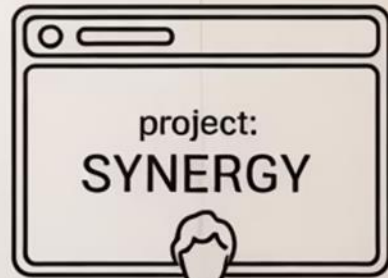




MSD



The Human Element: Synergising Emotional and Physical Intelligence in Statistical Programming Leadership

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Activity is now locked.
Responses are not accepted at this time.

Before we start... How do you feel?

Loading...

Nobody has responded yet.

Hang tight! Responses are coming in.



Hand or Stand?

People-first VS Data-first Leadership

Introduction



Traditional Approach

Technical proficiency,
methodological rigour,
regulatory compliance as
primary success metrics

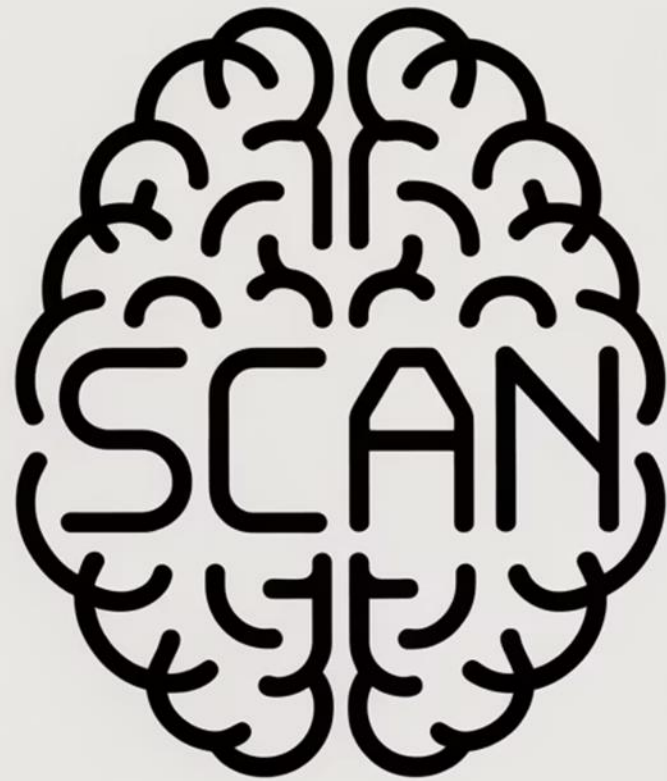
Modern Reality

AI & ML integration creates
challenges requiring
adaptive problem-solving,
evolution of statistical
programming role

Human-Centred Shift

Recognition that behind every line of code stands a human with
emotions, physical needs, social requirements

Gardner's 1983 theory of multiple intelligences challenged
unidimensional views, providing groundwork leadership intelligence
frameworks beyond traditional cognitive abilities.



Literature Review

Gardner's Multiple Intelligences (1983)

- Linguistic
- Logical-mathematical
- Spatial
- Musical
- Bodily-kinesthetic
- Interpersonal
- Intrapersonal
- Naturalistic

Emotional Intelligence Evolution

Salovey & Mayer: "ability to monitor one's own and other's feelings and emotions"

Goleman's Model: Self-awareness, self-regulation, motivation, empathy, social skills

Physical intelligence encompasses ability to recognise and actively manage physiological states, optimising cognitive function and decision-making capacity

Theoretical Foundations of EQ in Technical Leadership

Goleman's Behavioural Model

Self-awareness: Spot biases, knowledge gaps, emotional triggers

Self-regulation: Composure during failures or tight deadlines

Motivation: Intrinsic drive through long innovation cycles

Empathy: Bridge cross-functional communication

Social skills: Stakeholder alignment, conflict resolution

Salovey & Mayer's Ability Model

Perceiving: Spot emotions in colleagues' tone/body language

Using: Leverage excitement for creative problem solving

Understanding: Recognise how frustration escalates

Managing: Calm oneself before stressful meetings



Neurological Foundations of EQ



Key Brain Systems

- **Amygdala:** emotional salience
- **Prefrontal cortex:** reasoning, impulse control
- **Anterior cingulate:** emotion regulation
- **Mirror neurons:** empathy

