

Systematic Approach to the Development, Evolution, and Effectiveness of Integrated Product Development Teams (IPDTs)

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What is an IPDT?

- INCOSE SE Handbook, v3.2.1 (p. 186-95)
 - A *multidisciplinary group of people* who are collectively responsible for delivering a defined product or process.
 - A *process-oriented, integrated set of cross-functional teams* (i.e., an overall team comprised of many smaller teams) given the appropriate resources and charged with the responsibility and authority to define, develop, produce, and support a product or process (and/or service).
- In Plain English:
 - A group of *individuals working together* to solve a problem and deliver a product or service.



Premise

- IPDTs are a key component of any SE application.
- Team members are usually chosen because:
 - Have expertise in a *technical discipline*
 - Are *stakeholders* in the outcome or product
 - Hold a *key “position”* in the organization
 - Are *available*.
- IPDT effectiveness can be significantly increased by
 - Recognizing individual *personality types and skill sets*
 - Considering the *behavioral and inter-relational competence* of individual members
 - Monitoring and guiding *team development*

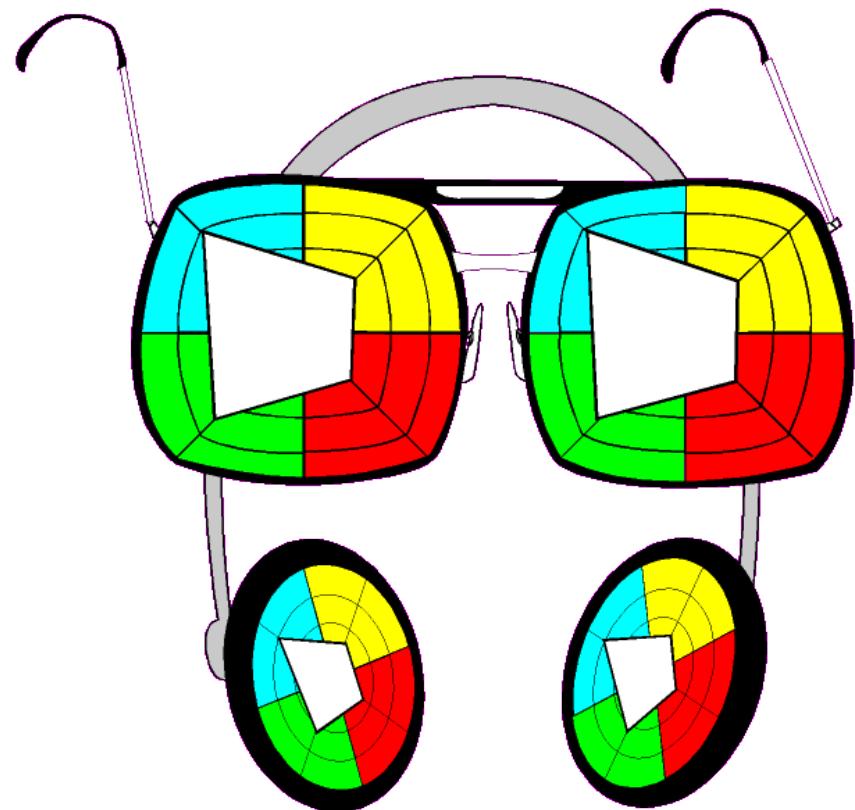
Understanding Team Dynamics

- The “unseen forces that operate in a team”
 - Personality Types and Thinking Styles
 - Team Roles and Responsibilities
 - Organizational culture
 - Working Environment
- “Thinking Style” Tools and Methodologies
 - Herrmann Brain Dominance Instrument
 - Belbin Team Roles Theory
 - Tuckman Stages of Team Development
 - Countless others

