Effective Engineering Leadership

MYANMAR ENGINEERING SOCIETY

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- Introduction
- Definition
- Engineering Leadership vs Engineering Management
- Importance of Engineering Leadership
- Roadmap to Becoming Engineering Leader
- Challenges & Pitfalls in Engineering Leadership

Introduction

Become the kind of leader that people would follow voluntarily even if you had no title or position

— BRIAN TRACY

BRIAN TRACY
INTERNATIONAL

Engineering Leadership

- Most **sought-after qualities** in **modern tech world**
- Need more than **brilliant engineers** who solve **technical problems**

Engineering Leadership

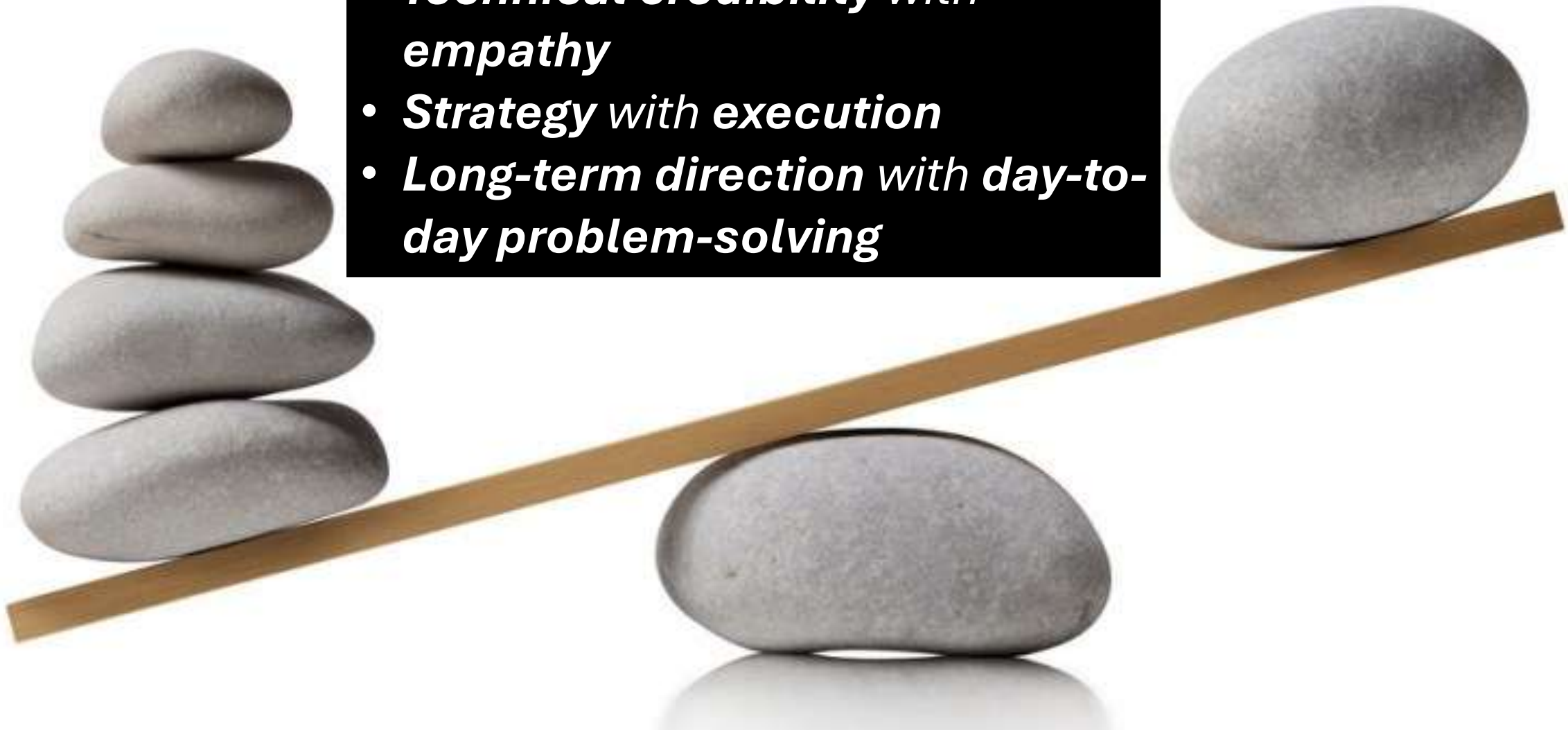
- Guide **teams**
- Align **engineering work** with **business priorities**
- Foster **innovation** in **uncertain environments**