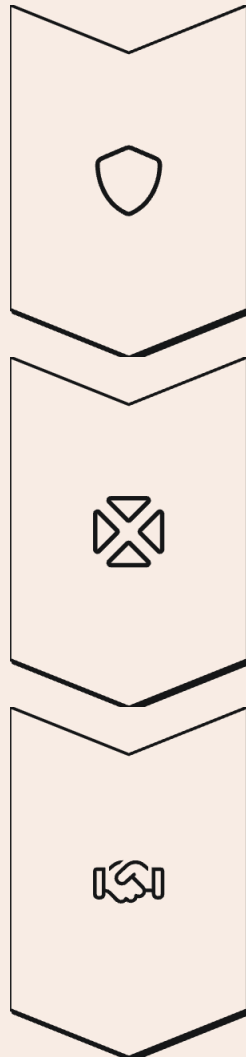


Leadership Applications

- Pause before responding
- Active listening techniques
- Structured decision frameworks
- Conflict resolution strategies

EQ Skill	Brain Basis	Leadership Benefit	Practical Tips
Self-Regulation	PFC inhibits amygdala	Trust, professionalism	Pause, mindfulness
Empathy	Mirror neurons, ACC	Team morale, safety	Active listening
Decision-Making	PFC + amygdala integration	Effective choices	Notice emotions, consult
Conflict Resolution	PFC, ACC	Team cohesion	Stay neutral

EQ in Statistical Programming



Psychological Safety

Environment where team members feel safe to take interpersonal risks

Motivational Alignment

Individual motivation congruent with cognitive demands and work goals

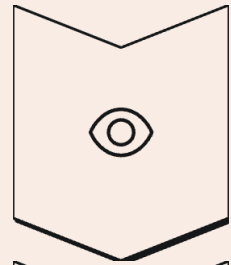
Conflict Navigation

Thomas-Kilmann modes: competing, collaborating, compromising, avoiding, accommodating



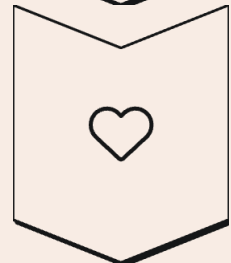
Theoretical Foundations of PQ in Technical Leadership

"The ability to detect and actively manage the balance of certain key chemicals so that we can achieve more, stress less, and live and work more happily"



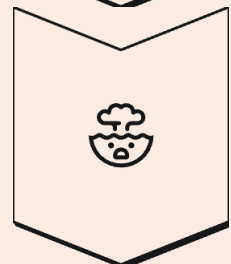
Interoception

Awareness of bodily signals influencing decisions



Physiological Regulation

Adjusting arousal states through breathing, movement



Embodied Cognition

Physical experiences shaping cognitive processes



Physical Intelligence Assessment Framework

Bottom-Up Approach

Interoception → Physiological Regulation → Embodied Cognition

Internal sensations and body movement as starting points

Top-Down Approach

Embodied Cognition → Physiological Regulation → Interoception

Mind focuses attention on body to understand experiences

Assessment Type	Examples
Physiological markers	Heart rate, blood pressure, cortisol levels, skin temperature
Observational methods	Understanding surrounding environment, own body awareness
Self-report measures	Awareness of comfort/discomfort, attention to body sensations

PQ Domains for Statistical Programming Leaders

Cognitive Performance Optimization

Proper posture enhances acetylcholine delivery to brain. Movement breaks counteract cognitive deficiency from sedentary work

Stress Regulation

Recognise early physiological stress indicators. Controlled breathing produces DHEA, neutralising cortisol's negative effects

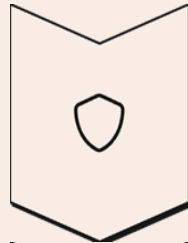
Attention Restoration

Directed attention is limited resource. Natural environments provide effective restoration of attention resources

Embodied Decision-Making

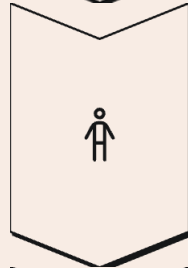
Physical states directly influence decision patterns. Enhanced awareness enables balanced integration of analytical reasoning and embodied insight

