# Succeeding through the Heart & Mind

Engineering Entrepreneurship
Industrial Engineering Department

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## Outline

- **Changing World, Disrupted Business**

- **Three new trends: Innovation, Digitization, and Entrepreneurship**

- **The End of Big: the Age of Start-ups, SMEs, Agility and Resilience**

- **The most needed Competence for Entrepreneurs: A Heart & A Mind (Leadership and Management)**

- **Different, yet Complementary (Managerial Leadership)**

- **The Critical Path to Success**

We are living in a
CHANGING WORLD

# Rationale

- The world is at the pinnacle of on a new technological revolution

- Simultaneous socio-political volatilities are reshaping the world

- Leading and managing change is imperative to ensure that the outcome of change is geared towards sustaining an abundant life to humanity

- Leadership will, consequently, be the most needed competence for driving future entrepreneurs in order to lead the way ahead and succeed in their business endeavors
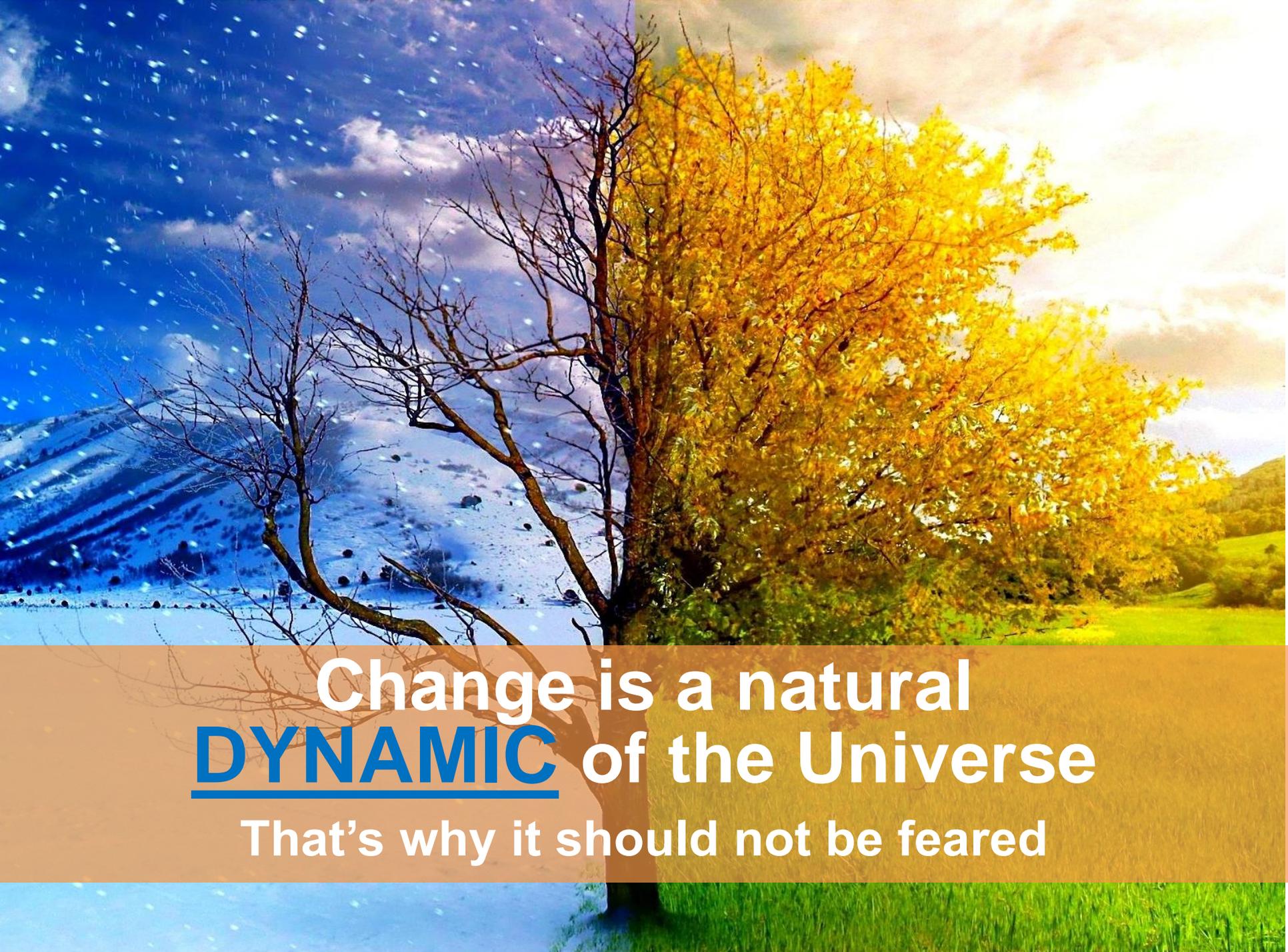
# Change is a natural
# DYNAMIC of the Universe
## That's why it should not be feared

We are living amidst
Exceptional, Exponential Times

# Years it took to reach a market audience of 50 million

**Radio**
**38 years**

**TV**
**13 years**

**Internet**
**4 years**

**Ipod**
**3 years**

**Facebook**
**2 years**

**We are living in an Unstable Environment**

We are living in an
Influential & Smart Leadership Era

**The traditional, hierarchical command and control structures are phasing out**

**Real-time competition is a reality. Leaders no longer have the luxury of long-term planning horizons. They need to be able to make decisions quickly, despite ambivalence and uncertainty**

We are living in a
Diversified Talent & Team Environment
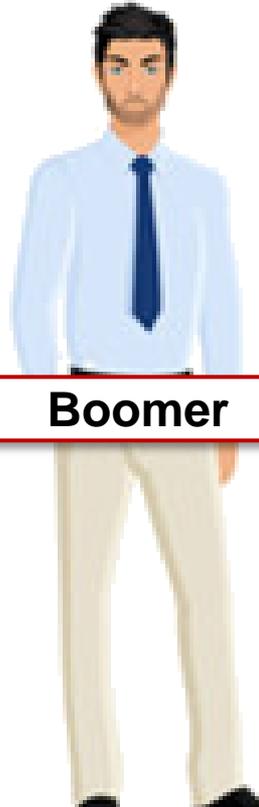
**Traditional**  **Boomer**  **Gen X**  **Millennial**
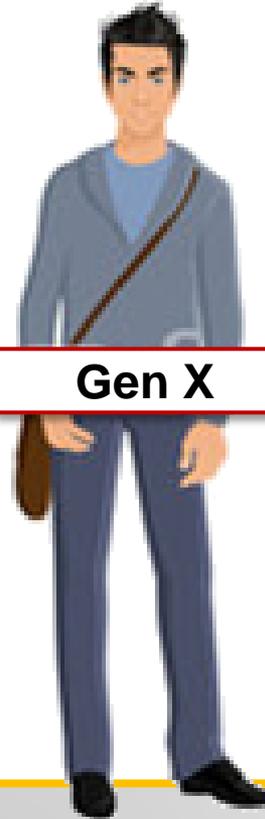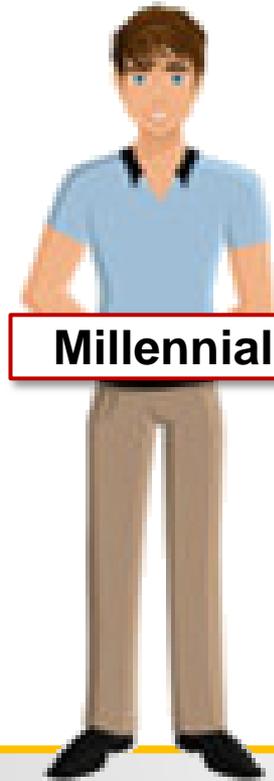
For the first time in History, such **4 diverse generations** work side-by-side