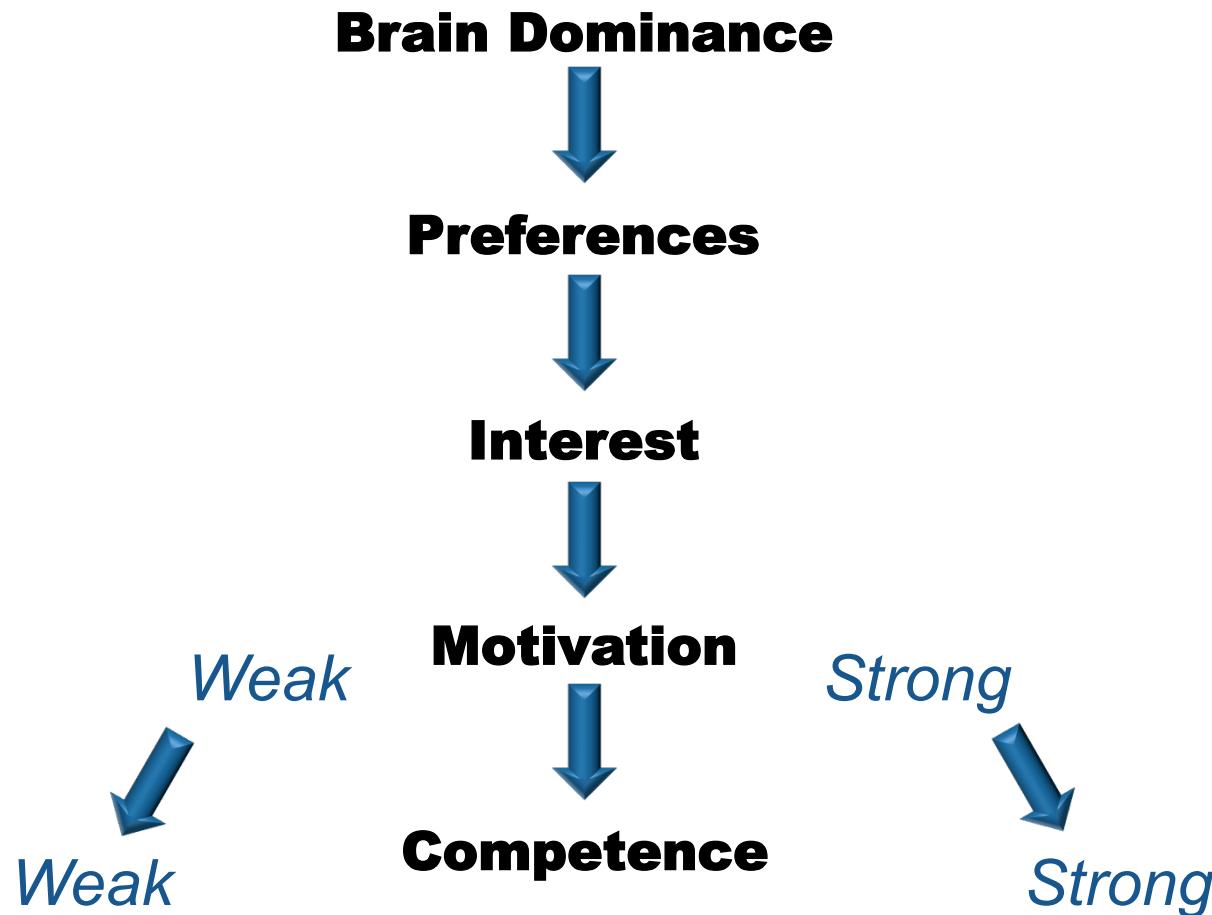


Brain Dominance Filters

- Our *subconscious* brain preferences determine how we interpret the world
- They act as *filters* for what we see and hear