The EQ-PQ Synergy Framework



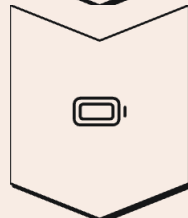
Resilient Decision-Making

Maintain analytical rigour under pressure by integrating emotional awareness with physiological regulation



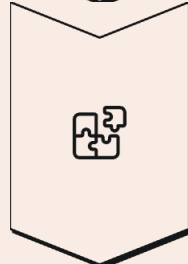
Authentic Presence

Embody values through emotional harmony and physical alignment, creating psychological safety



Sustainable Performance

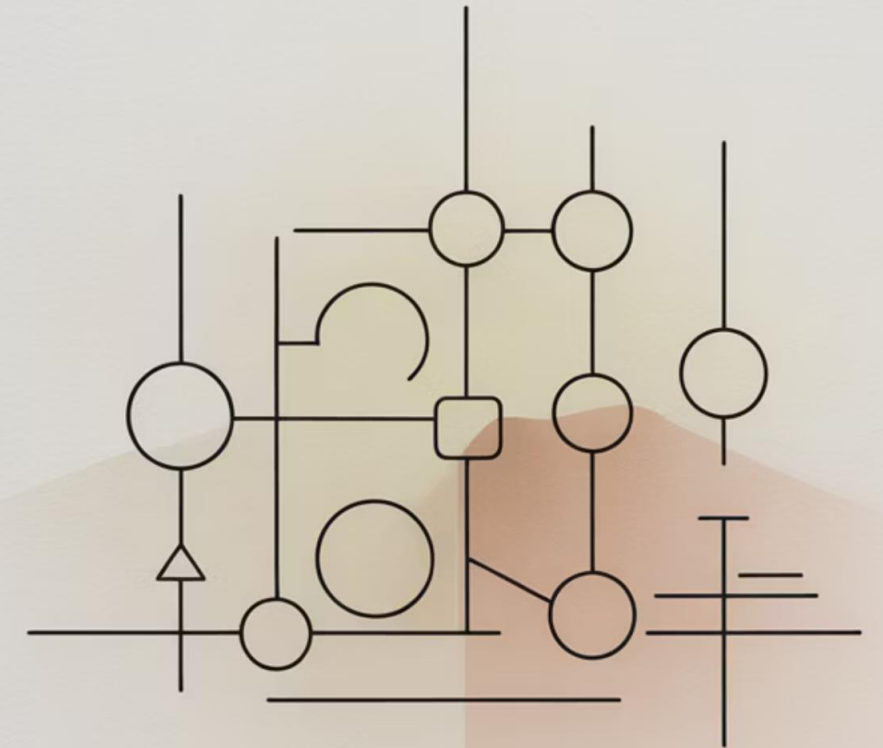
Recognise early warning signs of exhaustion and proactively adjust approach



Enhanced Problem-Solving

Utilise both analytical and intuitive processing models for complex solutions

Systems thinking reveals dynamic interdependence: emotional regulation influences physiological states, while physical awareness enhances emotional granularity.



Implementation Science Framework

Relative Advantage

Clear connections to performance outcomes:
improved code quality, enhanced productivity,
reduced errors

1

Compatibility

Align with existing values of scientific rigour
and continuous improvement

2

Complexity

Introduce through manageable, incremental steps
rather than comprehensive overhauls

3

Trialability

Create low-risk opportunities: mindfulness before
meetings, structured reflection processes

4

Observability

Make benefits visible through metrics resonating
with technical professionals

5

Psychological Readiness

- Beliefs about change necessity
- Scientific foundation demonstration
- Relevance to technical performance

Structural Readiness

- Resource availability
- Process capabilities
- Integration into development programs

