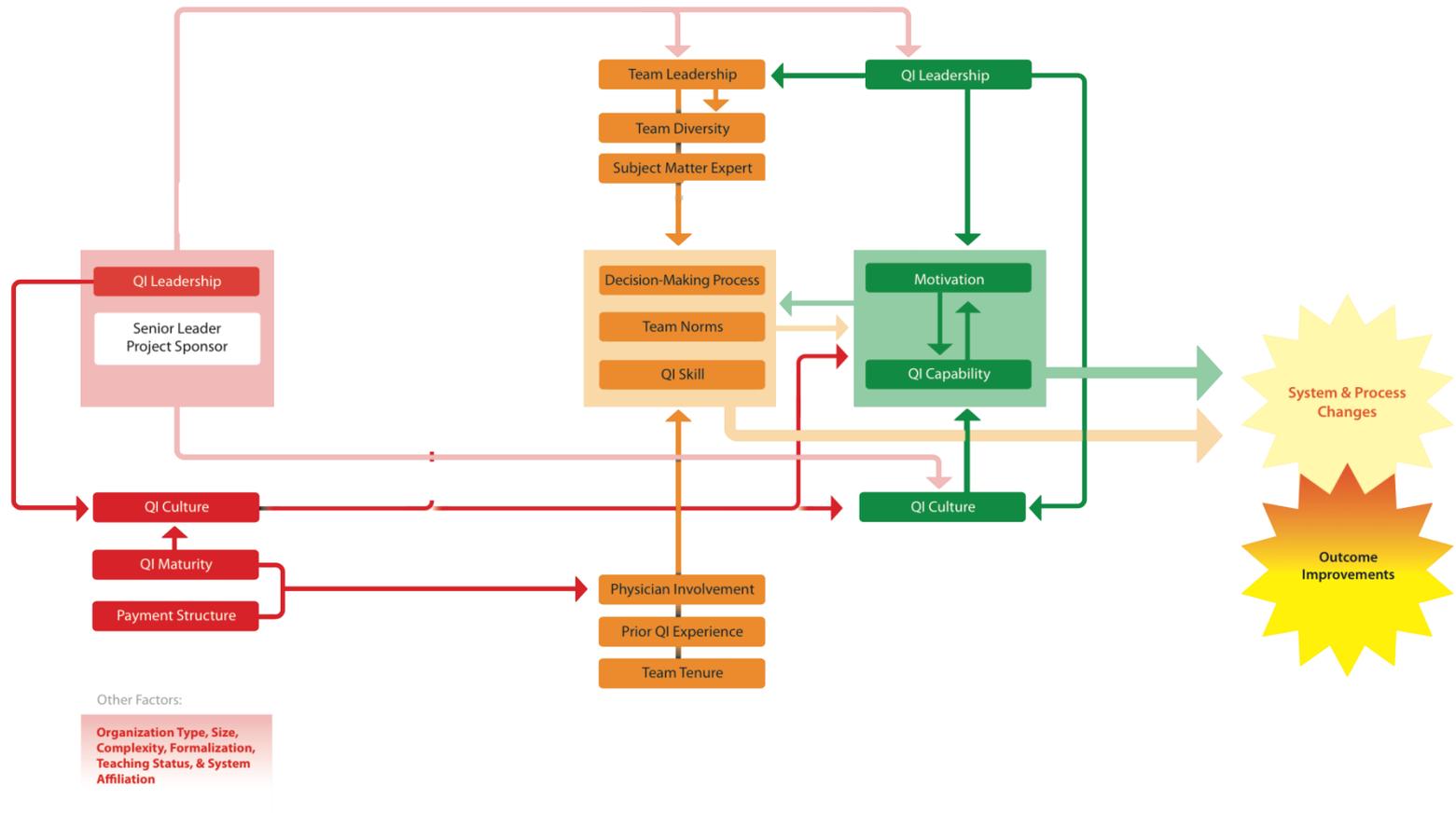
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