# Types of Innovation

1.  **Sustaining -** does not significantly affect existing markets

2.  **Evolutionary** - improves a product in an existing market in ways that customers are expecting (discontinuous, radical)

3.  **Revolutionary** - unexpected, but nevertheless does not affect existing markets

4.  **Disruptive -** creates a new market by providing a different set of values, which ultimately (and unexpectedly) overtakes an existing market

# The Disruptive Future

**"The future is already here — it's just not very evenly distributed."**

William Gibson

* William Gibson is an American and Canadian speculative fiction writer and essayist widely credited with pioneering the science fiction subgenre known as cyberpunk – inventor of the term "Cyberspace "

# Business Disruption

"The Disruptive Innovation theory explains the phenomenon by which an innovation transforms an existing market or sector by introducing simplicity, convenience, accessibility, and affordability where complication and high cost are the status quo. Initially, a disruptive innovation is formed in a niche market that may appear unattractive or inconsequential to industry incumbents, but eventually the new product or idea completely redefines the industry."

*Source: Christensen Institute*
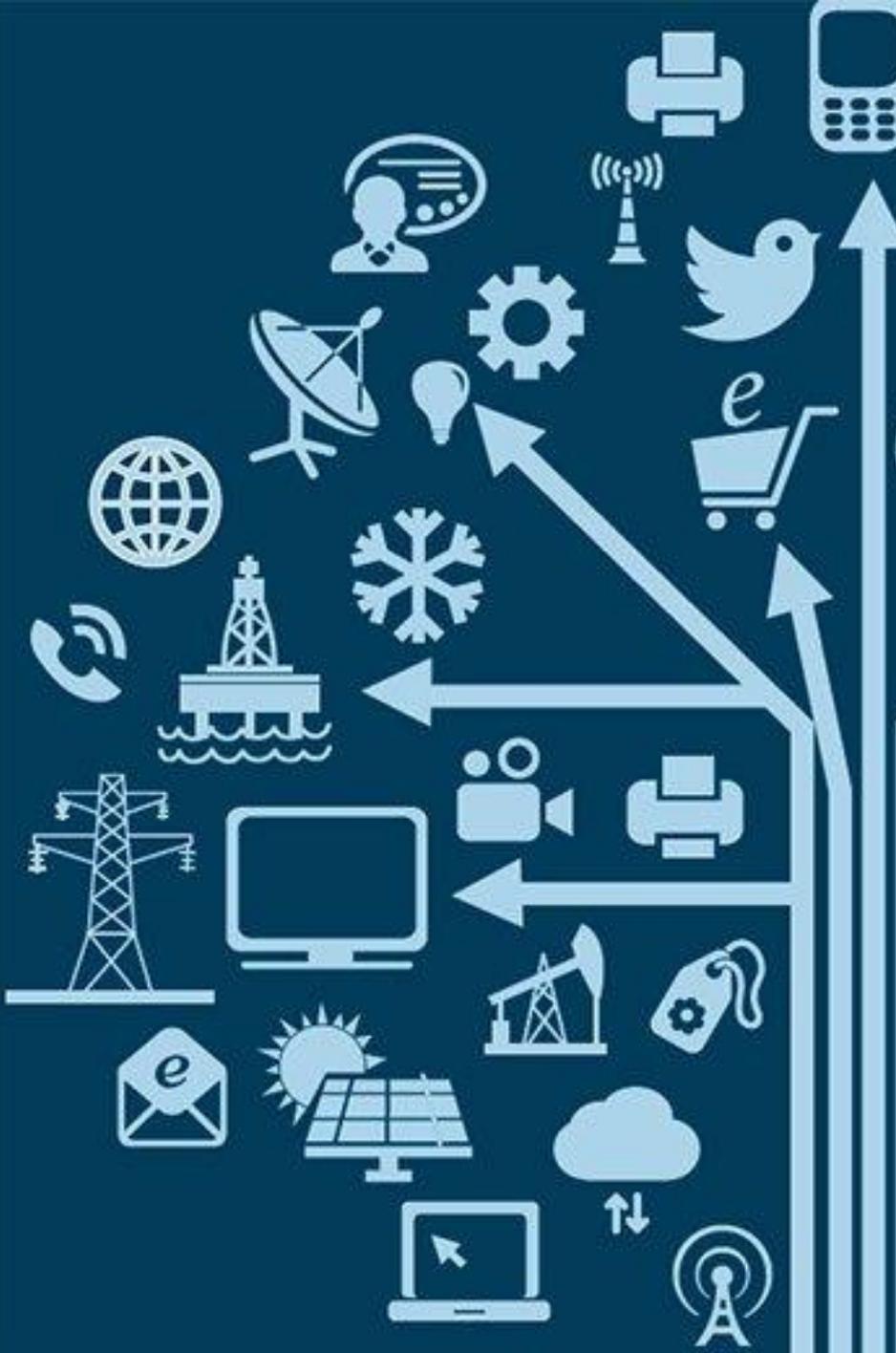
# Select Examples of Business Disruption

| Category | Disruptive innovation | Market disrupted by innovation |
|---|---|---|
| Academia | Wikipedia | Traditional encyclopedias |
| Communication | Telephony | Telegraphy |
| Computing hardware | Minicomputers | Mainframes |
| | Personal computers | Minicomputers, Workstations. Word processors, Lisp machines |
| | Pocket calculator | 3.5 standard calculator |
| | Digital calculator | Mechanical calculator |
| | Smartphones | Personal computers, laptops, PDAs |
| Data storage | 8 inch floppy disk drive | 14 inch hard disk drive |
| | 5.25 inch floppy disk drive | 8 inch floppy disk drive |
| | 3.5 inch floppy disk drive | 5.25 inch floppy disk drive |
| | CDs and USB flash drives | Bernoulli drive and Zip drive |
| Display | Light-emitting diodes | Light bulbs |
| | LCD LED displays | CRT |
| Music | Digital synthesizer | Electronic organ, electric piano and piano |
| | Gramophone | Pianola |
| | Downloadable Digital media | CDs, DVDs |
| Photography | Digital photography | Chemical photography |
| | High speed CMOS video sensors | Photographic film |

*Source: Wikipedia*

# Disruptor as a surprise!

The Disruptor may come from a completely different sector. e.g. The portable music segment led by Sony's Walkman, kept benchmarking themselves against traditional competitors like Samsung, etc.

Instead, they were totally disrupted by a company that had never been in the music business before – Apple and its iPod.