Knowledge Translation and Evaluation

360°

Multi-Source Assessment

Self, peer, direct report, supervisor perspectives

4

Evaluation Dimensions

Cognitive, emotional, behavioural, results

3

Timepoint Assessment

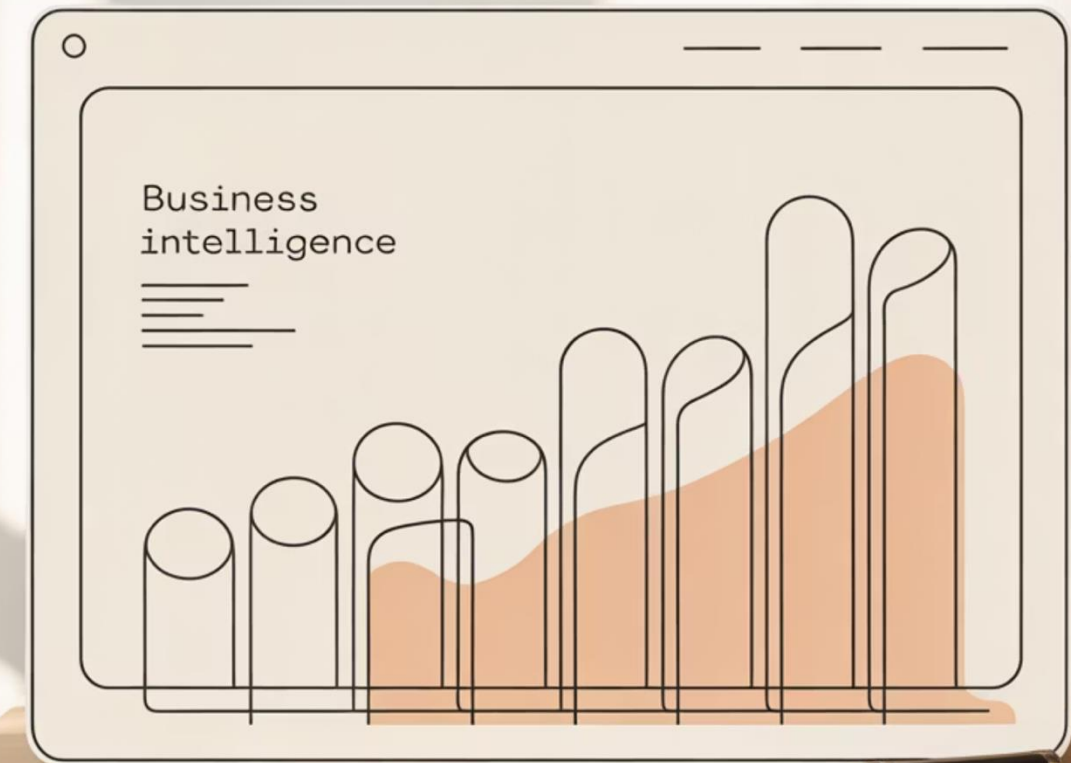
Baseline, progress monitoring, outcome evaluation

Leading Indicators

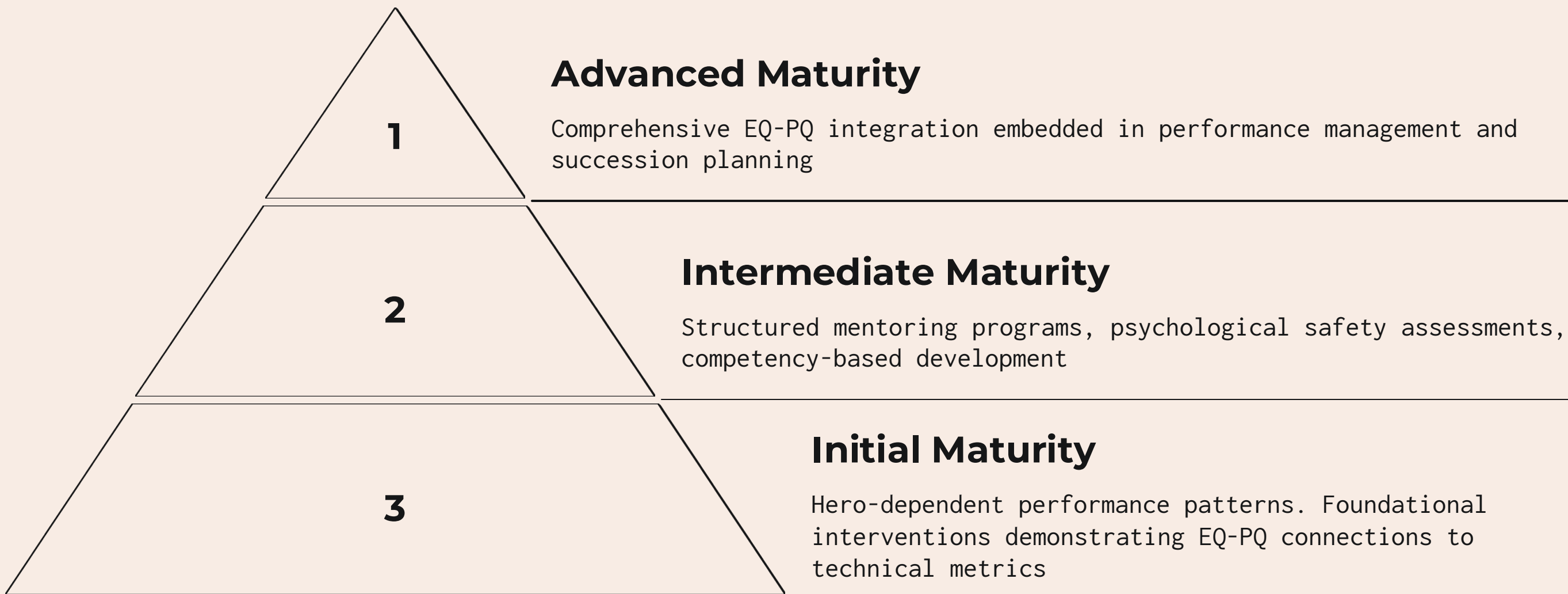
- Participation in EQ-PQ development programs
- Frequency of practice application
- Behavioural observation scores
- Early adoption metrics

