

LEADERSHIP FOR INNOVATORS

INTRODUCTION INTO THE COURSE

September 29, 2021

Skoltech

Professor Maxim Kiselev, CEI





Why Leadership? And Why for Innovators?

Leadership Development Ladder

What Today's Leaders Do

Leadership and Values: Ethical Leadership

What Kind of a Leader You May Be



Skoltech Learning Outcomes

1. DISCIPLINARY KNOWLEDGE AND REASONING

UNESCO PILLAR: LEARNING TO KNOW

- 1.1 KNOWLEDGE OF MATHEMATICS AND SCIENCES
- 1.2 KNOWLEDGE OF APPLIED SCIENCE AND ENGINEERING SCIENCE
- 1.3 KNOWLEDGE OF INNOVATION AND ENTREPRENEURSHIP
- 1.4 INTERDISCIPLINARY THINKING, KNOWLEDGE STRUCTURE AND INTEGRATION
- 1.5 KNOWLEDGE AND USE OF CONTEMPORARY METHODS AND TOOLS

2. PERSONAL ATTRIBUTES – THINKING, BELIEFS AND VALUES

UNESCO PILLAR: LEARNING TO BE

2.1 COGNITION AND MODES OF REASONING

- Analytical reasoning and problem solving
- System thinking
- Creative thinking
- Decision making (with ambiguity, urgency etc)
- Critical thinking and meta-cognition

2.2 ATTITUDES AND LEARNING

- Initiative and the willingness to take appropriate risks
- Willingness to make decisions in the face of uncertainty
- Responsibility, intensity, perseverance, urgency and will to deliver
- Resourcefulness, flexibility and an ability to adapt
- Self-awareness and a commitment to self-improvement, lifelong learning and educating

2.3 ETHICS, EQUITY AND OTHER RESPONSIBILITIES

- Ethical action, integrity and courage
- Social responsibility
- Equity and diversity
- Trust and loyalty
- Proactive vision and intention in life

3. RELATING TO OTHERS – COMMUNICATION AND COLLABORATION

UNESCO PILLAR: LEARNING TO WORK WITH OTHERS

3.1 COMMUNICATIONS

- Communications strategy and structure
- Written, electronic and graphical communication
- Oral presentation and discussion
- Inquiry, listening and dialogue

3.2 COMMUNICATIONS IN INTERNATIONAL ENVIRONMENTS

- Communications in English in scientific, business and social settings
- Effective interaction in different cultural and international settings

3.3 TEAMWORK

- Forming effective teams
- Team operations and project management
- Team coordination, decision-making and leadership
- Team growth and evolution
- Technical and multidisciplinary teaming

3.4 COLLABORATION AND CHANGE

- Establishing diverse connections and networking
- Appreciating different roles, perspectives and interests
- Negotiation and conflict resolution
- Advocacy
- Bringing about intentional change

4. LEADING THE INNOVATION PROCESS

UNESCO PILLAR: LEARNING TO DO

4.1 MAKING SENSE OF GLOBAL SOCIETAL, ENVIRONMENTAL AND BUSINESS CONTEXT

- Appreciating the potential and limitations of science and technology, their role in society and society's role in their evolution
- Taking responsibility for sustainable development, including social, economic, environmental and work environment aspects
- Understanding the technical products, systems and infrastructure of the sector
- Understanding the enterprise – culture, stakeholders, strategy and goals
- Understanding the business context – markets, policy and ecosystem of the sector

4.2 VISIONING – INVENTING NEW TECHNOLOGIES THROUGH RESEARCH

- The research process – hypothesis, evidence and defense
- Basic research leading to new scientific discovery
- Research aimed at developing new technologies
- Imagining utility of new science and technology
- Developing concepts and reducing to practice

4.3 VISIONING – CONCEIVING AND DESIGNING SUSTAINABLE SYSTEMS

- Identifying stakeholders need and wants
- Identifying and formulating objectives and goals
- Conceiving and architecting products and services around new technologies and identifying their impact
- Disciplinary and multidisciplinary design for sustainability, safety, aesthetics, operability and other objectives
- Understanding the technical context and ecosystem of the product or service
- Design process management, including planning, project judgment and effective decision-making

4.4 DELIVERING ON THE VISION – IMPLEMENTING AND OPERATING

- Designing and optimizing sustainable and safe implementation and operations
- Manufacturing and supply chain operations
- Supporting the system life cycle including evolution and disposal
- Implementation and operations management

4.5 DELIVERING ON THE VISION – ENTREPRENEURSHIP AND ENTERPRISE

- New venture conceptualization and creation
- Financing product development and new ventures
- Building and leading an organization and extended organization
- Initiating engineering and development processes
- Selling, marketing and distributing products and services
- Understanding the value chain – the innovation system, networks and infrastructure
- Managing intellectual property and respecting the legal process

2. PERSONAL ATTRIBUTES – THINKING, BELIEFS AND VALUES

UNESCO PILLAR: LEARNING TO BE

2.1 COGNITION AND MODES OF REASONING

- Analytical reasoning and problem solving
- System thinking
- Creative thinking
- Decision making (with ambiguity, urgency etc)
- Critical thinking and meta-cognition