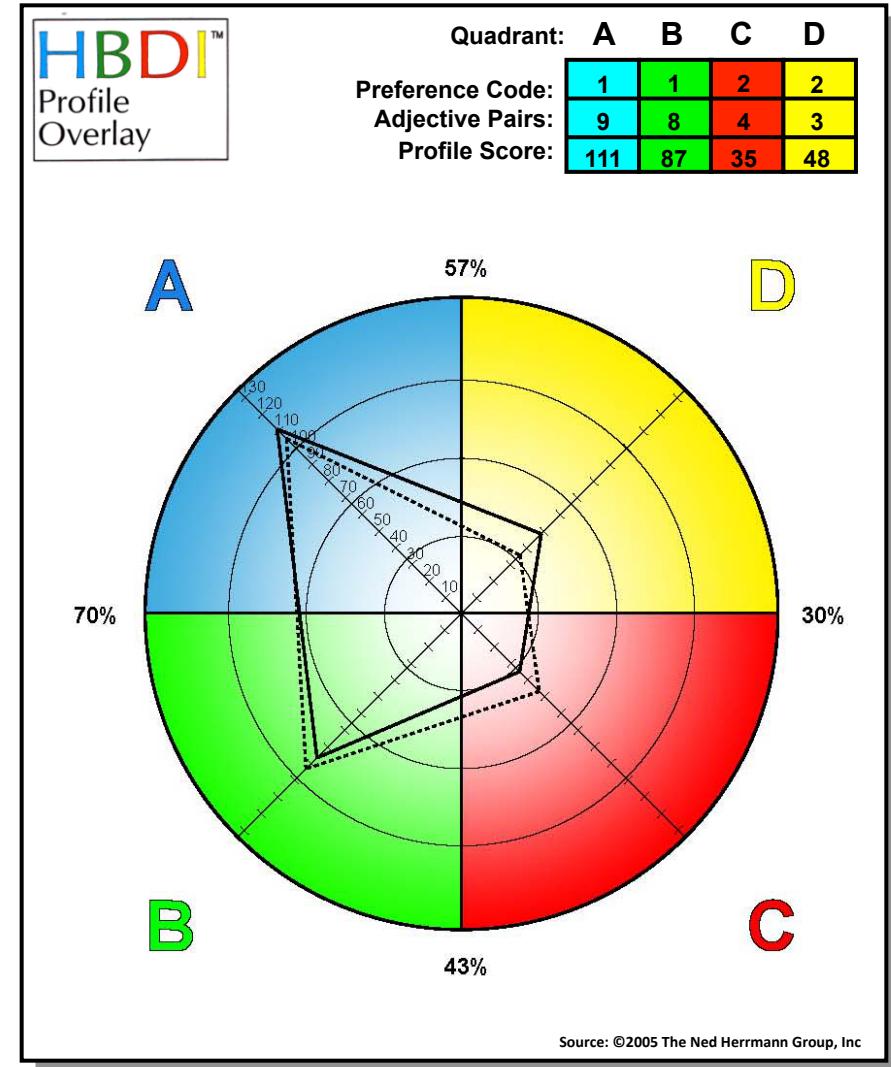
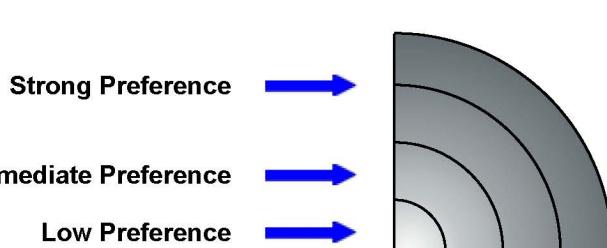


The Role of “Brain Dominance”