Lagging Indicators

- Team performance metrics
- Employee experience outcomes
- Stakeholder satisfaction
- Business results

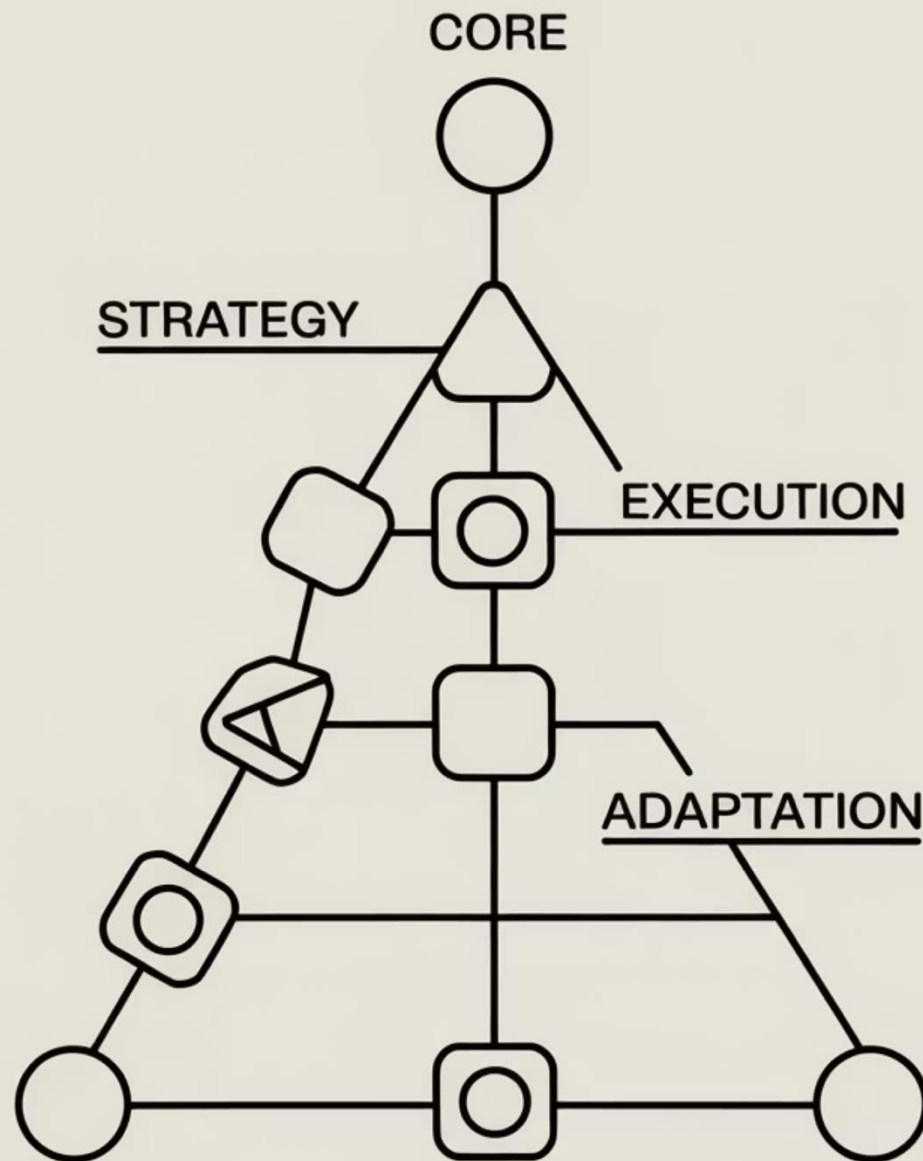


Cultural Transformation Strategies



Theoretical-to-practical translation methodology bridges evidence-based research with regulatory compliance and technical excellence demands.

Systems Change Application



Mental Models

Challenge beliefs equating leadership with technical expertise alone