2.2 ATTITUDES AND LEARNING

- Initiative and the willingness to take appropriate risks
- Willingness to make decisions in the face of uncertainty
- Responsibility, intensity, perseverance, urgency and will to deliver
- Resourcefulness, flexibility and an ability to adapt
- Self-awareness and a commitment to self-improvement, lifelong learning and educating

2.3 ETHICS, EQUITY AND OTHER RESPONSIBILITIES

- Ethical action, integrity and courage
- Social responsibility
- Equity and diversity
- Trust and loyalty
- Proactive vision and intention in life

3. RELATING TO OTHERS – COMMUNICATION AND COLLABORATION

UNESCO PILLAR: LEARNING TO WORK WITH OTHERS

3.1 COMMUNICATIONS

- Communications strategy and structure
- Written, electronic and graphical communication
- Oral presentation and discussion
- Inquiry, listening and dialogue

3.2 COMMUNICATIONS IN INTERNATIONAL ENVIRONMENTS

- Communications in English in scientific, business and social settings
- Effective interaction in different cultural and international settings

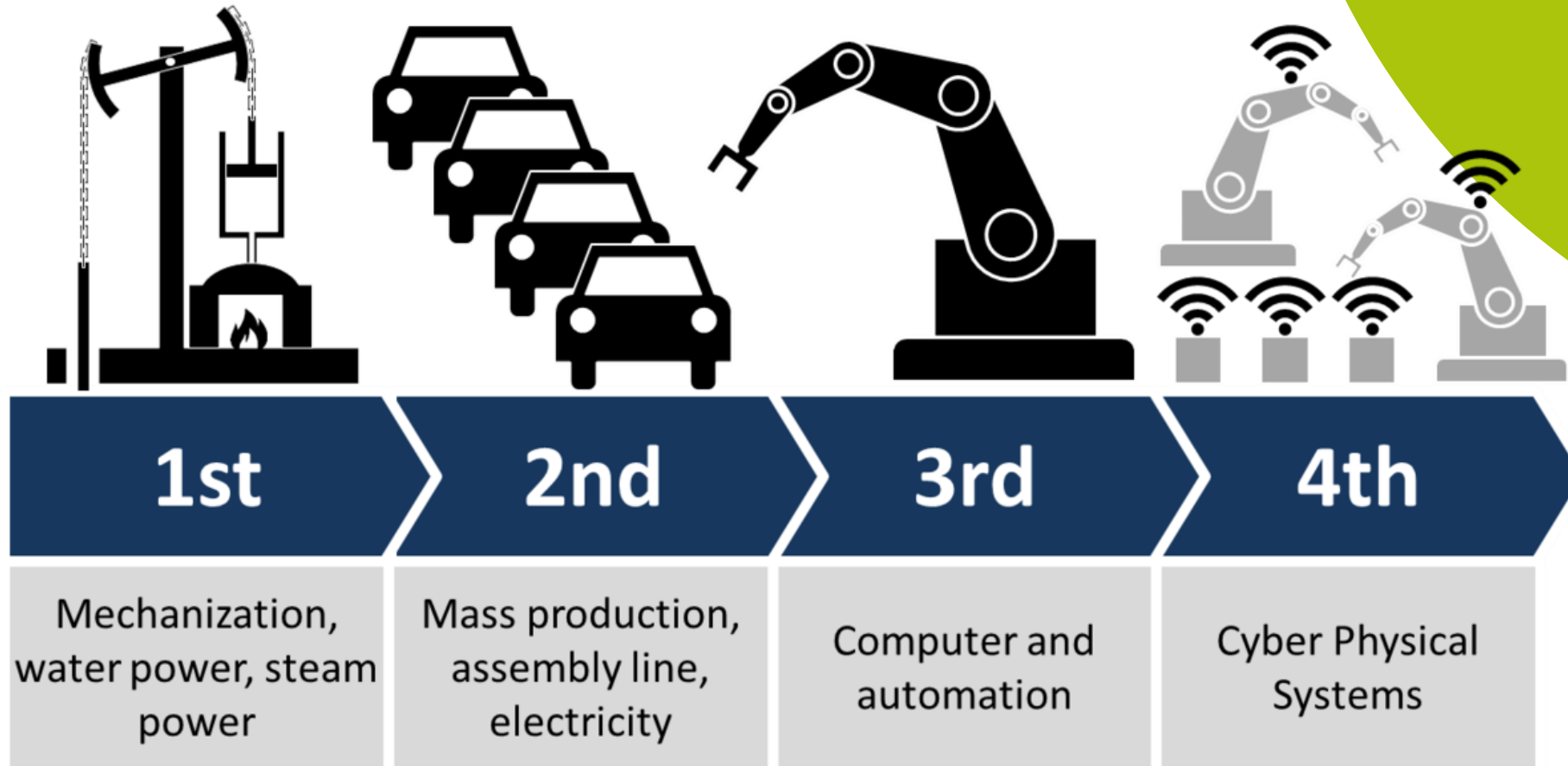
3.3 TEAMWORK

- Forming effective teams
- Team operations and project management
- Team coordination, decision-making and leadership
- Team growth and evolution
- Technical and multidisciplinary teaming