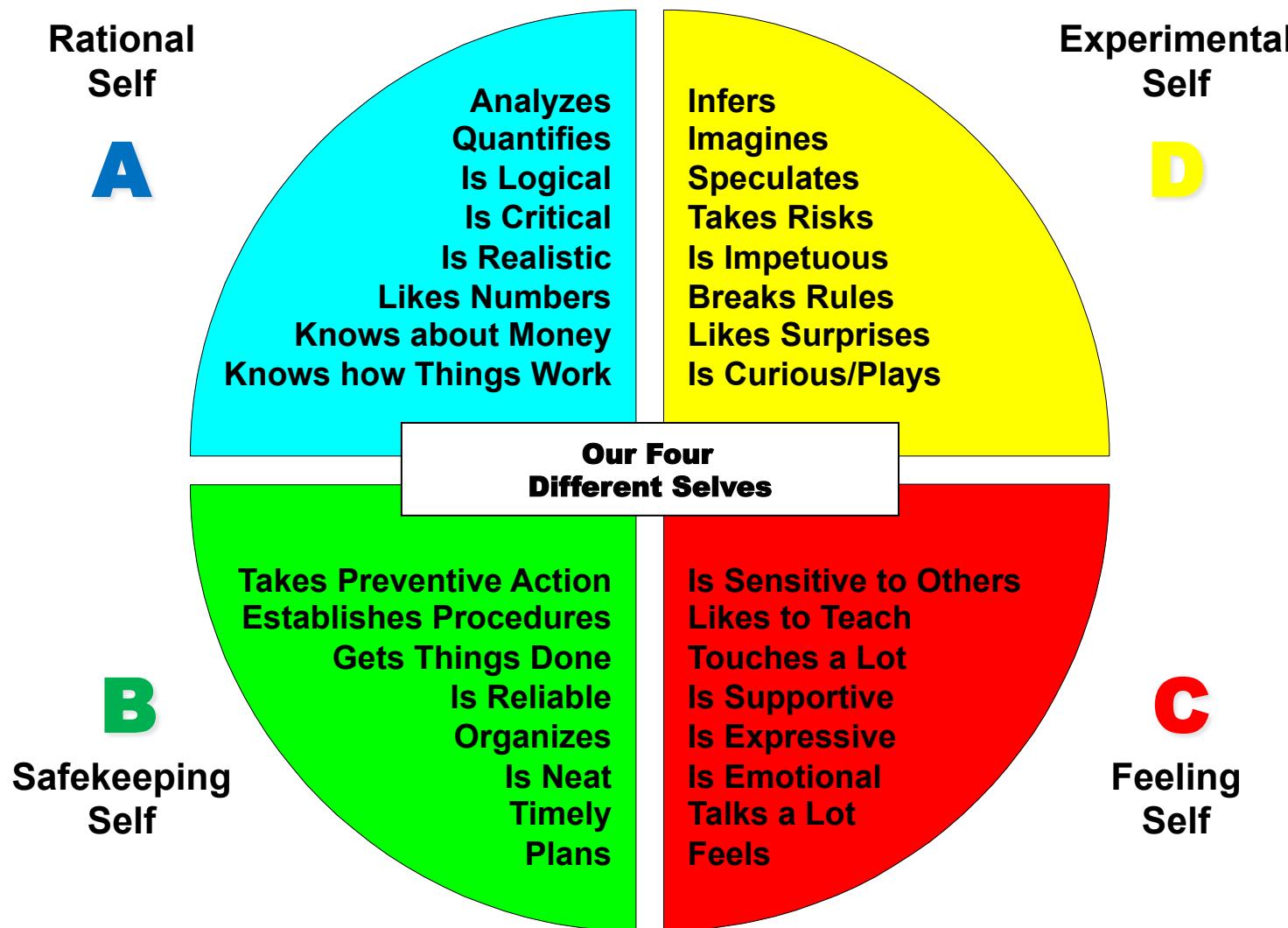


Herrmann Brain Dominance Instrument Profile

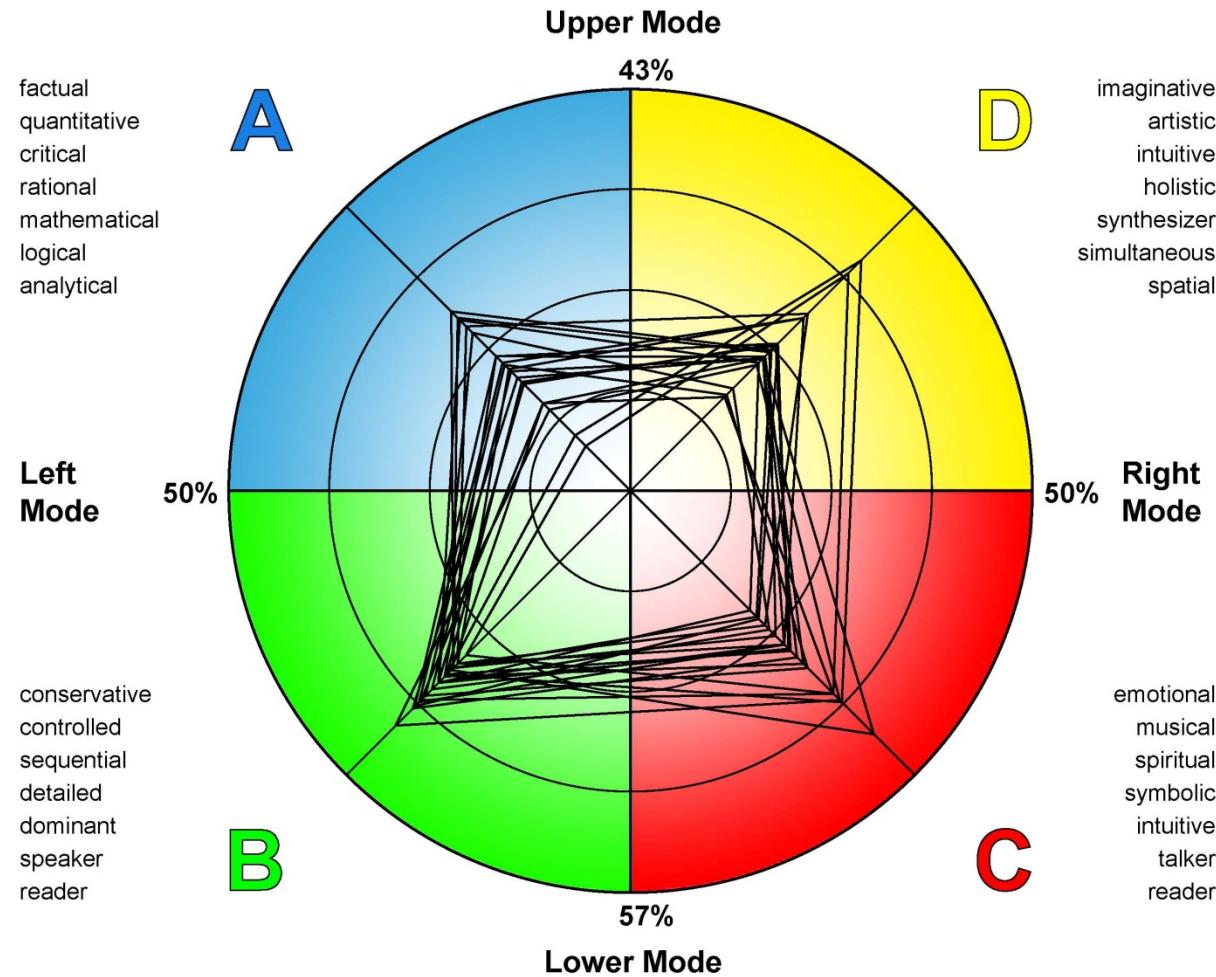
- A** – Logical, Rational, Mathematical, Technical, Theoretical
- B** – Structured, Disciplined, Thrives on order and predictability, Methodical
- C** – Social, Emotional, All about relationships Compassionate, Expressive
- D** – Creative, Adventurous, Risk taker, Entrepreneurial, Visual, Conceptual