Engineering Leadership

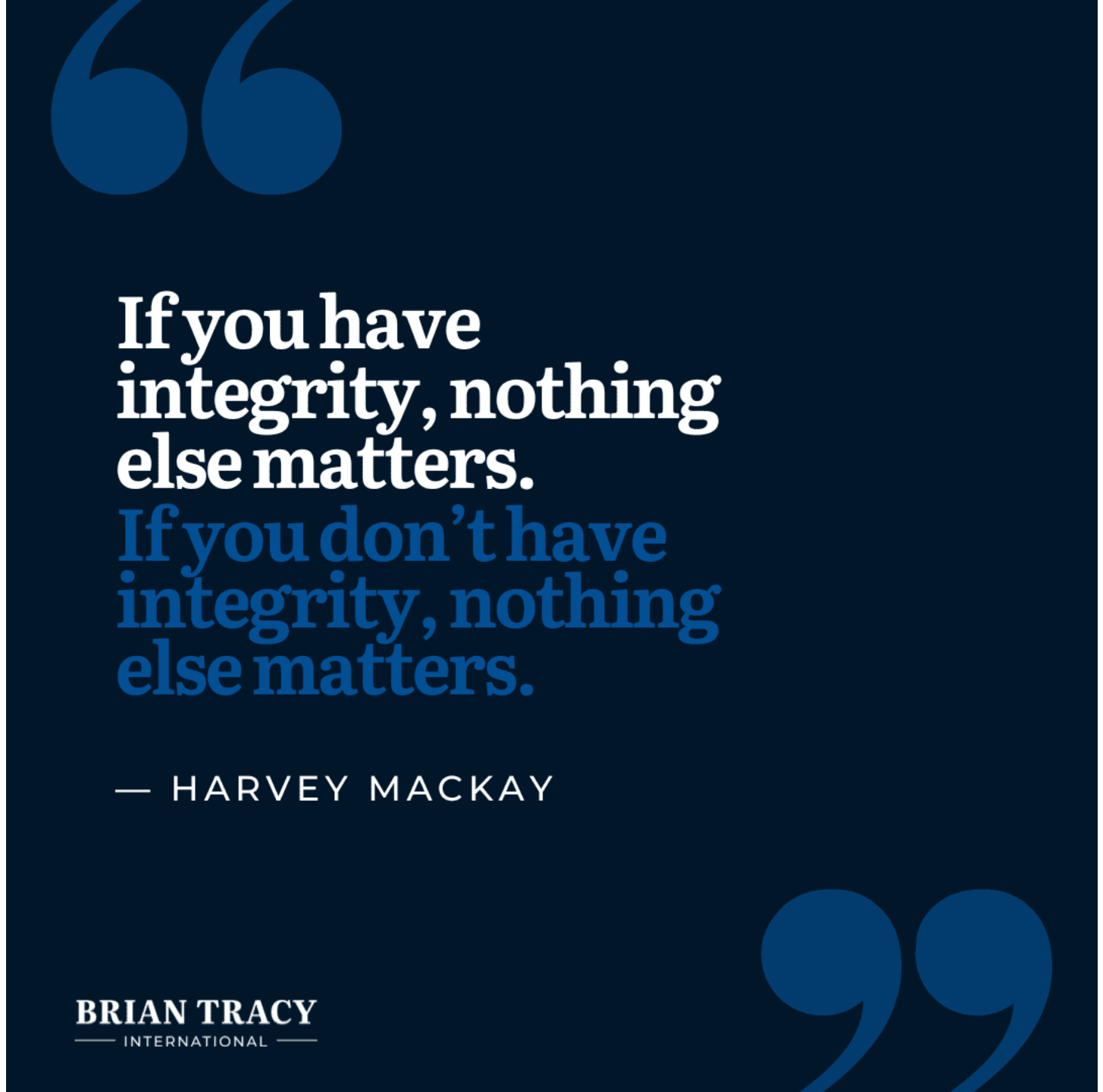
- Set **vision**
- **Inspire** people
- Create **environment** where engineers *do best work*

Engineering Leadership

- **Balance**
- ***Technical credibility*** *with* ***empathy***
- ***Strategy*** *with* ***execution***
- ***Long-term direction*** *with* ***day-to-day problem-solving***



Definition


If you have integrity, nothing else matters.
If you don't have integrity, nothing else matters.
— HARVEY MACKAY
BRIAN TRACY
INTERNATIONAL

Engineering Leadership

- **Combine:**
- ***Technical expertise***
- ***People skills***
- ***Strategic thinking***
- Drive **meaningful outcomes**

Engineering Leadership

- *Understand* **technology** deeply enough to earn **trust** of **engineers**
- **Communicate** effectively with **stakeholders** without **technical background**
- **Bridge gap** between **organizational goals** and **day-to-day technical execution**

Technical Authority

- *Ask **right questions***
- *Spot **risks***
- *Guide **technical decisions***

- Build **trust**
- **Mentor**
- Foster **collaboration**
- Create **psychological safety**

People Leadership

The Four Stages of Psychological Safety

1. Inclusion Safety

Employees feel safe valued, treated fairly, and believe their experiences and thoughts matter.

2. Learner Safety

Employees feel safe to learn and grow. They ask questions, and give and receive feedback.

4. Challenger Safety

Employees feel safe to challenge the status quo and see positive change opportunities.

3. Contributor Safety

Employees feel safe contributing their ideas. They feel they can use talents and abilities to make a difference.

- **Business goals** and **engineering efforts**
- Solve **right problems** in **right way**

ADAPTABILITY
Adjust style to fit environment

Foundations of Engineering Leadership

Technical Authority

Leaders must possess technical acumen to guide decisions and identify risks.

People Leadership

Building trust and fostering collaboration are essential for team success.

Strategic Alignment

Ensuring engineering efforts align with business goals is crucial.

Adaptability

Adjusting leadership style to fit different team sizes and contexts.

Engineering Leadership

- Improve **technical breadth**
- Strengthen **soft skills**
- Think **strategically**