3.4 COLLABORATION AND CHANGE

- Establishing diverse connections and networking
- Appreciating different roles, perspectives and interests
- Negotiation and conflict resolution
- Advocacy
- Bringing about intentional change

Why Leadership? The Context



FROM CLOSE PAST TO THE FUTURE

IN THE LAST 100 YEARS

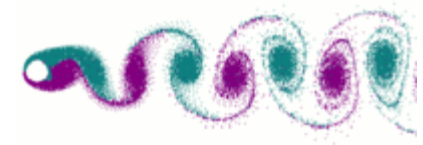
LIFE EXPECTANCY - 250%

PER CAPITA INCOME – 300%

LITERACY - from 12% to 88%



ERA OF TURBULENCE

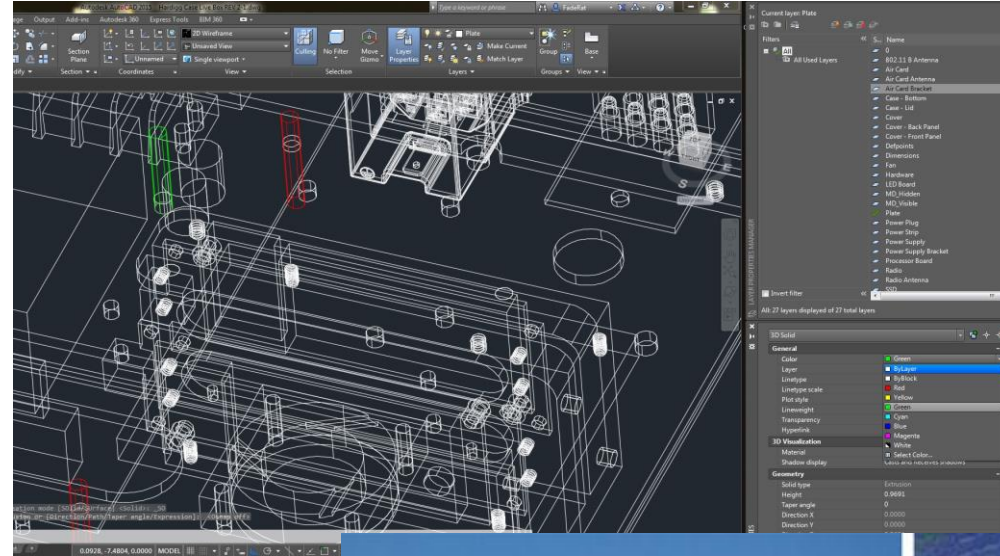


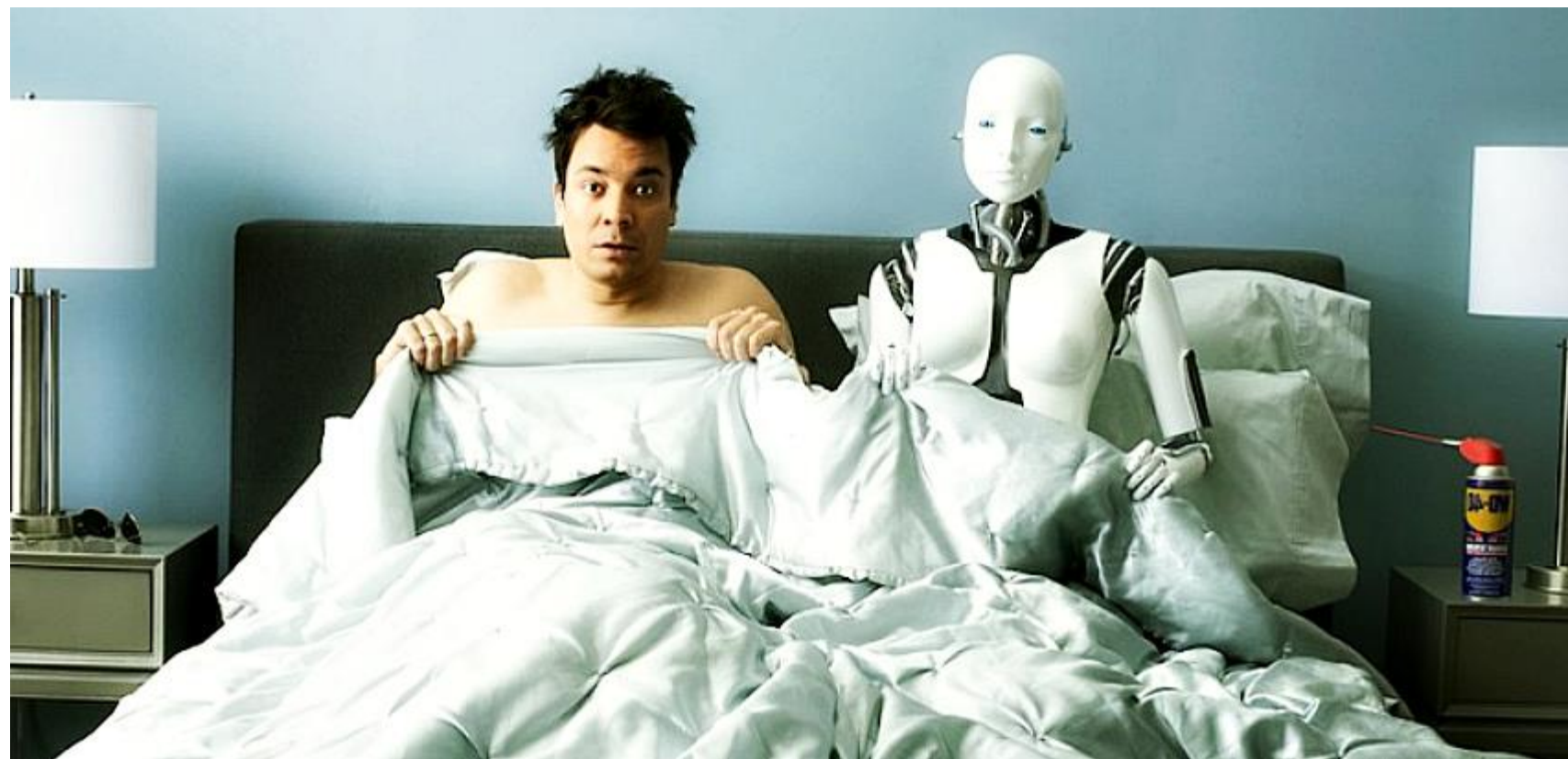
DIGITALIZATION



AUTOMATIZATION





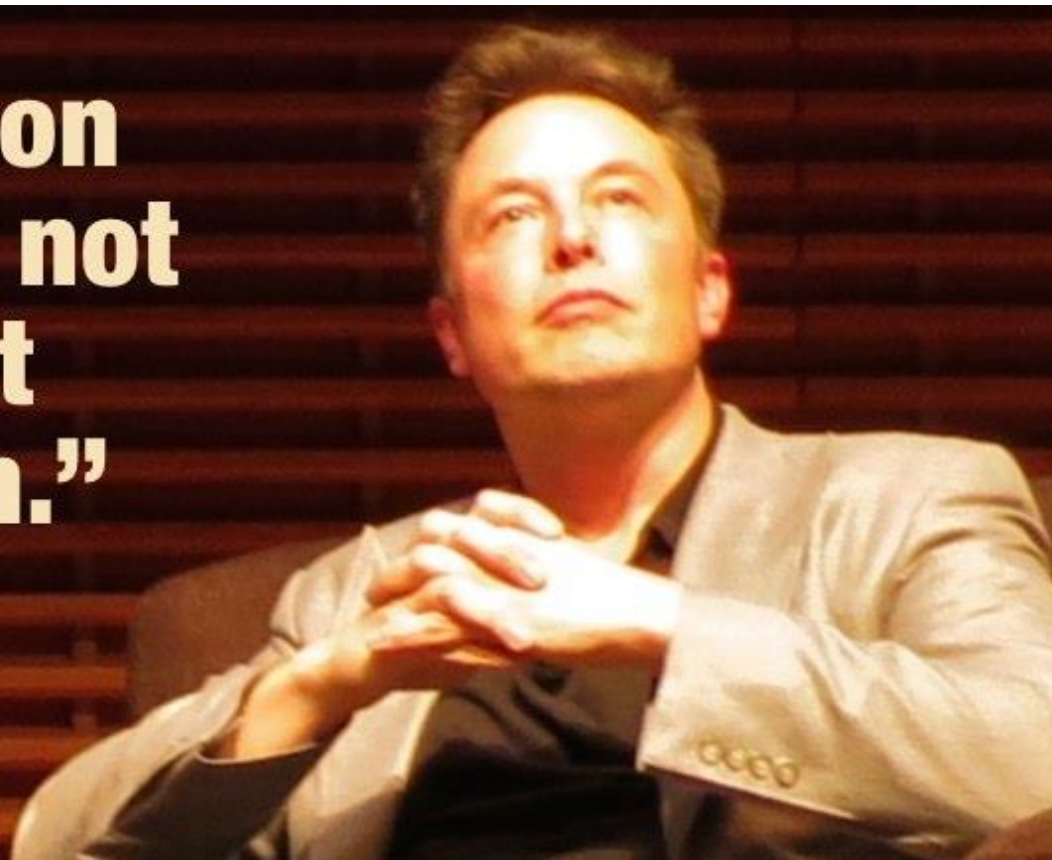


CAN TRADITIONAL LEADERSHIP SURVIVE?

“Failure is an option here. If things are not failing, you are not innovating enough.”