What Are Your Brain Dominances?



Composite (Team) Profile



The percentages indicate the preferences for one Mode compared to the opposite Mode

Belbin's Nine Team Roles

	CONTRIBUTIONS	ALLOWABLE WEAKNESSES
PLANT	Creative, imaginative, unorthodox. Solves difficult problems.	Ignores incidentals. Too preoccupied to communicate effectively.
RESOURCE INVESTIGATOR	Extrovert, enthusiastic, communicative. Explores opportunities. Develops contacts.	Over-optimistic. Loses interest once initial enthusiasm has passed.
CO-ORDINATOR	Mature, confident, a good chairperson. Clarifies goals, promotes decision-making, delegates well.	Can be seen as manipulative. Offloads personal work.
SHAPER	Challenging, dynamic, thrives on pressure. The drive and courage to overcome obstacles.	Prone to provocation. Offends people's feelings.

Belbin's Team Roles (cont)

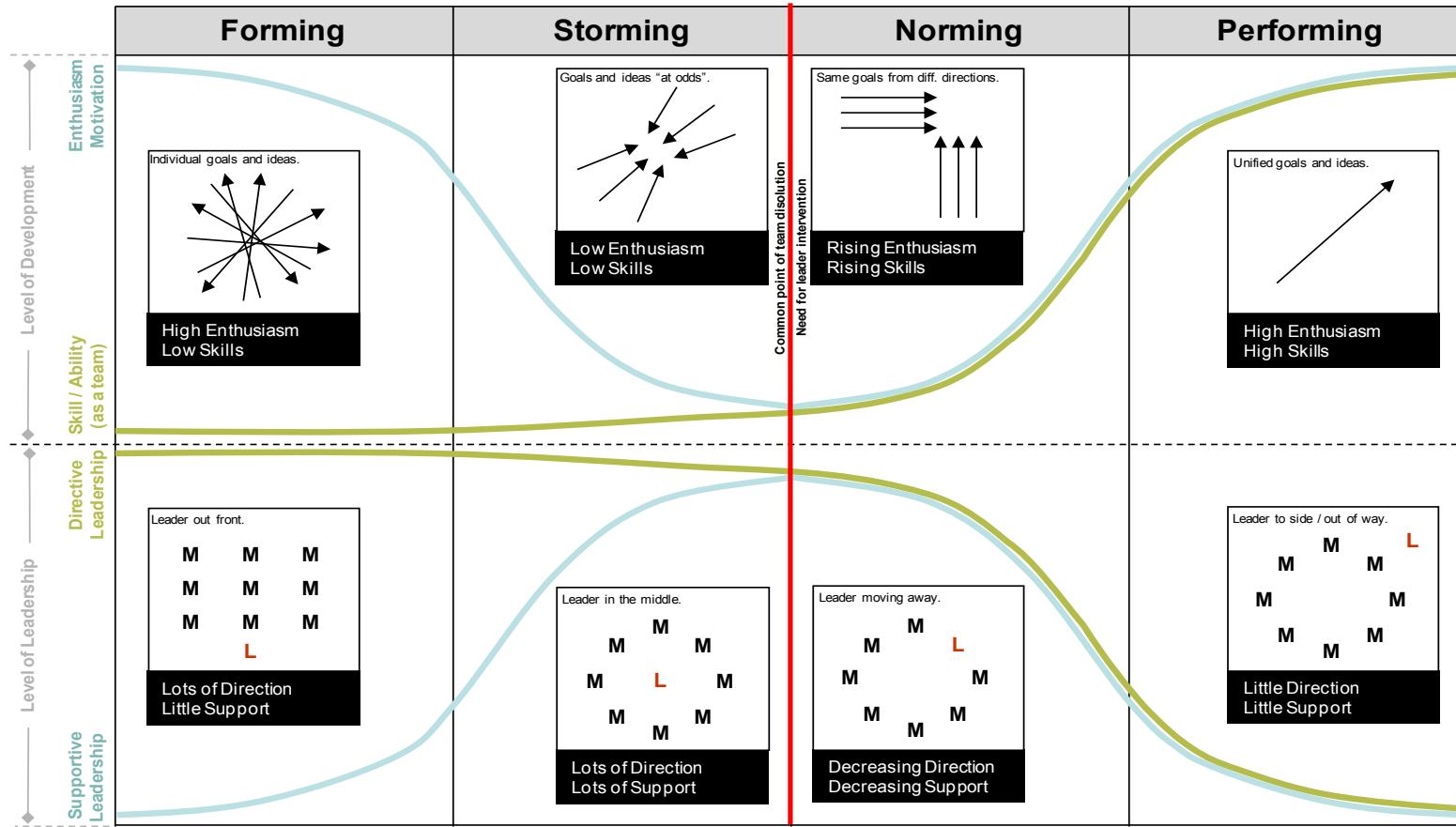
MONITOR EVALUATOR	Sober, strategic and discerning. Sees all options. Judges accurately.	Lacks drive and ability to inspire others.
TEAMWORKER	Co-operative, mild, perceptive and diplomatic. Listens, builds, averts friction.	Indecisive in crunch situations.
IMPLEMENTER	Disciplined, reliable, conservative and efficient. Turns ideas into practical actions.	Somewhat inflexible. Slow to respond to new possibilities.
COMPLETER FINISHER	Painstaking, conscientious, anxious. Searches out errors and omissions. Delivers on time.	Inclined to worry unduly. Reluctant to delegate.
SPECIALIST	Single-minded, self-starting, dedicated. Provides knowledge and skills in rare supply.	Contributes on only a narrow front. Dwells on technicalities.

Tuckman's Stages of Team Development

- **Conceived by Bruce Tuckman in 1965**
 - *Four Stages*: Forming, Storming, Norming, Performing
- **Measured by two key factors**
 - Level of *Enthusiasm / Motivation*
 - Level of *Skill / Ability*
- **Helps teams anticipate what they will go through**
- **Prevents teams from being surprised by events**
- **Helps leaders gauge how to move teams forward**
 - Helps leaders understand why teams act the way they do
 - Helps leaders change their leadership approach to match the development stage of the team
 - Helps leaders avoid hindering team progress