# The Disruptive Innovation Model
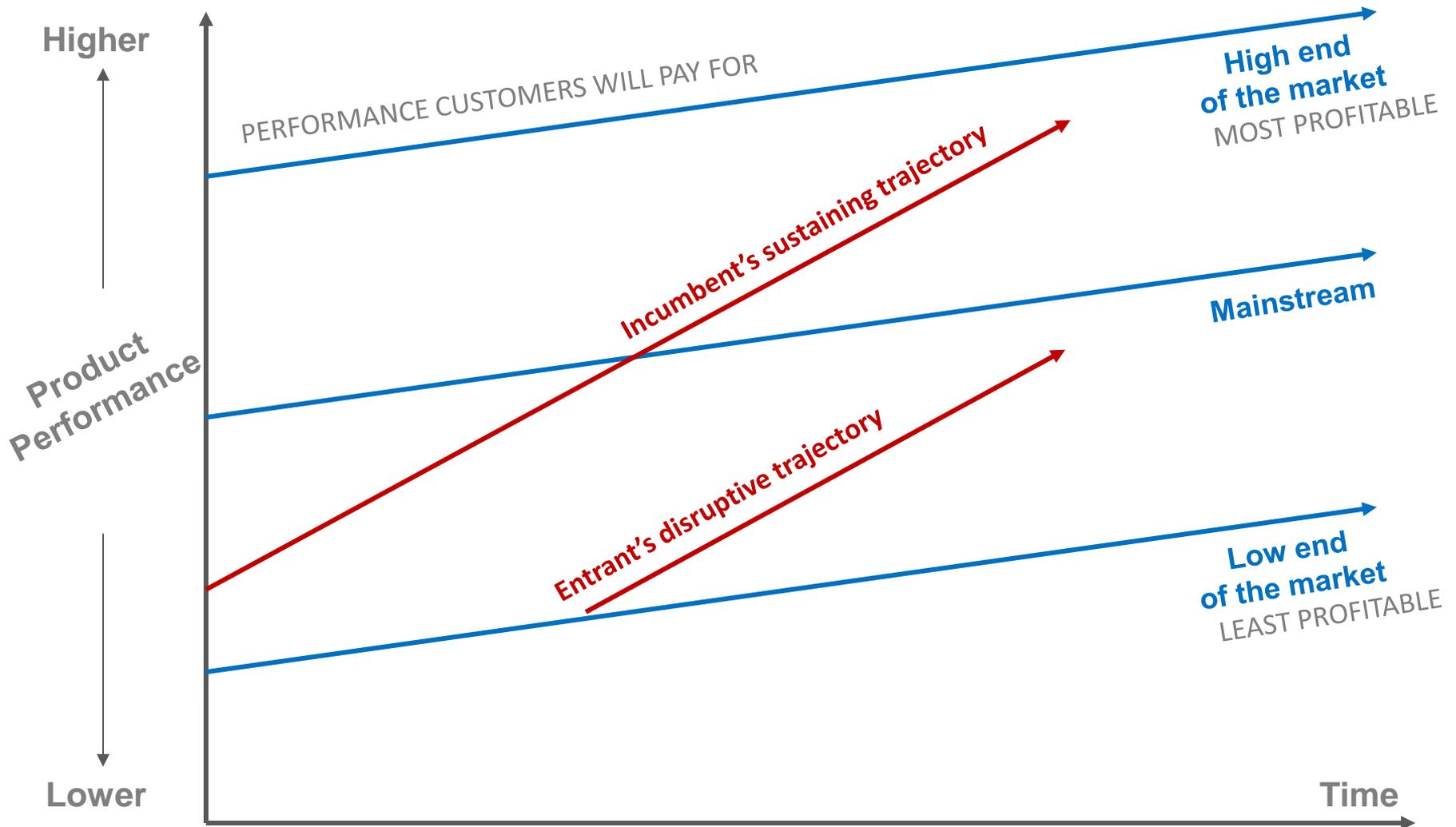
# Executives who anticipate moderate or massive digital disruption in the next 12 months, by industry

| Industry | Percentage |
|---|---|
| Media | 72% |
| Telecom | 64% |
| Customer financial services | 61% |
| Retail | 57% |
| Technology | 57% |
| Insurance | 53% |
| Consumer products | 52% |
| Nonprofit | 52% |
| Business & professional services | 51% |
| Education | 50% |
| Health care | 47% |
| Asset wealth management | 43% |
| Industrial | 39% |
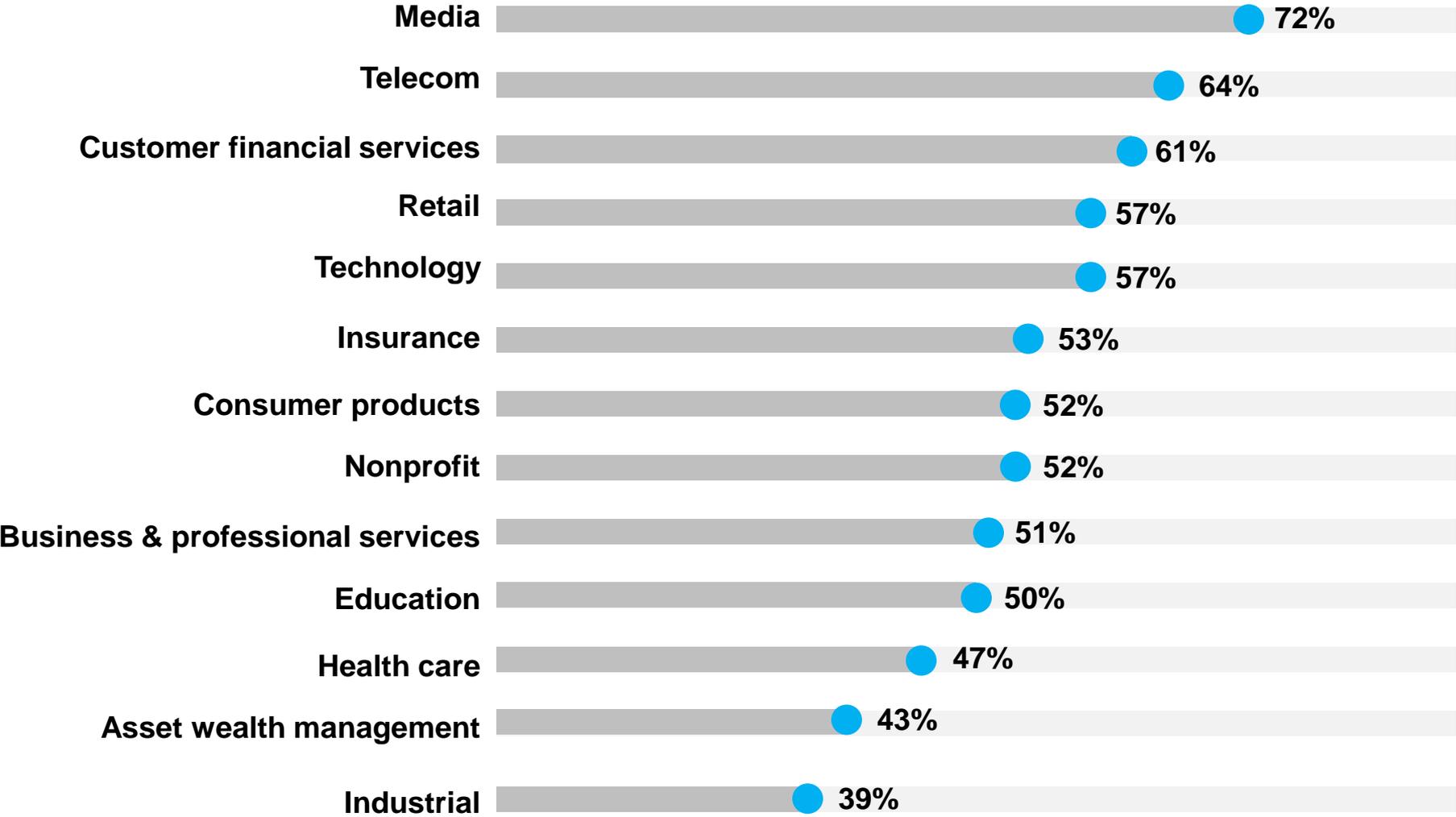
# A Case in Point: Disruption in Engineering – What is changing?