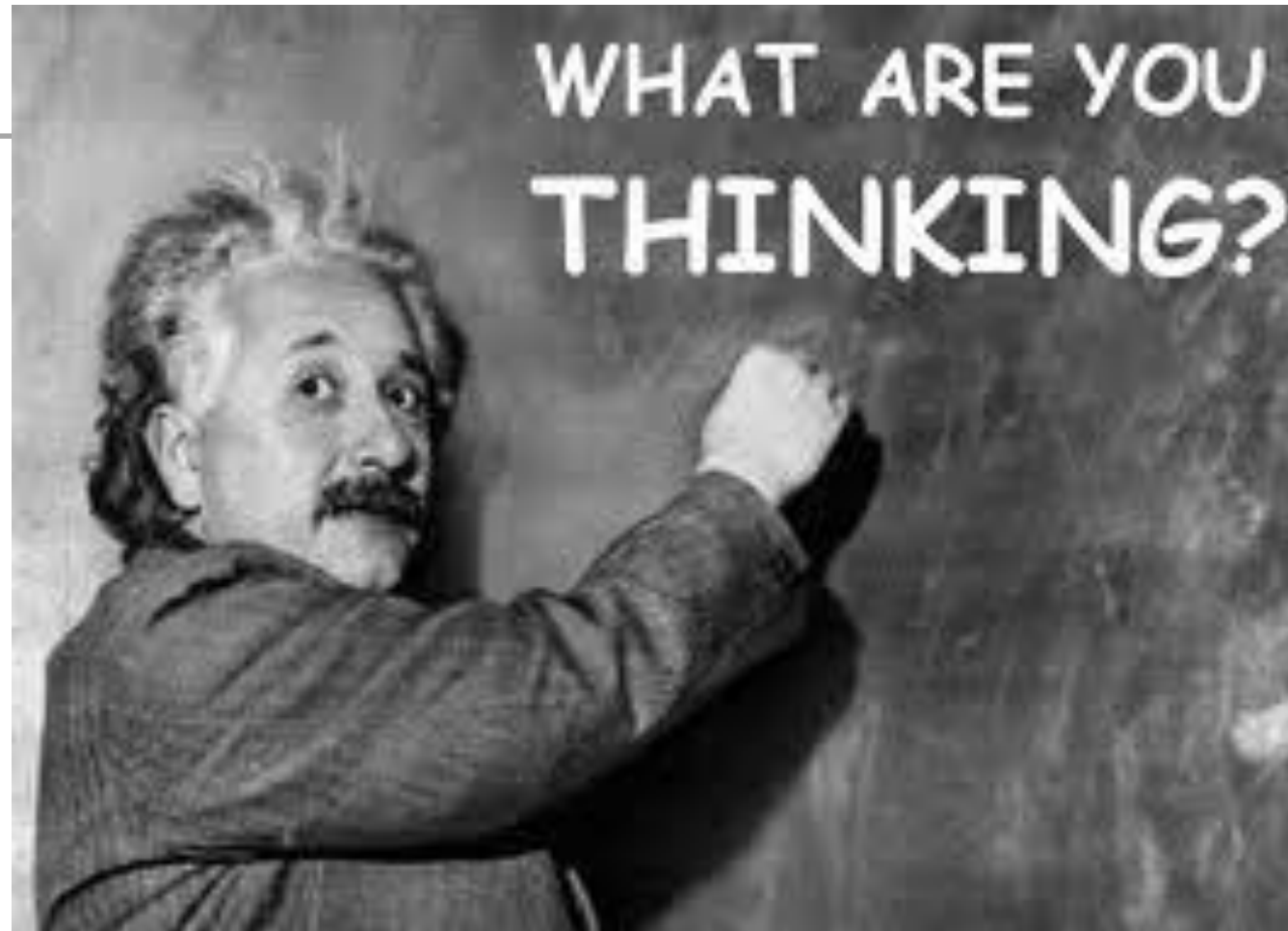
— Elon Musk

by justadandak.com

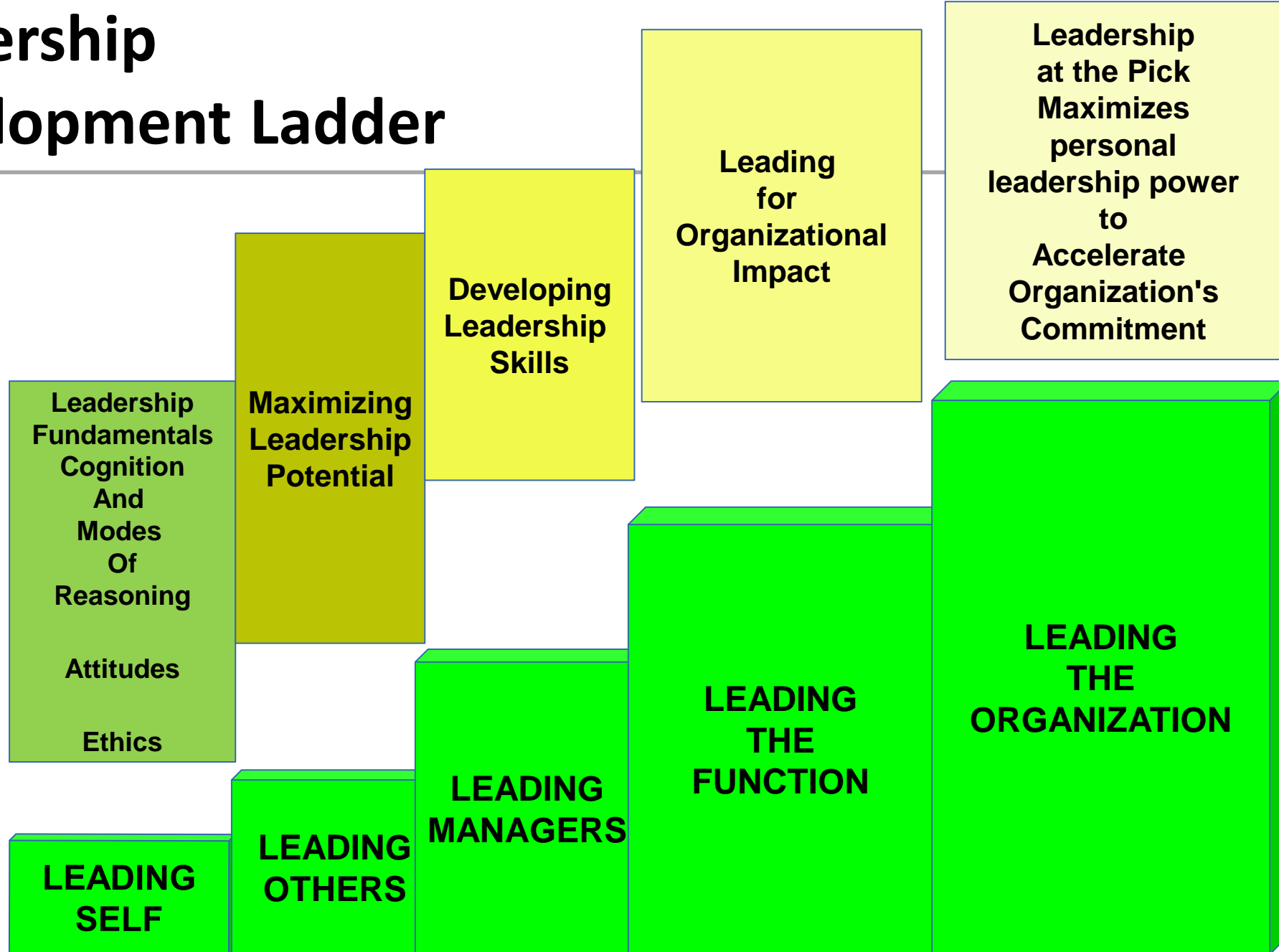


**Are you a leader?
How do you know?**

And Who Is One?



Leadership Development Ladder



OUR COURSE COMPOSITION

Leading Yourself:

- **Self-Awareness**