Engineering Leadership vs Engineering Management

Real integrity is doing the right thing, knowing that nobody's going to know whether you did it or not.
OPRAH WINFREY
BRIAN TRACY
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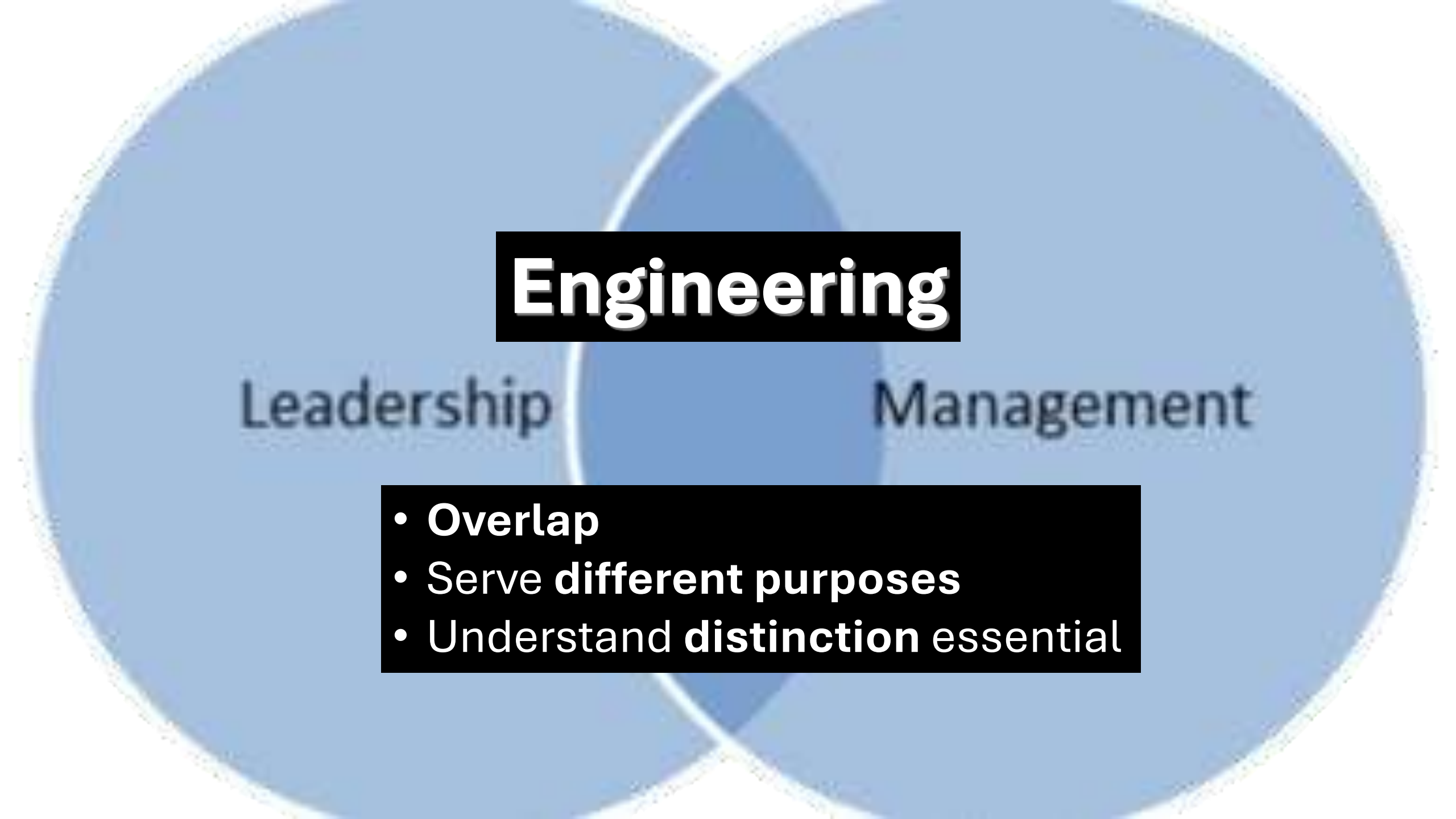

Engineering
Leadership
Management
• Overlap
• Serve different purposes
• Understand distinction essential

Vision and **influence**
Set **“why”** and **“what”**

Engineering Leadership

• **Inspire** people to **grow**, take **ownership**, and deliver **impactful work**
• **Bridge** between **execution** and **organizational strategy**
Engineering Leadership

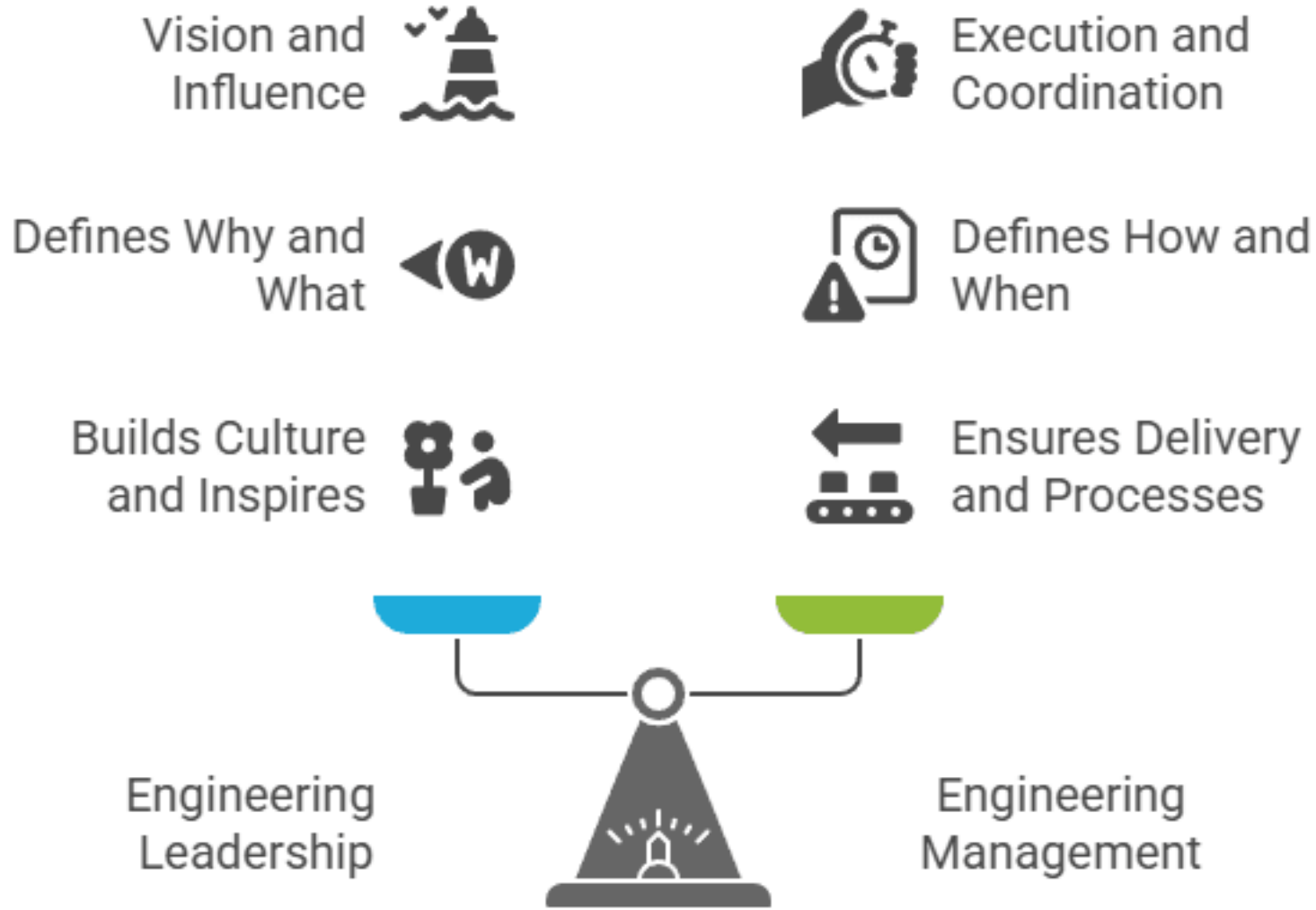
Engineering Leadership

- Don’t just **manage tasks**
- Shape **direction** and **outcomes**

- *Are we working on the **right problems**?*
- *How do we **motivate** and **empower**?*
- *How do we turn **business goals** into **engineering solutions**?*