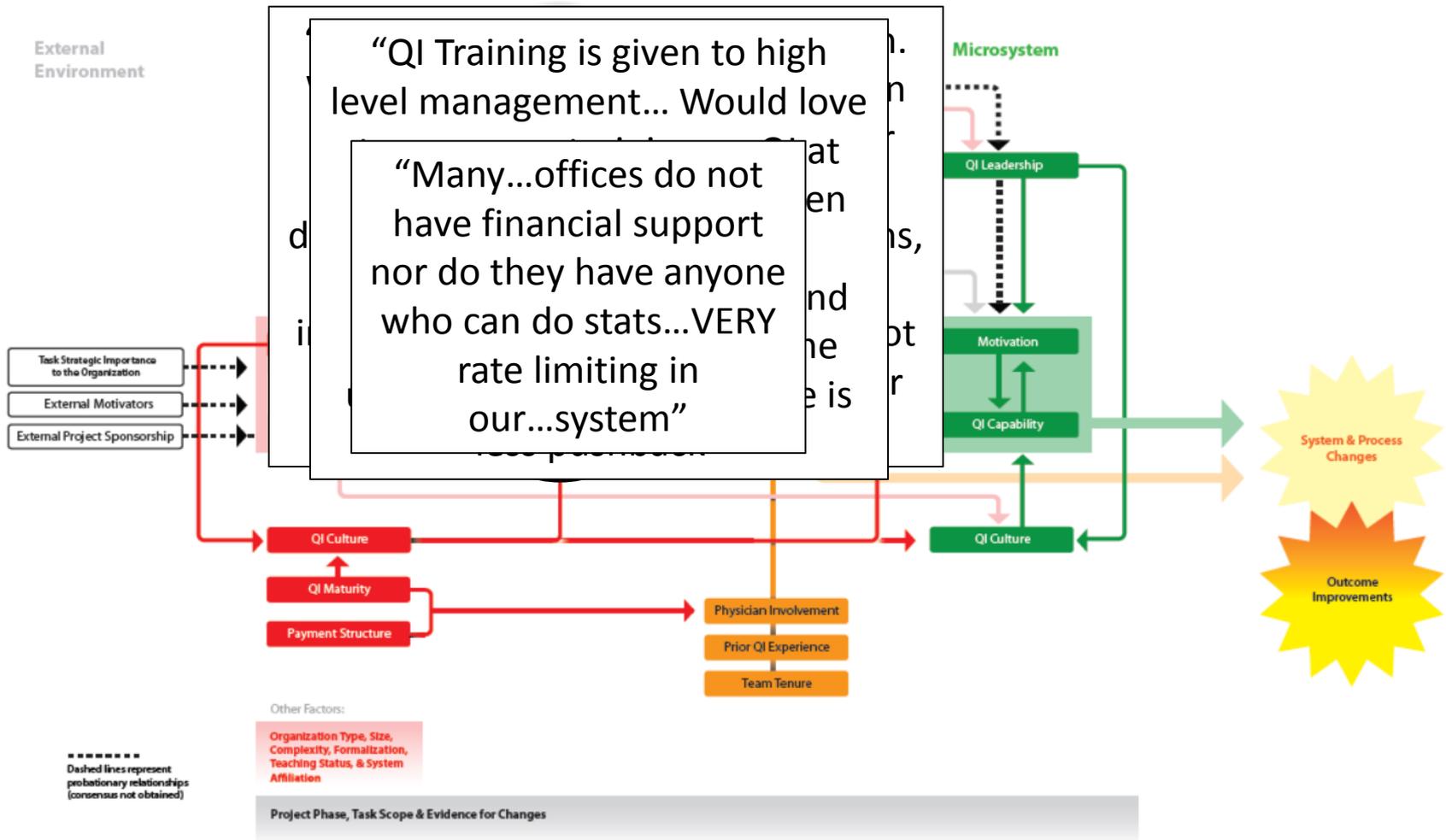
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