- **EQ**
- **Stress-Management**

Leading Others:

- **Team and Teamwork**
- **Collaboration**
- **Agile Leadership**

WHO IS A GOOD LEADER?

Get into Groups of 5.

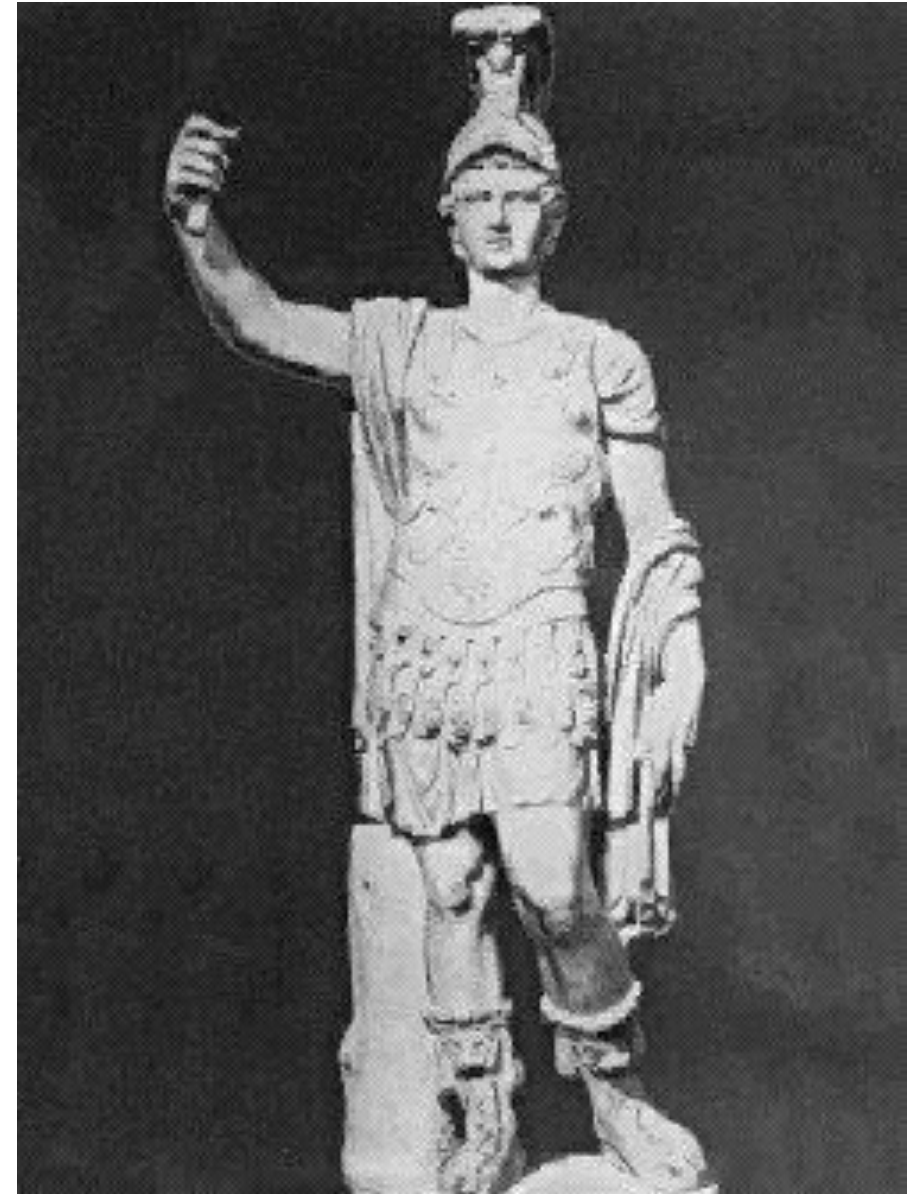
**Think of the Best Leaders You Know. What Makes Them Best?
Discuss.**