Engineering

- **Execution-focused**
- **Ensure:**
- *Projects* ***scoped, scheduled****, and* ***delivered***
- ***Processes*** *and* ***workflows*** *run smoothly*
- ***Time, budget****, and* ***people*** *allocated effectively*
- ***Performance*** *tracked and reported*


Vision and Influence
Execution and Coordination
Defines Why and What
Defines How and When
Builds Culture and Inspires
Ensures Delivery and Processes
Engineering Leadership
Engineering Management

Importance of Engineering Leadership

The greatest leader is not
necessarily the one who does
the greatest things.
He is the one that gets the
people to do the greatest things.
RONALD REAGAN
BRIAN TRACY
INTERNATIONAL

Three Dimensions of Effective Leadership

Technical Skills

Deep expertise in technology

Business Skills

Strategic financial and market insight

People Skills

Inspiring and unifying teams

- Understand **technology** deeply
- Connect **expertise** to **bigger challenges**
- Move across **disciplines**

TECHNICAL SKILLS

- **Adapt** quickly
- **Collaborate** with other departments
- Apply **knowledge** to guide **right decisions**

- **Engineering decisions** never made in **vacuum**
- Understand **financial** and **strategic impact**
- **Profit and loss/ROI**

- **Assess** value added by **engineering initiatives**
- Maximize **returns on projects**
- Build **great technology**
- Drive **business forward**

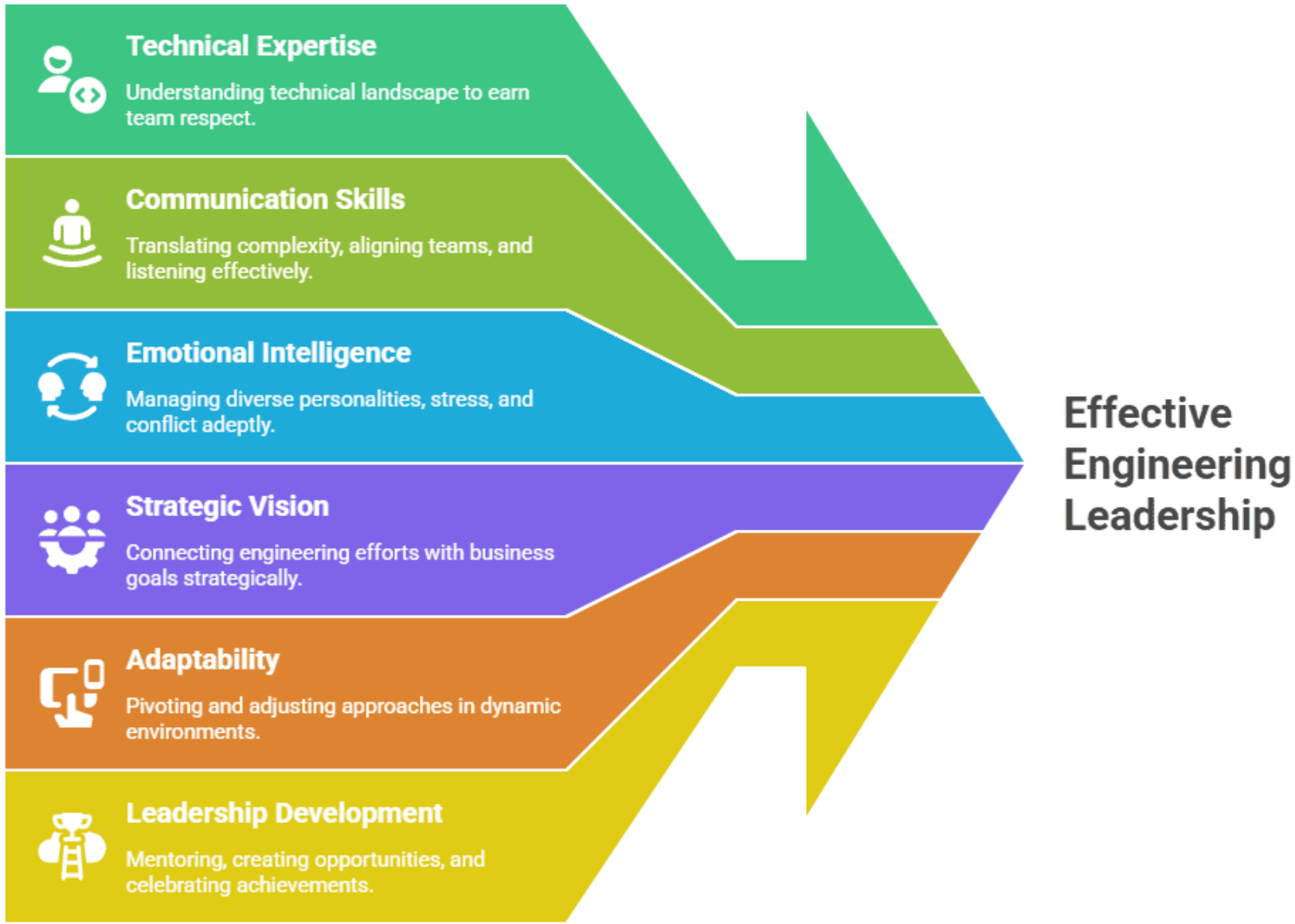
• **Lead** people
• Inspire **growth**
• Manage **differences**
• **Diverse voices** thrive
People Skills

- **Balance**
- ***Technical*** *credibility*
- *Business acumen*
- *People-first thinking*