- Owners are recognizing the value of the digital asset

- The new economic reality favors owners over Engineering Companies in contract formulation

- High-speed internet access anywhere

- Low cost file storage in the cloud

- The emergence of Software as a Service (SaaS) delivery model

- The frustration of installing and supporting new software "on premise"

- The business drive to concentrate on core areas of competence, and outsource others

- The realization that company customization of common products or tools is not efficient or required

# The Disrupted Future is NOW

- All design work will take place in the owner's controlled cloud space

- The owner will supply all design tools

- The owner's specialty engineering contractor will maintain the standards, commodity codes, specs and underlying design databases

- PDF's and paper will disappear other than for regulatory compliance and contractual obligations

- Data can be manipulated, analyzed and transformed

- Material management will evolve

- The design will be available from anywhere with secure access

# Three new trends



**Innovation**

**Digitization**

**Entrepreneurship**

# The **End** of **BIG**

"Radical connectivity -- our breathtaking ability to send vast amounts of data instantly, constantly, and globally -- has all but transformed politics, business, and culture, bringing about the upheaval of traditional 'big' institutions and the empowerment of upstarts and renegades," Nicco Mele – Author: The End of Big

1. **SMEs are drivers of economic growth** especially in light of the global economic slow down and decreasing oil prices

2. **SMEs are a source for job creation**, a critically required stability factor all over the world, specially in the unstable MENA region

3. **SMEs are not too big to fail**, their relatively small scale makes them more agile, resilient, and responsive to financing standards and banking requirements

4. **SMEs are innovative and always seeking new ideas to grow**, and the major breakthroughs in mobile technology and digitization were nothing but perfect

5. **SMEs are significantly appealing to venture and seed capitalists** since they are an affordable investment with potential for major returns

# Human Capital **TRENDS** are influenced by the **ECONOMY**

As the economy grows and skills become more specialized, the competition for talent has increased, driving culture & engagement, leadership, and development to the top of human capital agenda

Ratings are indexed on a 0–100 scale in which 0 represents the lowest possible degree of importance and 100 represents the highest possible degree of importance.

| Trends | Global | North America | Africa | Middle East | Western Europe | Asia |
|---|---|---|---|---|---|---|
| **Culture & Engagement** | 78 | 76 | 83 | 75 | 76 | 72 |
| **Leadership** | 78 | 80 | 84 | 75 | 74 | 73 |
| **Learning & Development** | 74 | 73 | 81 | 78 | 69 | 72 |
| **Reinventing HR** | 71 | 67 | 77 | 76 | 66 | 66 |
| **Workforce Capability** | 70 | 72 | 78 | 74 | 67 | 66 |

*Source: Human Capital trends 2015, Deloitte University Press (3333 respondents)*

# That is why **Resilience** and **Agility are** what businesses are after nowadays

Since the year 2000, 52% of companies in the Fortune 500 list have either gone bankrupt, been acquired or ceased to exist

| Job Design | Organizational Culture & Structure | Leadership | External Environment |
|---|---|---|---|
| • Ability to interpret events<br>• Manage Complexities<br>• Improvise<br>• Redefine roles<br>• Correct & learn from errors<br><br>Source: Weick and Sutcliff 2001) | A resilient organization effectively aligns its:<br><br>• Strategy<br>• Operations<br>• Management systems<br>• Governance structure<br><br>Source: Starr et al 2007 | **Leaders are:**<br><br>• **Stewards of organizational resilience**<br>• **Inspiring & motivating**<br>• **Renew the collective energy of those they lead**<br><br>**Source: Starr et al 2007** | • People with trustworthy relationships & personal support systems at work are more able to cope with stress and organizations more likely to hold up in a crisis<br><br>Source: Johnson-Lenz 2009 |

*Source: Constellation research, Constellation's 2014 Outlook on Dominating Digital Business Disruption*