**Choose One per Group. Describe the Behavioral Traits of Your
Chosen Leader.**

15 minutes.

Who is a Successful Leader?

- Alexander the Great



Who is a Successful Leader?

- Napoleon I

“A leader is a dealer in hope.”



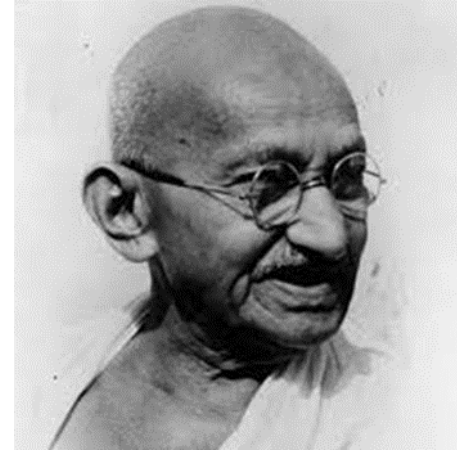
Who is a Successful Leader?

- John F. Kennedy

“Leadership and learning are indispensable to each other.”



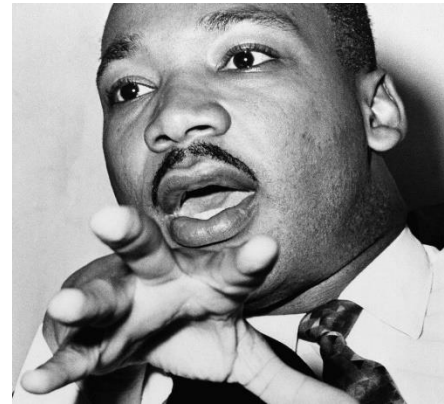
- M. Ghandi: *“...we must be the change we wish to see in the world.”*



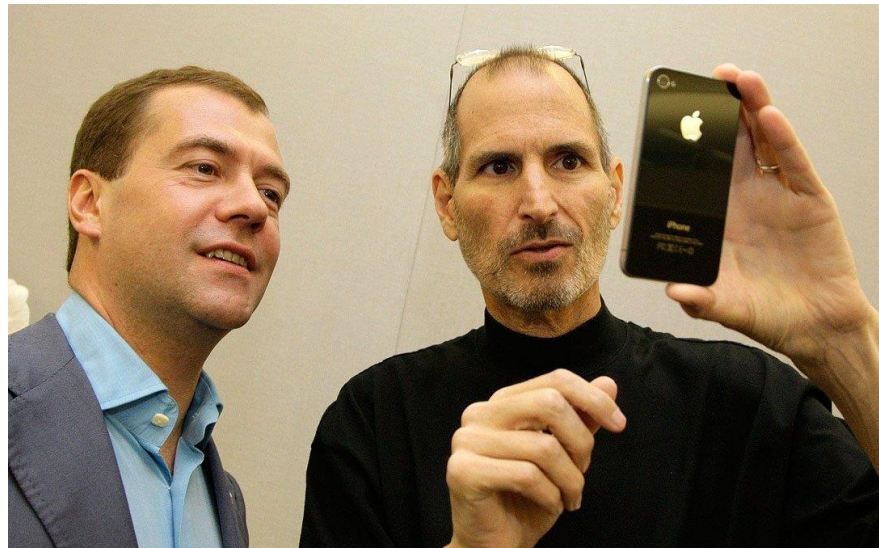
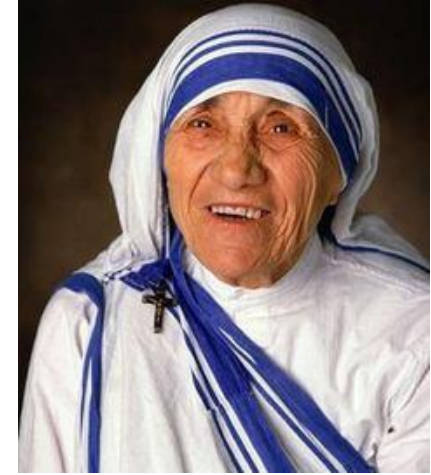
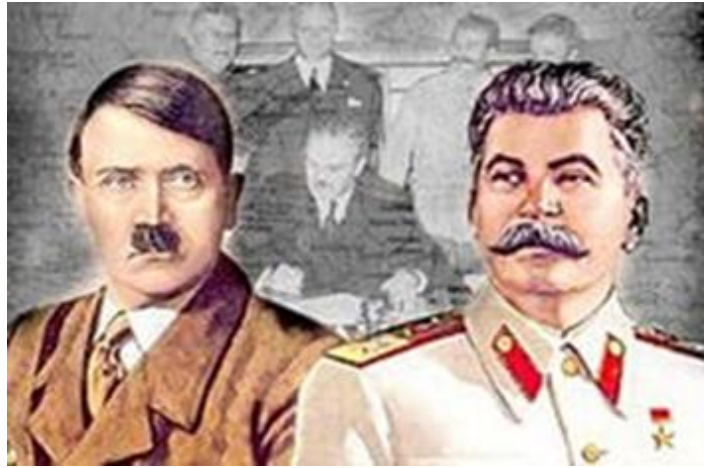
- W. Churchill: *“The price of greatness is responsibility.”*