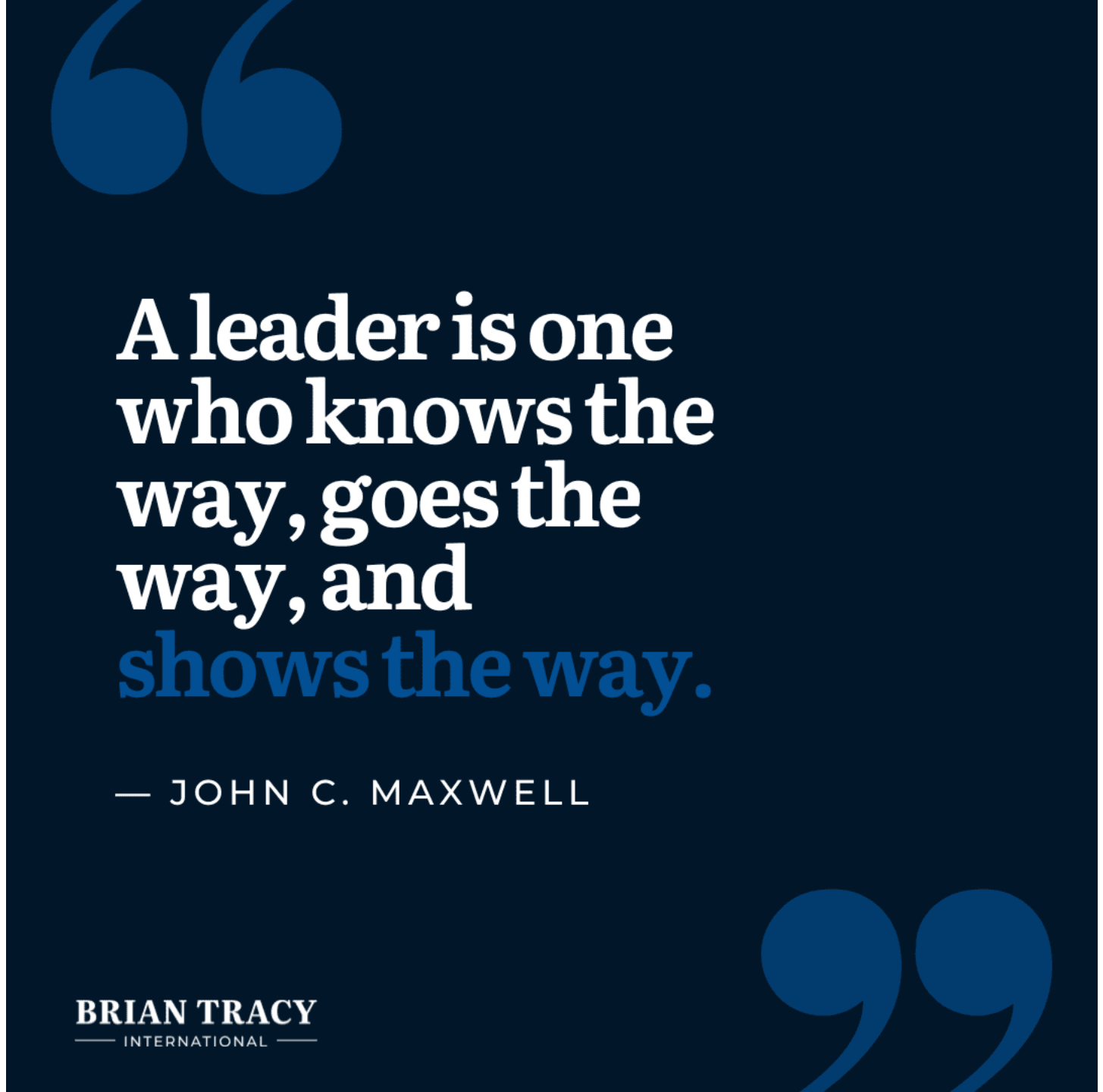
True Engineering Leadership

• Build **resilient innovative** teams
• **Adapt, grow**, and **stay competitive**
True Engineering Leadership

- Earn **respect** of teams
- Spot **risks** and evaluate **trade-offs**
- Ask **right questions** during **decision-making**
- **“Get it”** at **technical level**


Technical Expertise
Understanding technical landscape to earn team respect.
Communication Skills
Translating complexity, aligning teams, and listening effectively.
Emotional Intelligence
Managing diverse personalities, stress, and conflict adeptly.
Strategic Vision
Connecting engineering efforts with business goals strategically.
Adaptability
Pivoting and adjusting approaches in dynamic environments.
Leadership Development
Mentoring, creating opportunities, and celebrating achievements.
Effective Engineering Leadership