**Typical MANAGERS will face difficulties dealing with the new Characteristics of Work**

# Evolution of the Manager's role
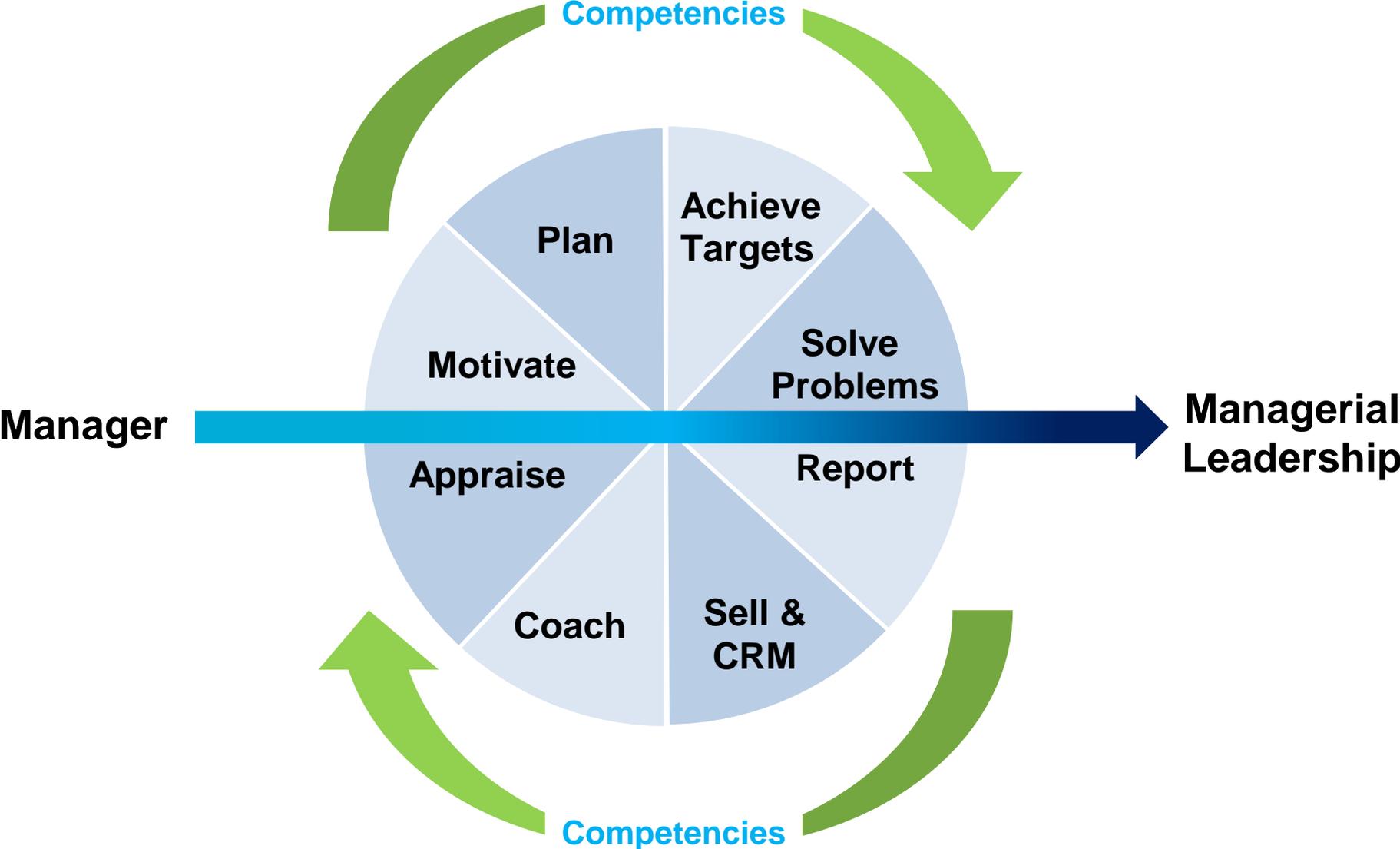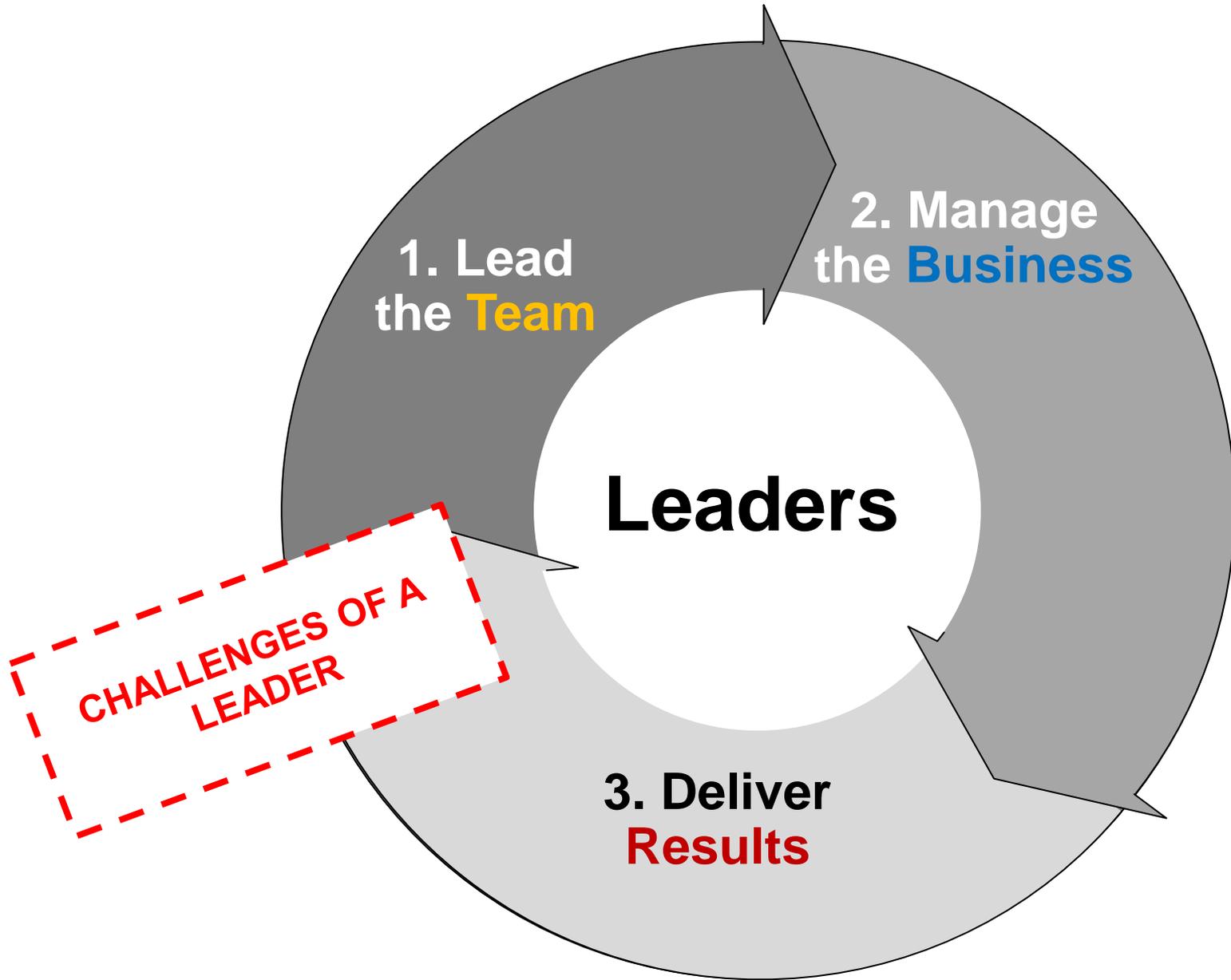
**Leaders' Challenges**

# Environmental Challenges

- **Global Business Trends**
- **Political situation**
- **Economic dynamics that affect people lifestyle**
- **Technology & Digitization**
- **Competition**
- **Brain Drain forces**

**Leaders' Challenges**

# Organizational Challenges

- **Organizational Resilience and Agility**
- **Workforce Competence**
- **Start-up support**
- **Access to Funds**
- **Compliance with Regulations**

# Individual Challenges

- **Workforce motivation and belonging**
- **Organization – Individual fit**
- **Work-Life balance**
- **Generational Gaps**

# The Evolution of Leadership Concerns



Complexity

| Focus | Operations | Resources | Competition | Performance | Change |
|---|---|---|---|---|---|
| **Concern** | Efficiency | Risk | Position | Execution | Renewal |
| **Response** | Budgeting & Procedures | Long-range Planning | Strategy | Excellence | Innovation |
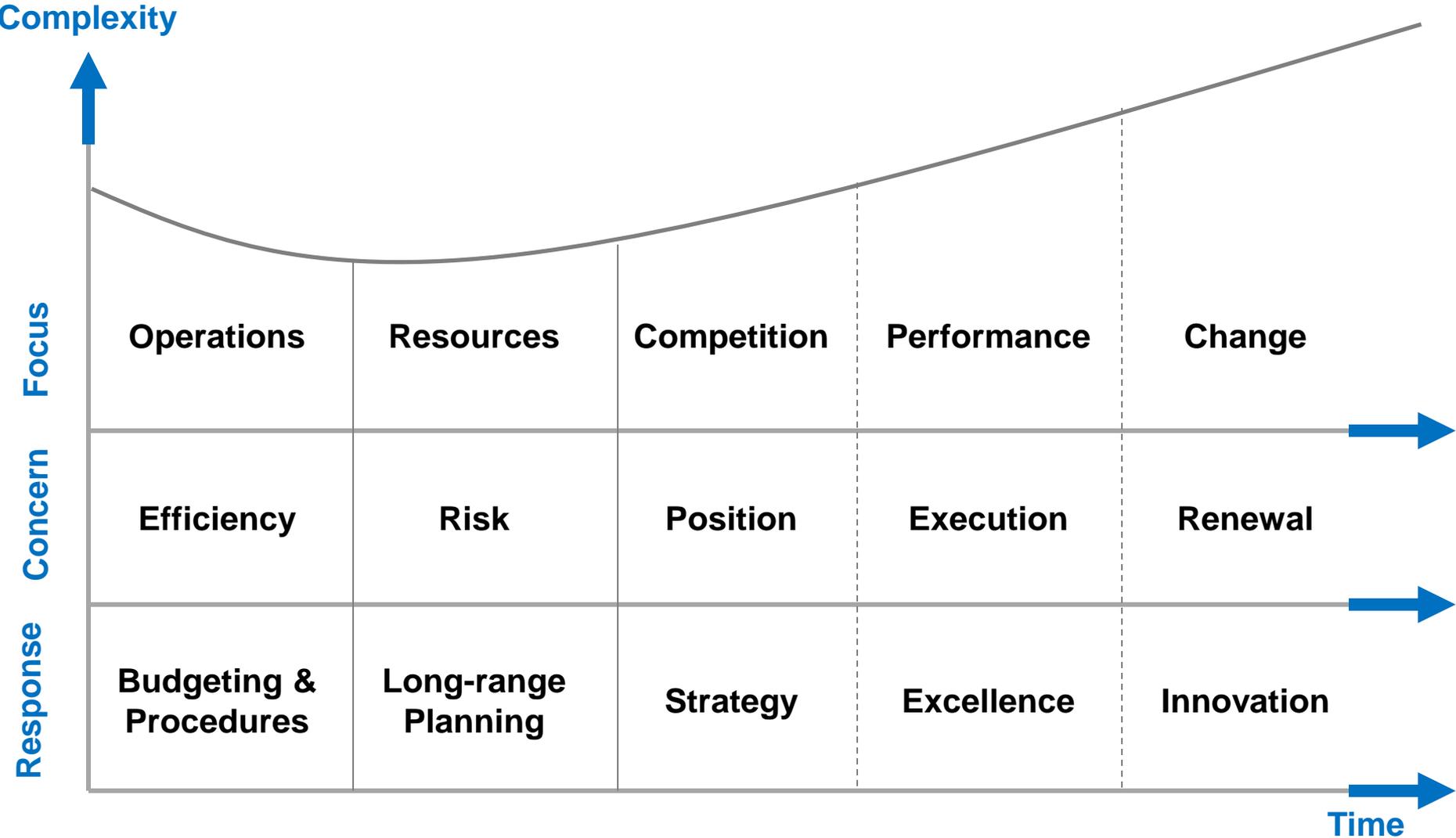
Time