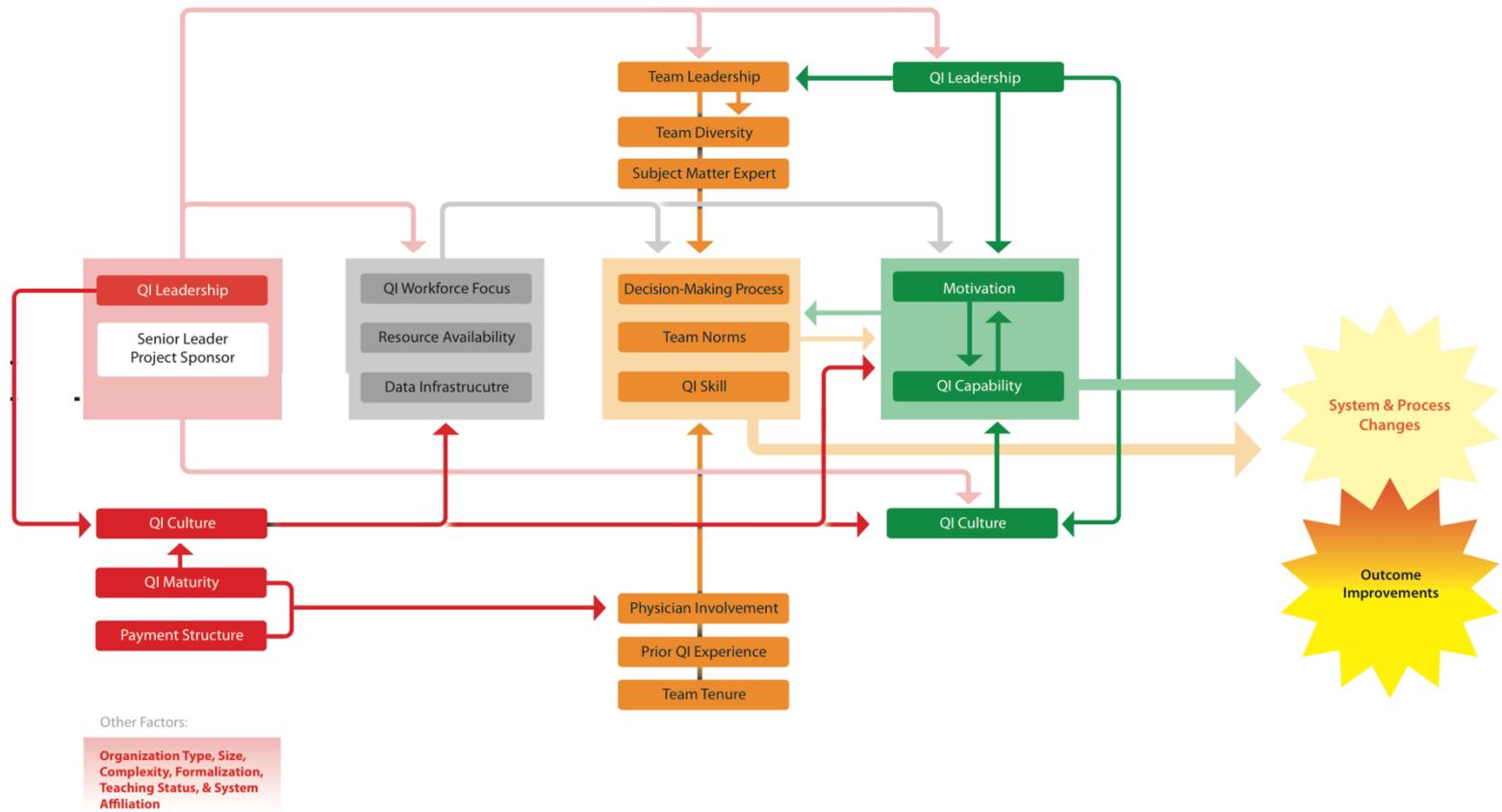
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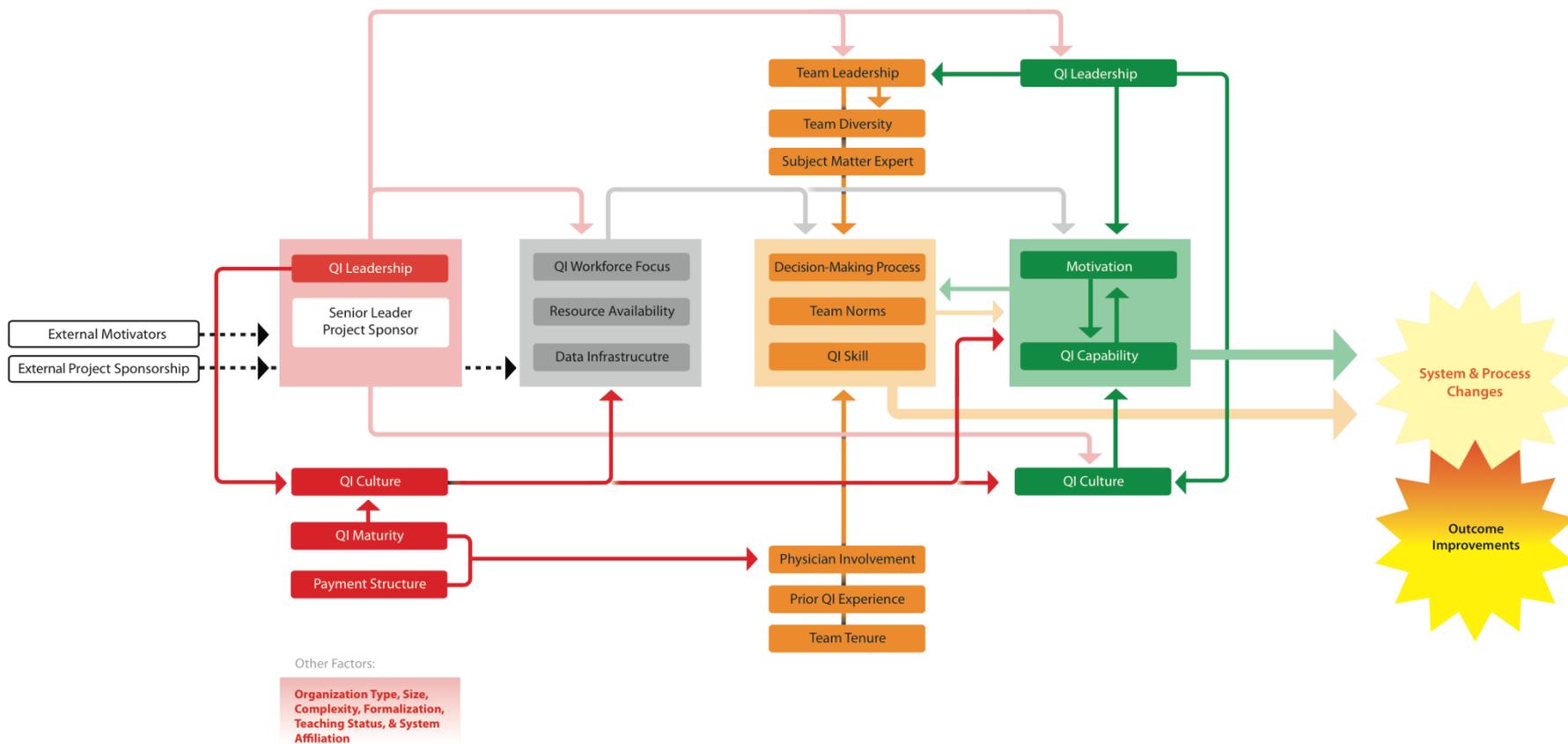