Roadmap to Becoming Engineering Leader


A leader is one who knows the way, goes the way, and shows the way.
— JOHN C. MAXWELL
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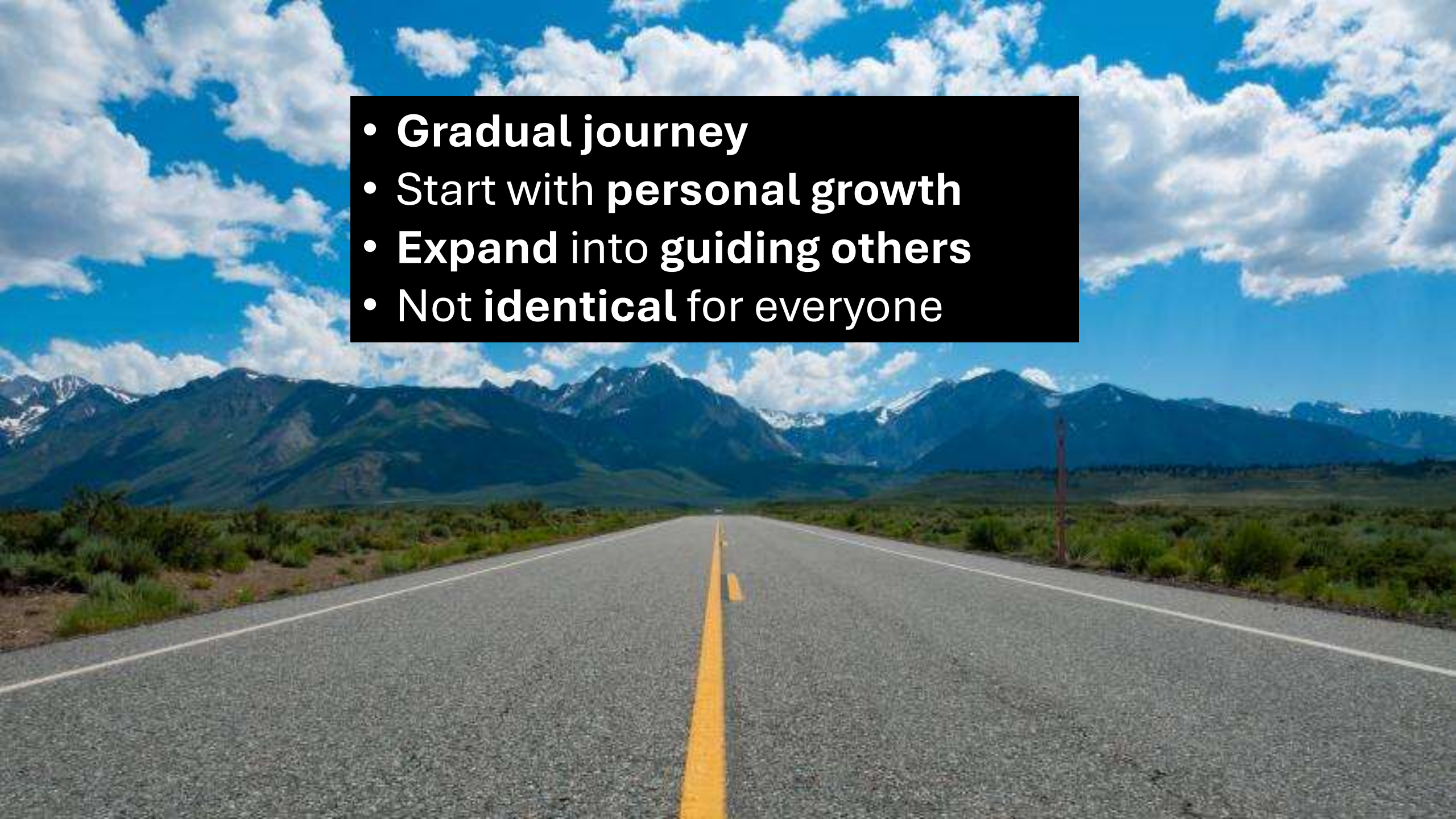

• **Gradual journey**
• Start with **personal growth**
• **Expand** into **guiding others**
• Not **identical** for everyone

Self Leadership
• Learn to **lead yourself**
• Build **discipline**
• Take **ownership**
• Develop **self-awareness**

- Consistently deliver **high-quality work**
- **Communicate** effectively
- **Informal leaders**

- Influence **decisions** without **formal authority**
- **Communicate** clearly with both **technical** and **non-technical audiences**
- **Think strategically** about **long-term goals**
- Not just **immediate tasks**

Seek Mentorship

- **Strong leaders** rarely grow in **isolation**
- **Mentorship** - ***formal*** *or* ***informal*** **–** shape **leadership style**

03
Affiliative
04
Democratic
02
Visionary
Which Leadership Style Are You?
05
Pace - Setting
01
Autocratic
06
Coaching

Seek Mentorship

- **Strong leaders** rarely grow in **isolation**
- **Mentorship** - ***formal*** *or* ***informal*** **–** shape **leadership style**
- See **blind spots**

FEEDBACK
• See **blind spots**
• Avoid **common pitfalls**
• Accelerate **growth**

- Move from **informal leadership**
- **New challenges**

Formal Leadership Roles

- Move from **individual contributor** to **tech lead**
- **Shift** from **“my work”** to **“our work”**
- Balance **people management, delivery**, and **technical guidance**
- Let go of day-to-day **technical details**
- Focus on **organizational strategy** and **culture**