# Activities, resources, time & events have to be managed - often concurrently- with energizing, mobilizing & leading people involved

**Management** (vertical axis, from Weak to Strong)

**Leadership** (horizontal axis, from Weak to Strong)

| | Weak Leadership | Strong Leadership |
|---|---|---|
| **Strong Management** | Administratively Sound, but Little Inspiration | **Well Organized / Motivated Successful Team** |
| **Weak Management** | No Hope & "Death" Imminent | Inspired & Motivated, but Disorganized |

# Managerial Leadership – The Head, Heart and Feet

**Strategy –** positioning the area of responsibility and ensuring growth

**Culture –** ensuring "the way we do things around here" results in positive people

**Inspiration**

**Influence –** Through what we do and say

**Quality supervision –** hands-on
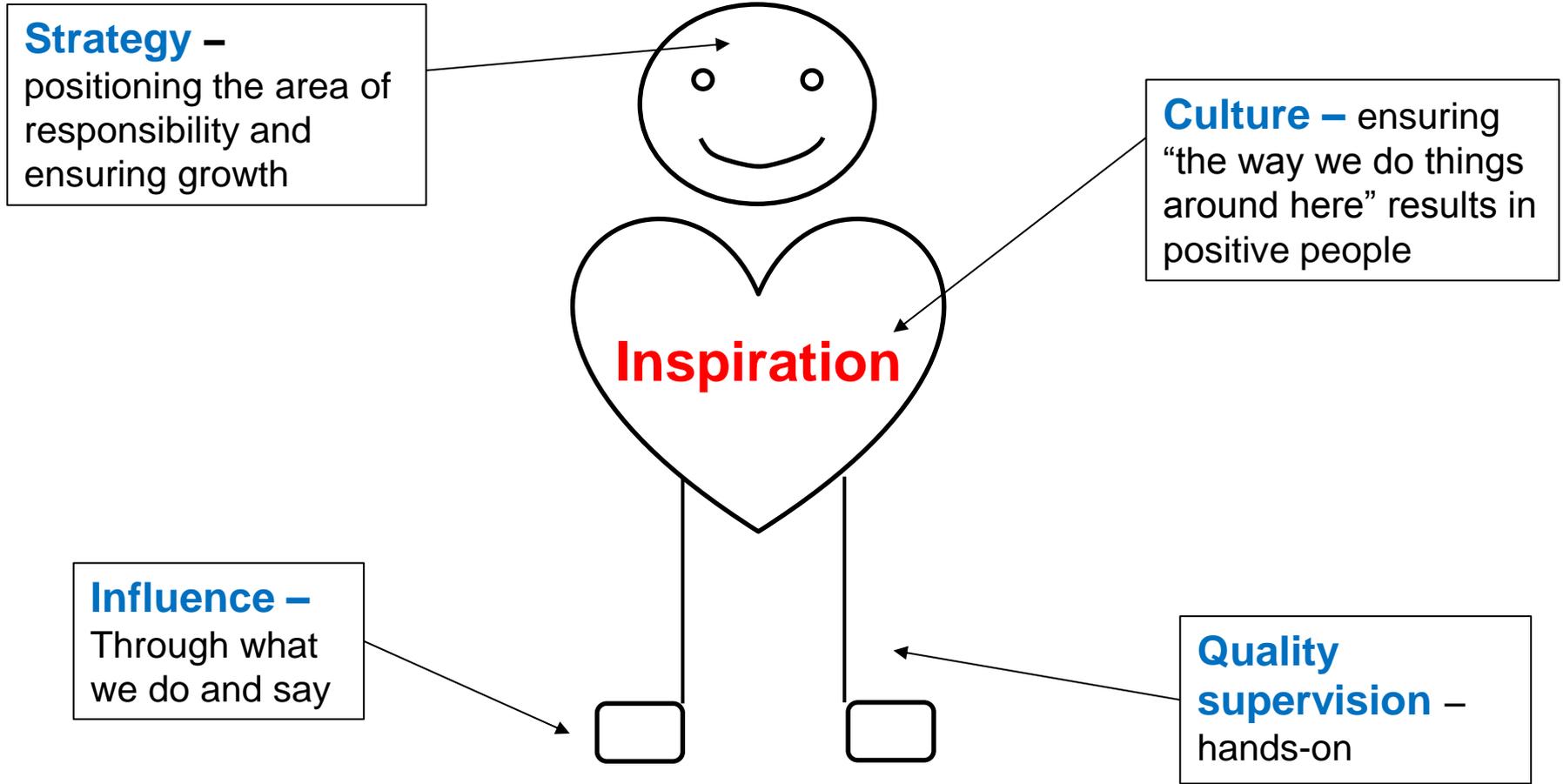
# Where At Is Leadership ?
# At Every Level
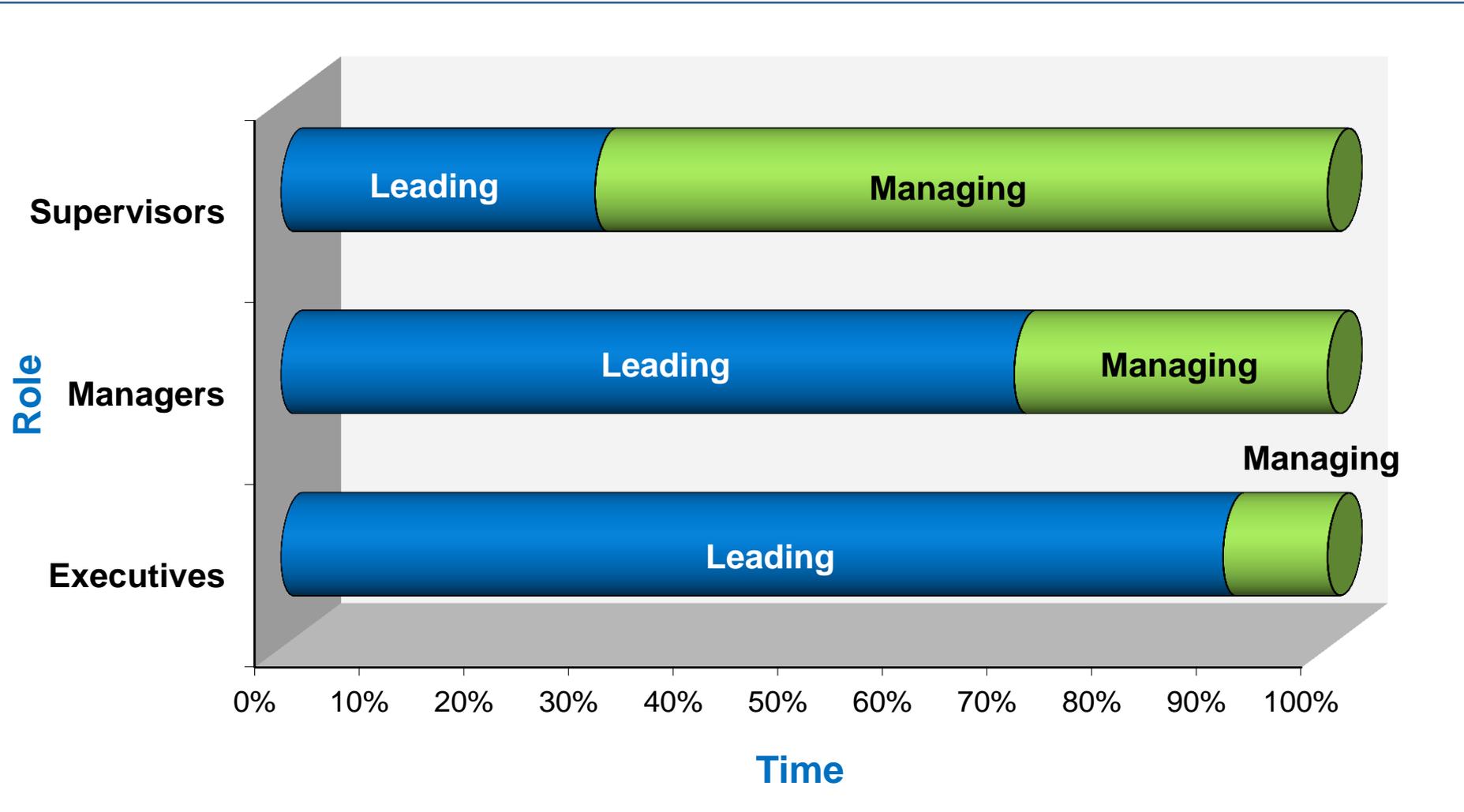
# Where Exactly Is It?