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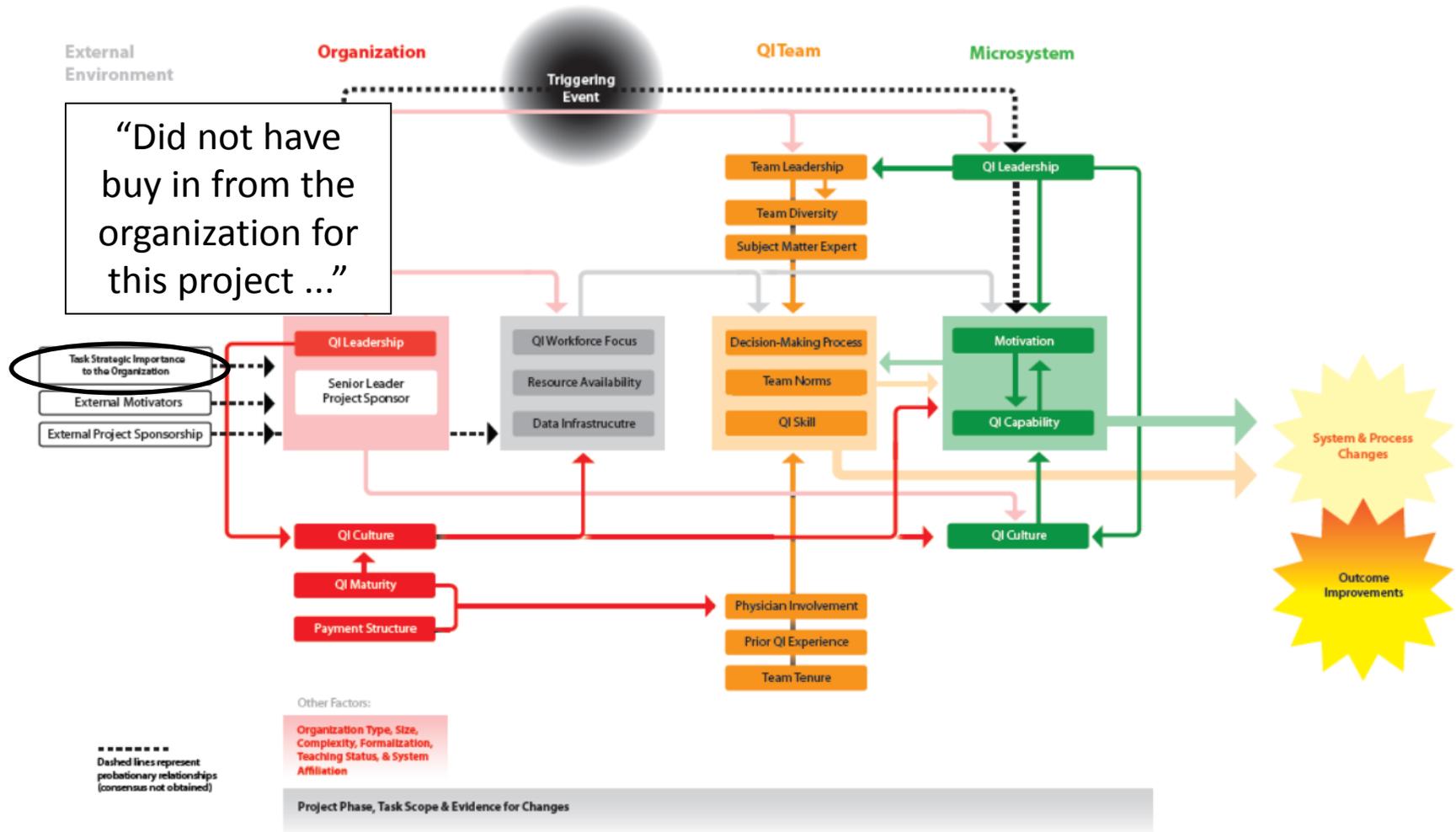