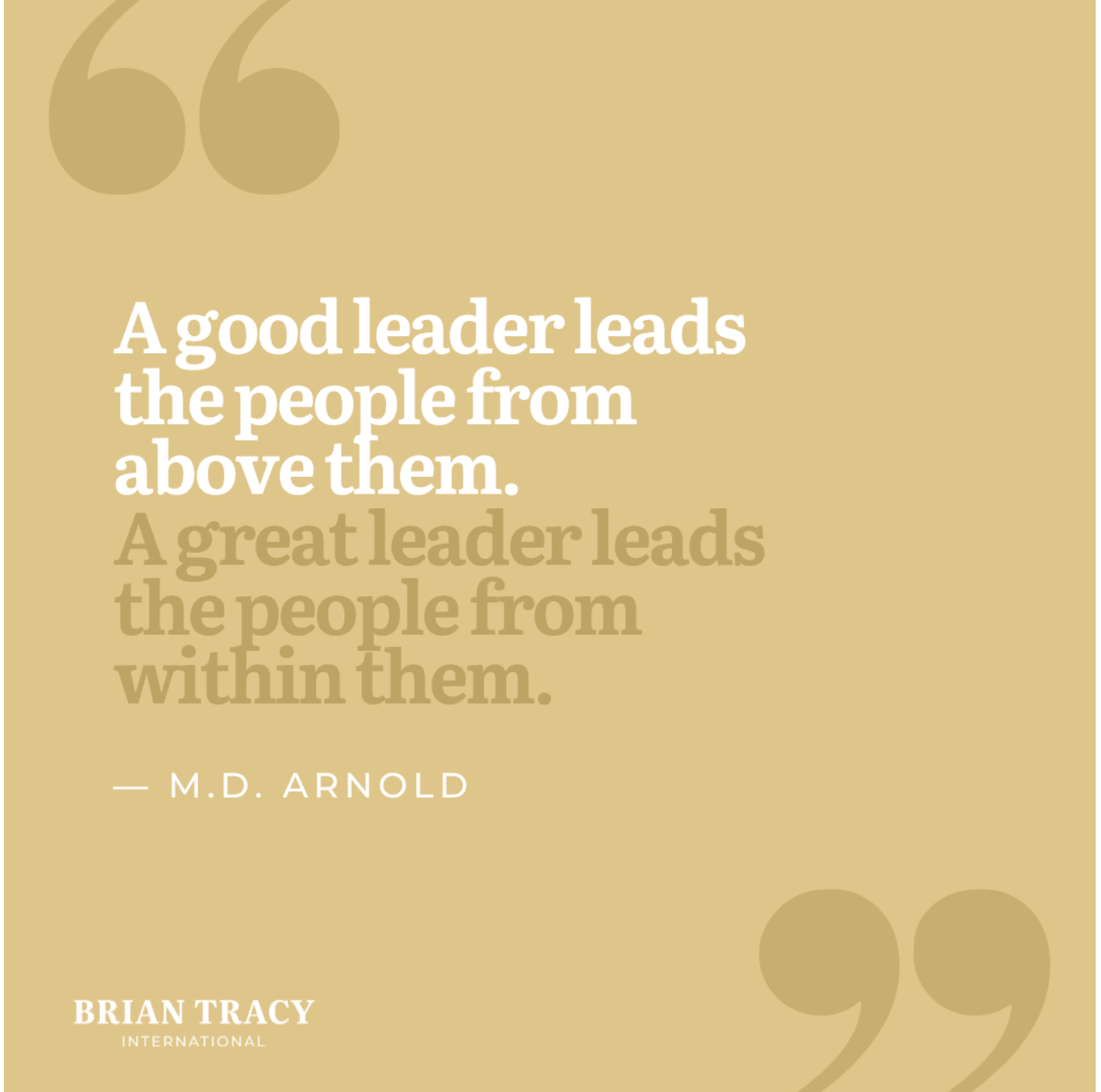
Commit to Continuous Learning

- **Leadership practices** evolve quickly
- Stay on top of **new tools**
- Learn about **organizational psychology**
- Study **different leadership styles**
- Best leaders treat learning as **lifelong process**

Path to Engineering Leadership

- *Start with* **self-leadership**
- *Expand through* **skill-building** and **mentorship**
- Grow into **formal roles**
- *Need* **adaptability, vision**, and **continuous learning**

Challenges & Pitfalls in Engineering Leadership


A good leader leads the people from above them.
A great leader leads the people from within them.
— M.D. ARNOLD
BRIAN TRACY
INTERNATIONAL

Balance Technical and Managerial Work

- Let go of **‘hands-on’** technical work
- Shift **focus**
- Find **right balance**
- **Technically** credible

Balance Technical and Managerial Work

- Give enough time to **people, strategy**, and **delivery**
- Risk **micromanaging** or **losing touch** with team’s work

Distributed Teams

- Build **inclusive, flexible systems** for **collaboration**
- Mindful of **cultural differences**
- **Over-communicate**
- Maintain **connection**

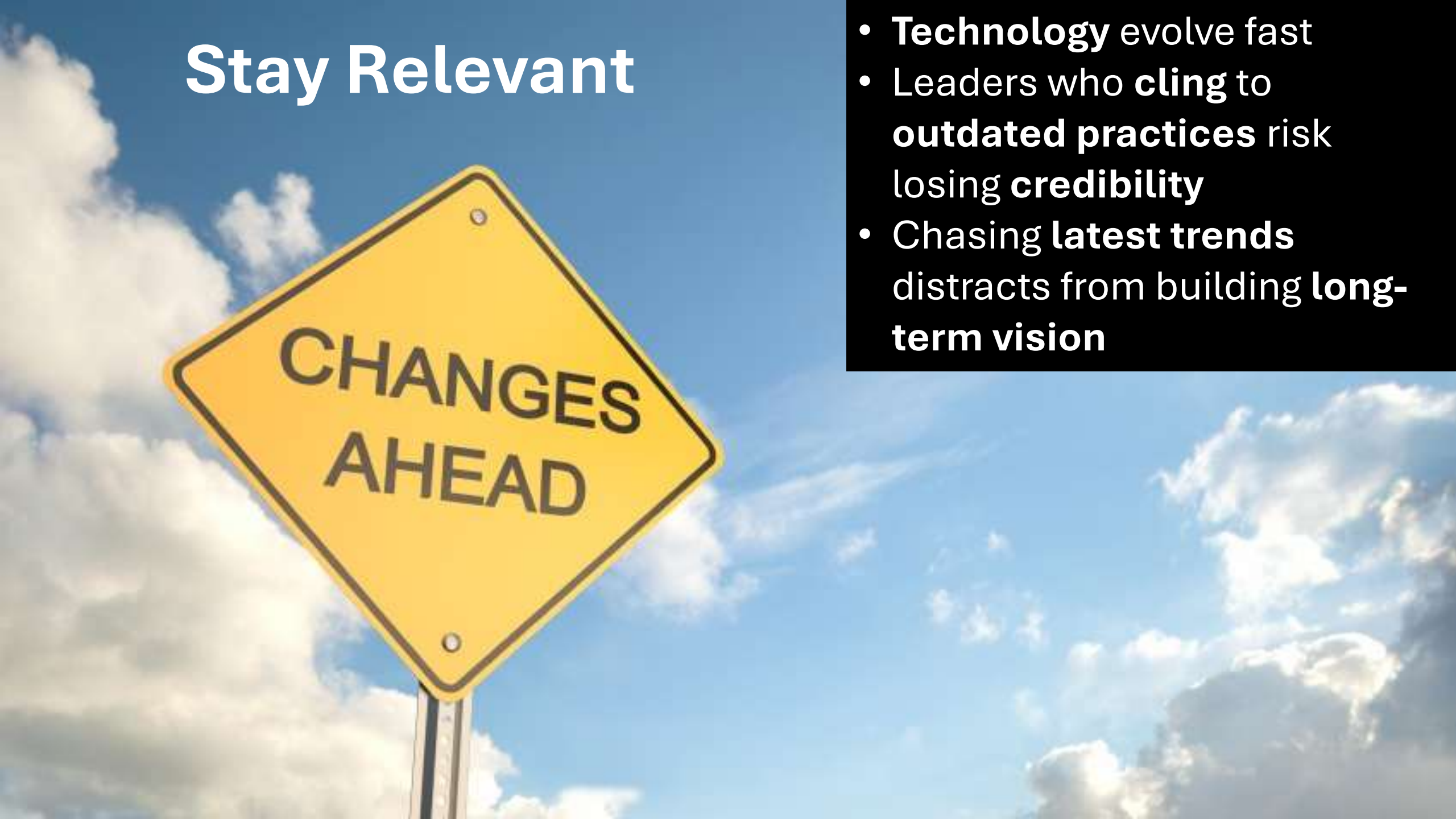
Avoid Micromanagement

- **Trust** core of **effective leadership**
- Leaders feel **pressure** to **control every detail**
- Undermine **morale**
- **Slow** teams down