# Level 5 Leadership



Pyramid levels from top to bottom:
- Level 5 Executive
- Effective Leader
- Competent Manager
- Contributing Team Member
- Highly Capable Individual

*Source: Good to Great, James C. Collins, 2001*
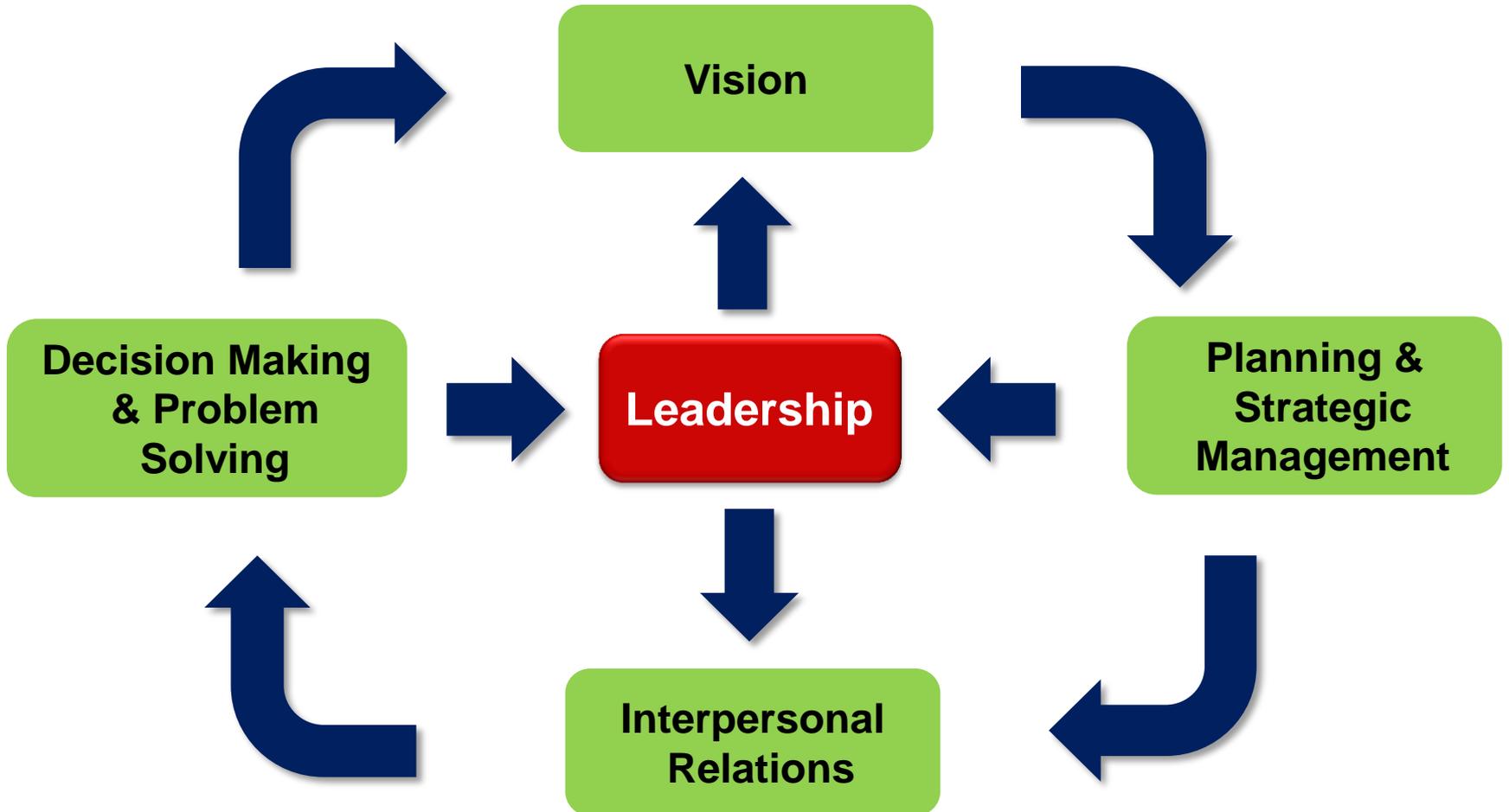
# Level 5 Leadership

| | | |
|---|---|---|
| **Level 5** | **Executive** | Builds enduring greatness through a paradoxical combination of personal humility plus professional will. |
| **Level 4** | **Effective Leader** | Catalyzes commitment to and vigorous pursuit of a clear and compelling vision; stimulates the group to high performance standards. |
| **Level 3** | **Competent Manager** | Organizes people and resources towards the effective and efficient pursuit of predetermined objectives. |
| **Level 2** | **Contributing Team Member** | Contributes to the achievement of group objectives; works effectively with others in a group setting. |
| **Level 1** | **Highly Capable Individual** | Makes productive contributions through talent, knowledge, skills, and good work habits. |