Structures

Restructure teams to enhance psychological safety and collaboration

Processes

Integrate EQ-PQ assessment into project management methodologies

Relationships

Foster trust networks supporting technical excellence and human development

Alliance Building: Executive sponsors, frontline supervisors, individual contributors across all levels

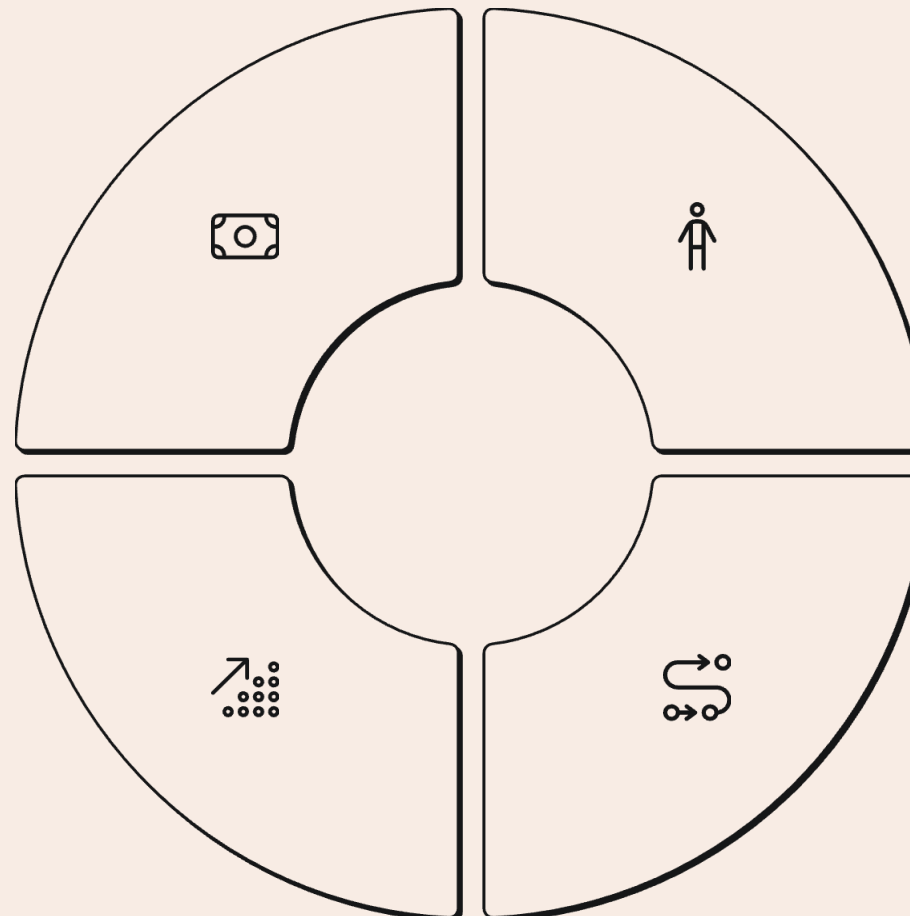
Metrics for Adoption: Balanced Scorecard Adaptation

