

Technical Leadership

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What is Leadership?

- The art of accomplishing things
- With people

What is **technical** leadership?

- The art of accomplishing **technical** things
- With people

Can engineers and scientists be good leaders?

- Strengths translate well into leadership roles.
 - Analytical skills • Motivated to create • Organized problem solving
 - Discipline • Attention to detail • Focus on efficiency and risk management
- Engineering has long been ranked as the most common undergraduate degree among Fortune 500 CEOs.¹
- Leaders with technical degrees
 - Thomas Edison • Satya Nadella • Jeff Bezos • Tim Cook
 - Grace Hopper • Sundar Pichai • Henry Ford • Mary Barra

Why would technical experts want to be leaders?

- Little can be accomplished today alone
 - Scale of work is rarely one person
 - So much work is interdisciplinary
 - Teams accomplish more than the sum of their parts
- May be more effective leading those with similar tech skills
- May be in a team that needs leadership
- May want to expand beyond the technical work
- May find yourself thinking “I could lead better”

Additional skills technical experts need

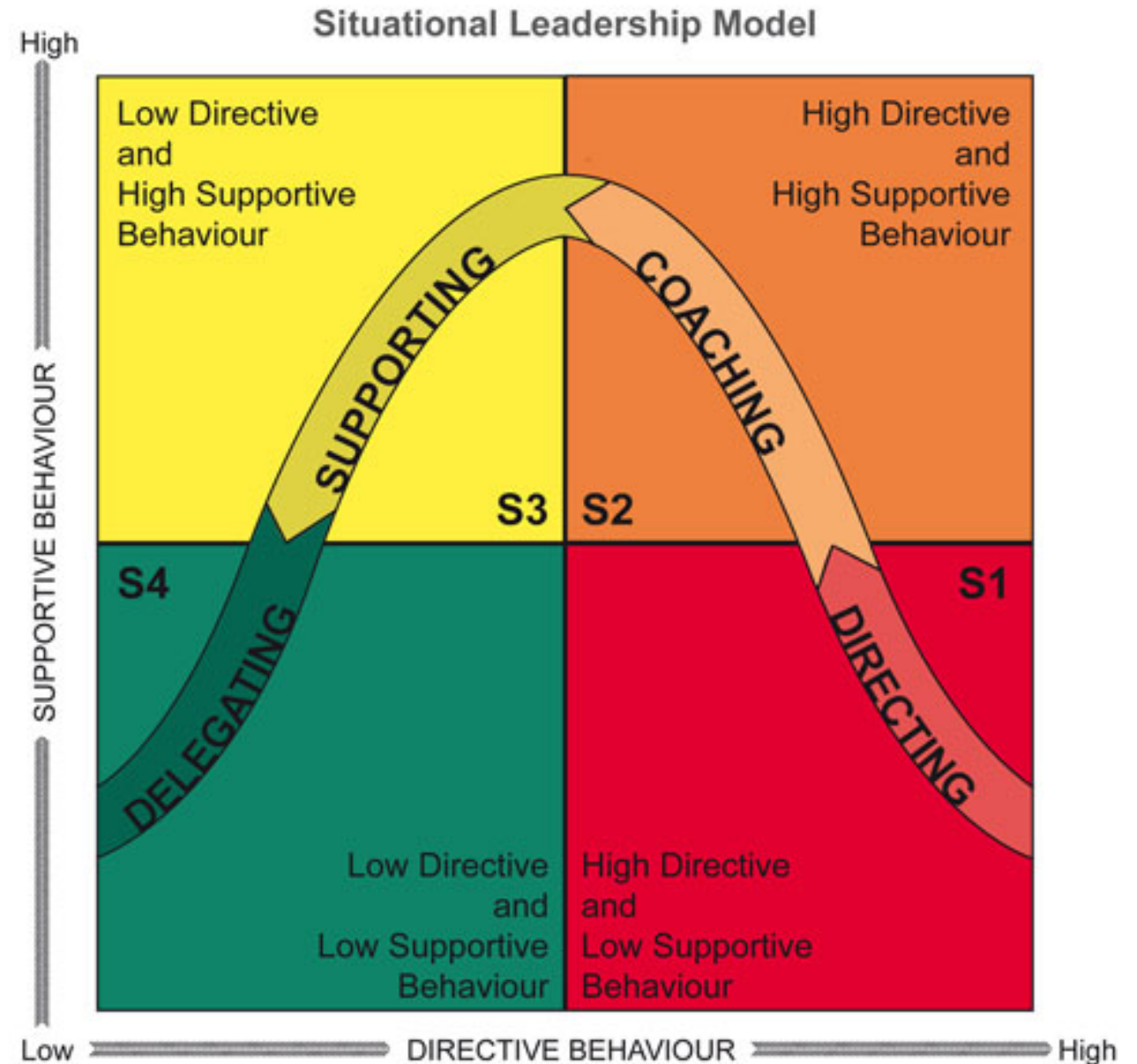
- Communications – Both with other experts, and with lay people
- Strategic thinking – Determining what to do
- Organization skills – How to build and structure a team
- Change management – Complete overhaul, or continuous improvement
- Interdisciplinary skills – Beyond own technical expertise
- Project management – How to accomplish big things
- Financial management – Expand on engineering economic skills
- Motivation – Getting your team to want to do the job
- Delegation – Without abrogation

Leadership styles

- Charismatic
- Autocratic
- Bureaucratic
- Participative
- Laissez-Faire

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- Situational
- Servant



Hersey Blanchard Situational Leadership Model

Character of good leaders

- Subject matter competence
- Humble confidence
- Driven for success – in the face of adversity
- Disinterestedness
- Values and ethics
- Courage of your convictions
- Empathy and support
- Vision of a better future

“It is character through which leadership is exercised.”

Peter Drucker, The Practice of Management

For what purpose?

- Must be for the greater good

- Find something inspirational to do
 - Create something that changes things for the better
 - Help others be better
 - Improve your organization, your neighborhood, your state, your nation
- Why?
 - Self-focused purposes ultimately fail
 - Leadership is actually easier when you are doing good
 - Make a difference

“The world will be saved by those who know how to save it.”

William Clinton, to an audience of energy engineers

In summary.....

- Become a technical expert
- Hone your leadership and management skills
- Develop your character
- Find your purpose
- Leave this world better than you found it

“I think people want to be magnificent.

It is the job of the leader to bring out magnificence in people and to create an environment where they feel safe and supported and ready to do the best job possible in accomplishing key goals.

The responsibility is a sacred trust that should not be violated. The opportunity to guide others to their fullest potential is an honor and one the should not be taken lightly.

As leaders, we hold the lives of others in our hands. These hands need to be gentle and caring and always available for support”

— Ken Blanchard

Sources

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