The Team Development Picture

Stages of Team Development

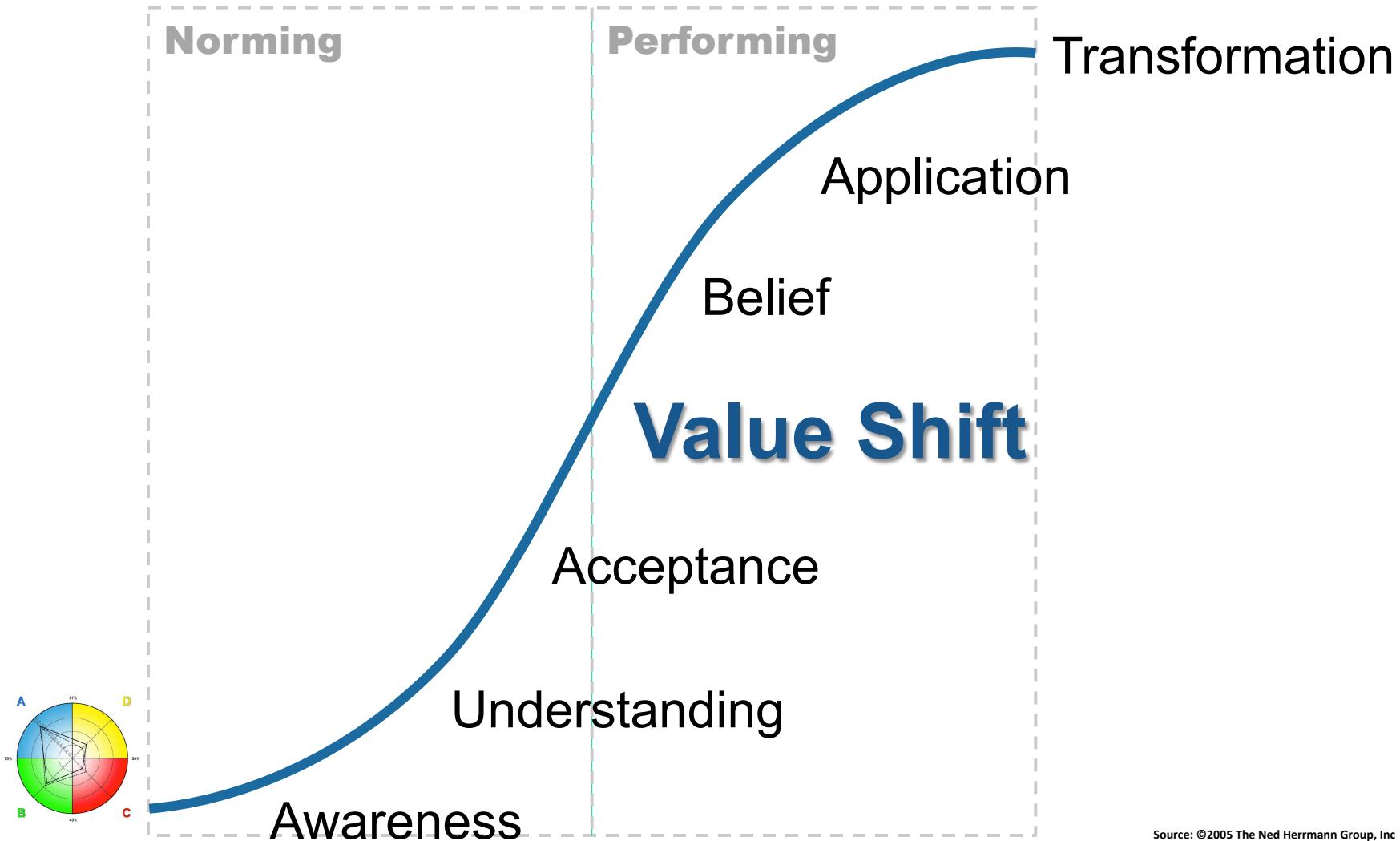


Corresponding Leadership Styles

Leader Notes:

Leadership styles and relations to team members must change as teams move through stages of development. Leaders who refuse/fail to change, lock teams into the stage corresponding to the style of leadership. Storming is a natural part of team development. Don't try to prevent it; just monitor it and let it happen.

HBDI Mental Path to Self (and Team) Development



Key Insights

- It's as much about the **people and their ability to work together** as it is about the collective technical capability of the team – both are needed
- It takes many **different personality types and skill sets** to form an effective team – you need “whole brain”
- Effective teams consciously fill **critical roles and responsibilities**
- All teams progress through **four stages of development**
- You can't “skip” any stages
- Leaders must change their **expectations and leadership approach** to match the development stage of the team