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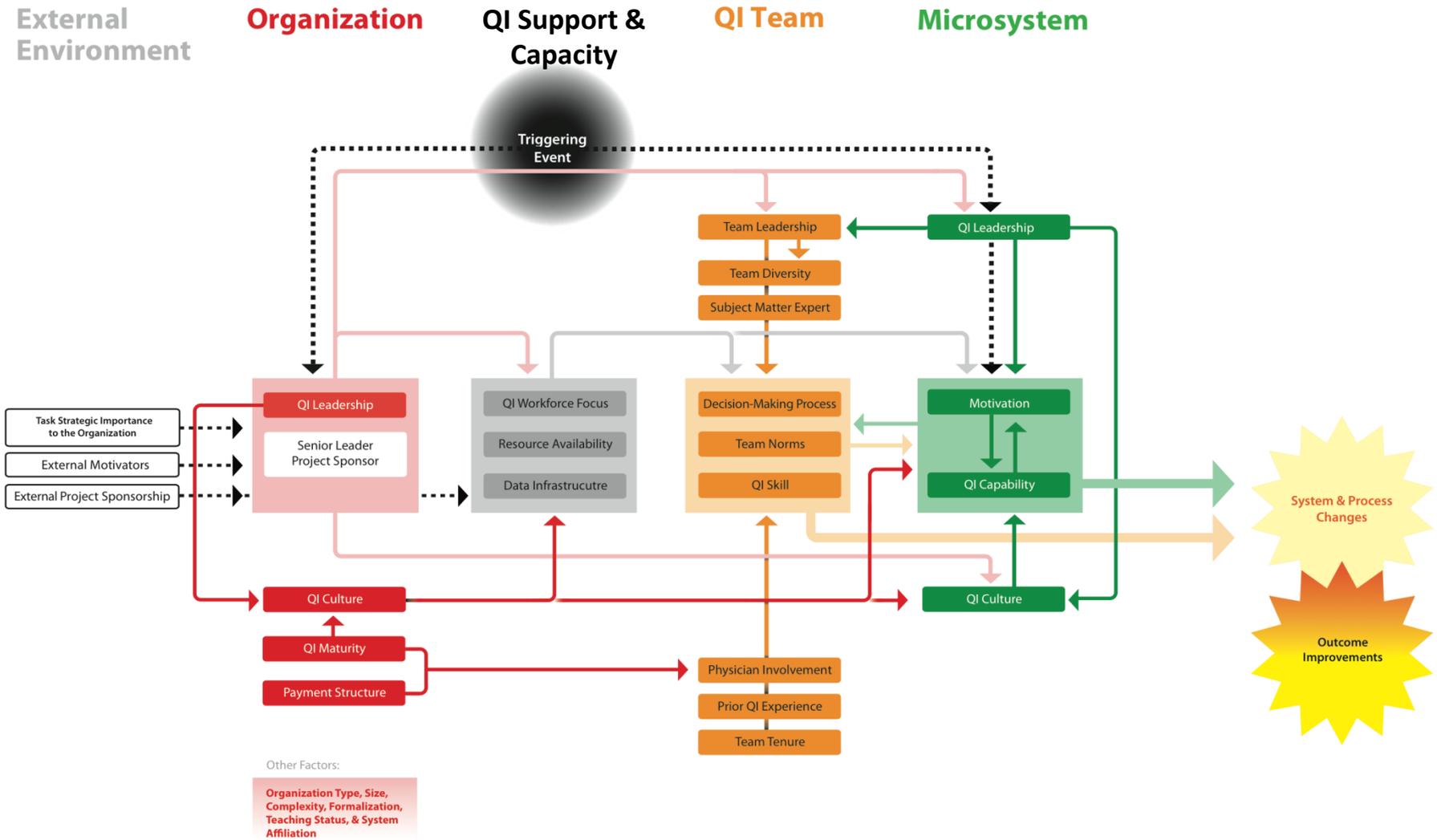