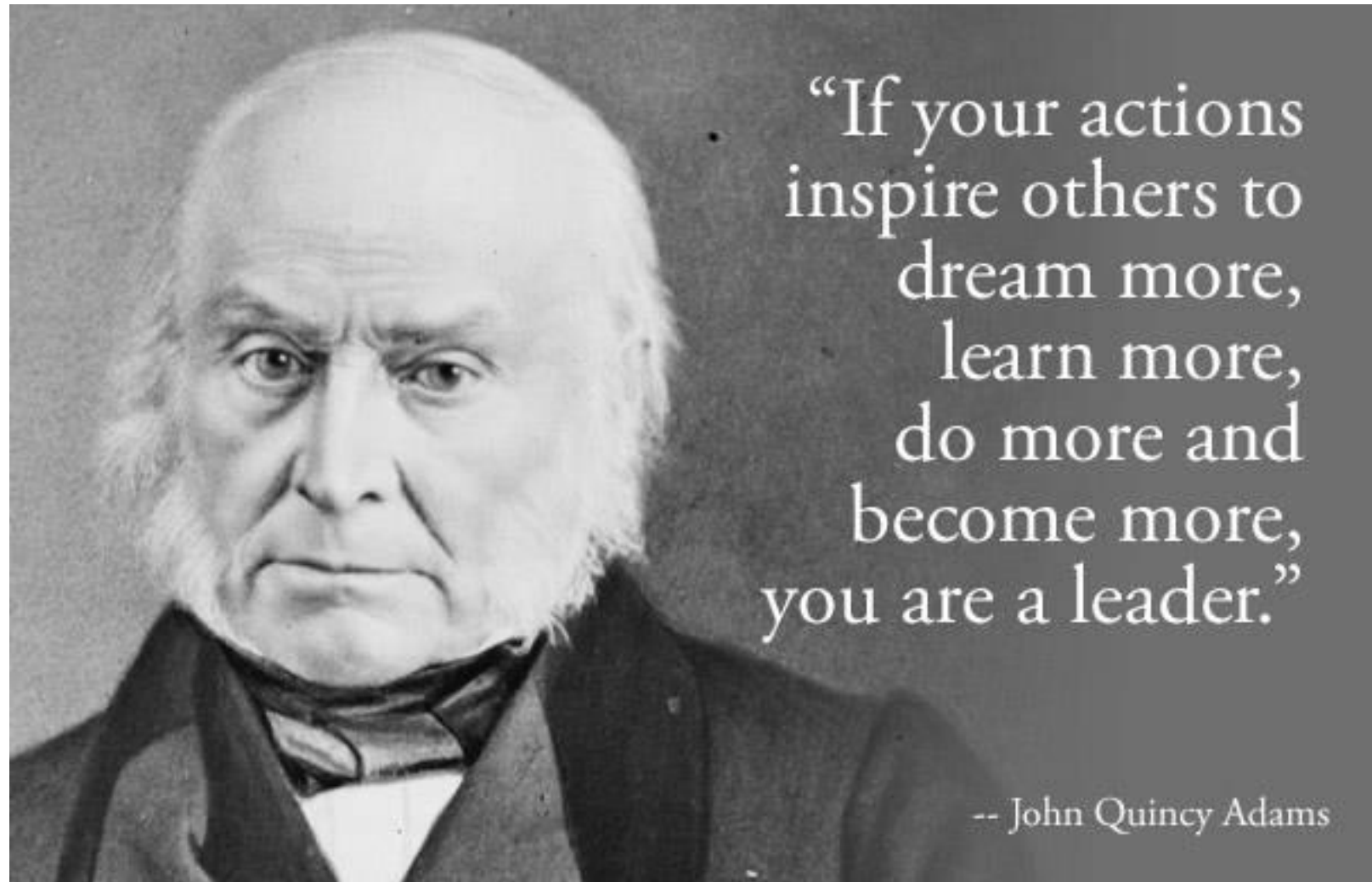


- Martin Luther King, Jr.: *“A genuine leader is not a searcher for consensus, but a molder of consensus.”*



Leadership Could Be Different





“If your actions
inspire others to
dream more,
learn more,
do more and
become more,
you are a leader.”

-- John Quincy Adams

Skoltech

Skolkovo Institute of Science and Technology