Financial Perspective

- Project completion rates
- Regulatory submission success
- Cost per analysis
- Resource utilization efficiency

Learning & Growth

- EQ-PQ competency assessments
- Skill application observations
- Individual development progress
- Knowledge translation evaluation



Stakeholder Perspective

- Team engagement scores
- Cross-functional collaboration quality
- Psychological safety measures
- External stakeholder satisfaction

Internal Process

- Decision-making effectiveness
- Conflict resolution quality
- Knowledge transfer efficiency
- Innovation pipeline development

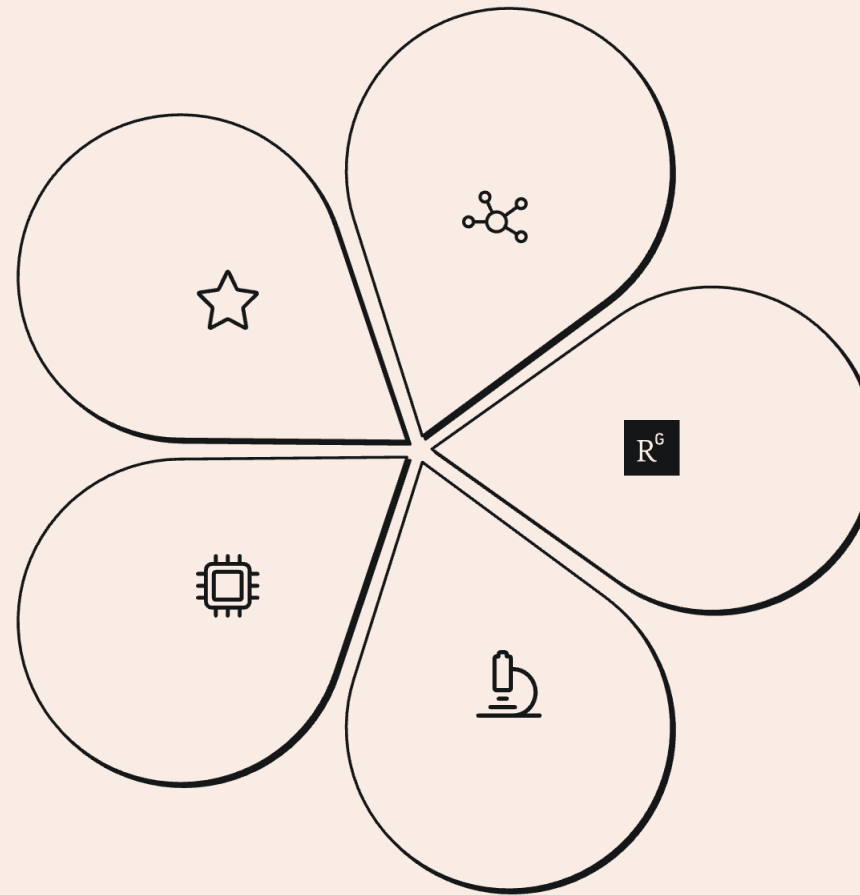
Future Directions in Human-Centric Leadership

Knowledge Co-Creation

Joint knowledge production through
partnerships across pharmaceutical
data science ecosystem

AI Impact

How emerging technologies affect human
dimensions of statistical programming
leadership



Cross-Organizational Learning

Structured exchange of experiences and
best practices among organizations

Research Gaps

Impact of EQ vs PQ interventions,
psychological safety role,
cultural differences

Mixed-Methods Research

Combining quantitative measurement
with qualitative exploration

Research Gaps & Future Investigations

☐ **EQ vs PQ Impact**

Understanding differential impact of EQ versus PQ interventions on specific technical performance outcomes

☐ **Psychological Safety Role**

Investigating relationship between leader competencies and team innovation metrics

☐ **Cultural Differences**

Exploring how global team cultural differences influence EQ-PQ leadership effectiveness

☐ **Sustainability Research**

Examining long-term sustainability of interventions in high-turnover technical environments

☐ **AI Impact**

Investigating how emerging technologies affect human dimensions of statistical programming leadership

Mixed-Methods Approach: Combining quantitative measurement precision with qualitative contextual richness to capture both behavioural indicators and underlying mechanisms



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