Avoid Micromanagement

- Set **clear goals**
- Give **context**
- **Empower** engineers to figure out **“how”**
- **Leading Distributed and Hybrid Teams**

Stay Relevant



- **Technology** evolve fast
- Leaders who **cling** to **outdated practices** risk losing **credibility**
- Chasing **latest trends** distracts from building **long-term vision**

• **Balance**
• ***Stay informed*** *to guide* ***smart decisions***
• *Focus on timeless* ***leadership principles***
CHANGES AHEAD

- Key driver of **innovation**
- Don’t happen **automatically**
- Create **inclusive cultures**
- **All engineers** valued and supported

Build and Sustain Diversity

Lack of Diversity

- Risk **high turnover**
- Among **underrepresented groups**
- **Miss out** on benefits of **diverse perspectives**

Navigate Conflicting

- **Intersection** of **technology, business**, and **people**
- Pulled in **different directions**

- Lead to **burnout**
- **Push back** when necessary
- **Prioritize**

ACTION PRIORITY MATRIX

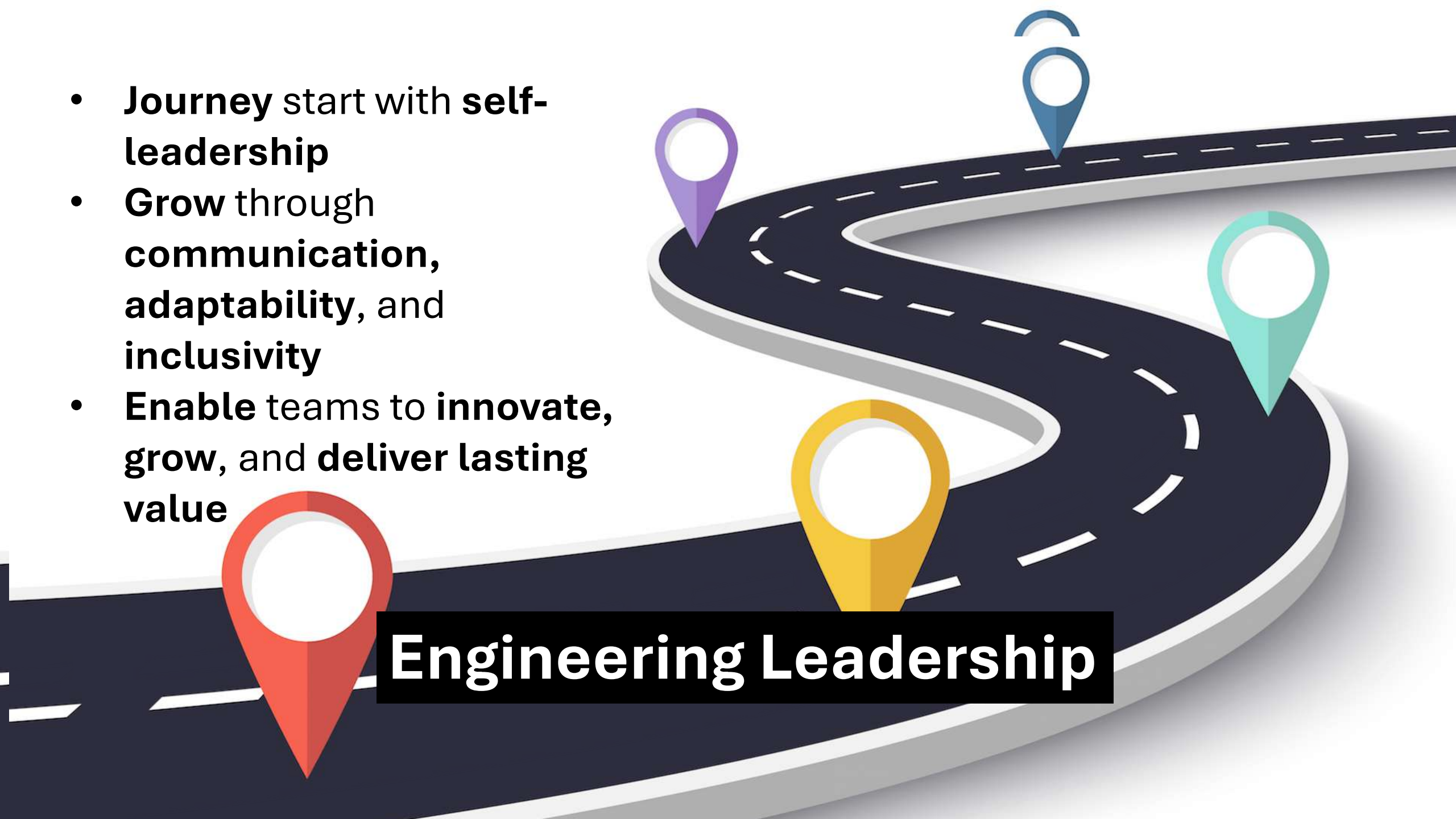
Conclusion

Lead and inspire people.
Don't try to manage and
manipulate people.
Inventories can be managed
but people must be led.
ROSS PEROT
BRIAN TRACY
INTERNATIONAL

- Transform **technical work** into **real impact**
- Beyond **managing projects**
- Set **vision**
- **Empower** people
- **Align** *engineering* with *business goals*

Engineering Leadership

- **Journey** start with **self-leadership**
- **Grow** through **communication, adaptability**, and **inclusivity**
- **Enable** teams to **innovate, grow**, and **deliver lasting value**



Engineering Leadership

• Guide **teams**
• Shape **technical direction**
• Deliver **at scale**
Step Into Engineering Leadership With Confidence

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Real leadership is leaders recognizing that they serve the people that they lead.
PETE HOEKSTRA
BRIAN TRACY
INTERNATIONAL

Thank you