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Dashed lines represent
probationary relationships
(consensus not obtained)

MUSIQ: Model for Understanding Success in Quality



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.....
Dashed lines represent probabilistic relationships (consensus not obtained)

What we've learned to date...

- Context is important in the success of QI initiatives and needs to be examined systematically
- Using MUSIQ you can...
 - Identify aspects of context that must be addressed before or during the execution your QI projects
 - Plan strategies to modify context for increased success



Tools Available

- Pilot MUSIQ Context Assessment Tool
 - Excel Spreadsheet
 - Full paper version of the questionnaire



Future Development: Our Perspective

- Begin to apply MUSIQ to QI projects:
 - Measurement Challenges
 - Can we develop better measures of the components of the model. Use validated questionnaires or keep simple?
 - How do we define and measure QI success so that we can calibrate and further validate the model?
 - Interventions to Modify Context
 - If we could predict which teams are going to fail (and why), what actions could they take to get better results?
 - In the absence of proven interventions, how do we use QI methods to design, test, and implement interventions to get better results?
 - Creating a learning system for dialogue

Future Development: Your Perspective

- How might you use available tools right now?
- What would make the tool most useful?
- What are your most pressing needs in addressing context in the execution of QI projects?
- How do you measure the success of your QI initiatives?



General Reactions and Questions