# The Management-Leadership Continuum

**Mind** ⬅        **Heart** ➡
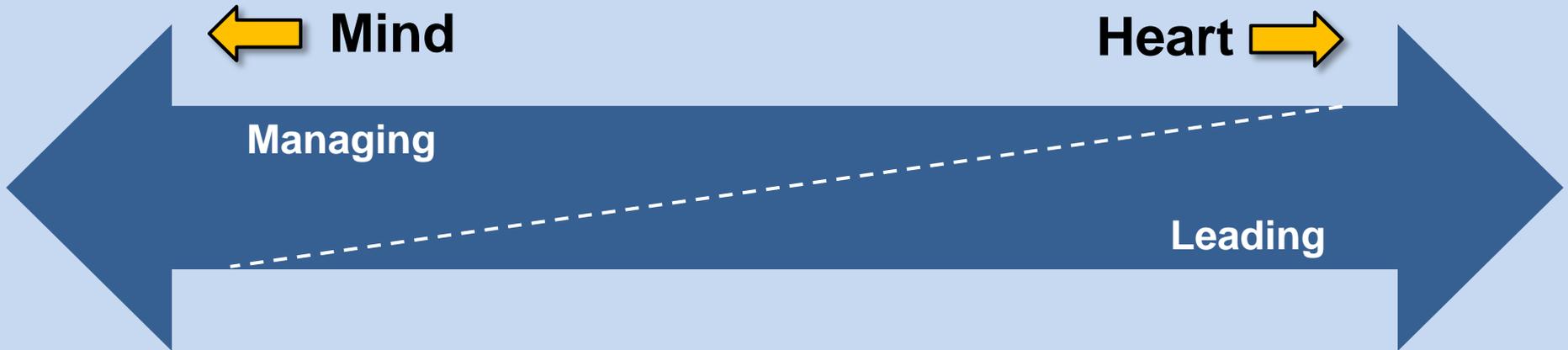
Managing

Leading

- **Goals / Objectives**
- **Control**
- **Co-ordination**
- **Calculation**
- **Planning and Direction**
- **Managing Risk**
- **Managing Resources**

- **Goals / Vision**
- **Motivation**
- **Mobilization**
- **Passion**
- **Pace and Direction**
- **Taking Risk**
- **Leading Talent**

# 21st Century Leaders Competencies

| INFORMATION ORIENTED COMPETENCIES | TASK ORIENTED COMPETENCIES | PEOPLE MANAGEMENT COMPETENCIES | INTERPERSONAL COMPETENCIES | PERSONAL COMPETENCIES |
|---|---|---|---|---|
| Strategic thinking | Building the organization | Providing leadership | Influencing | Breadth of awareness |
| Business understanding | Steering | Directing teams | Relationship building | Achieving objectives |
| Conceptualizing | Organizing | Building teams | Advising | Self awareness |
| Innovating | Deciding | Coaching/developing | Team orientation | Taking initiative |
| Integrating | Problem Solving | Motivating | Service orientation | Showing drive |
| Analyzing | Structuring work | Guiding people | Cultural awareness | Showing commitment |
| Processing | Performing tasks | Providing support | Communicating | Adaptability |
| Comprehending | | Transferring knowledge | Openness | |

*Source: European Central Bank*
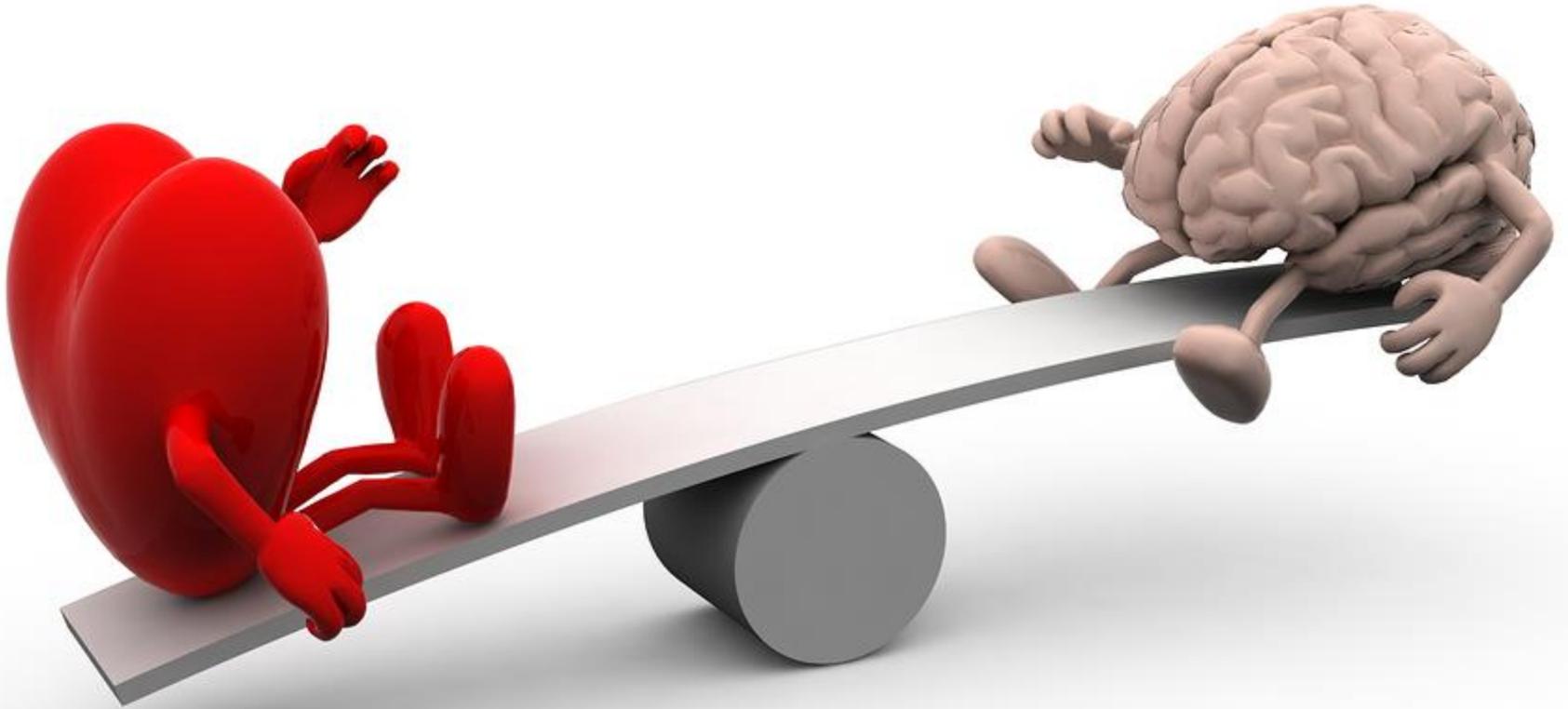
**Most Important - It is Complementary**

# Critical path to Success

- **Think BIG start Small – Rome was not built in a day**

- **Think People – a Great Idea with Big Funds is not a Great Business**

- **Have a mentor from day one**

- **Believe that the Good will happen, the bad will happen, and the Ugly will happen – but those are not the drivers for surrendering**

- **Get partners on board early on – Great minds need a friend to temper ideas with**

- **Remember "Innovation" is the new Ideology**

# Critical path to Success

- **Look for feedback about your Entrepreneurial idea from people who tell you the truth not those who tell you what you like to hear**

- **Don't rejoice access to Funds – you should only borrow when you need and what you need**

- **Having your Bankers on your side is always a good idea – so keep them posted**

- **Seek long lasting relationships with your clients, more than closing deals – great relations bring deals**

# Critical path to Success

- **Avoid going into a new ideas spree – strengthen what you have and then conquer the new concept**

- **Get ready to Travel – with digitization the World is your market**

- **Brand and make good music about your Business (marketing) – but don't over do it**

- **Over deliver**

- **Real Hard Work starts When you succeed – "It is much difficult to stay at the Peak than it is to reach it" Gibran Khalil Gibran**