

Developing Center Proposals: Establishing Synergy Beyond Disciplinary Boundaries



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Beyond Disciplinary Boundaries



I'm on the verge of a major breakthrough...

but I'm also at that point where Chemistry leaves off and Physics begins....

So I'll have to drop the whole thing....

Platform for Innovation

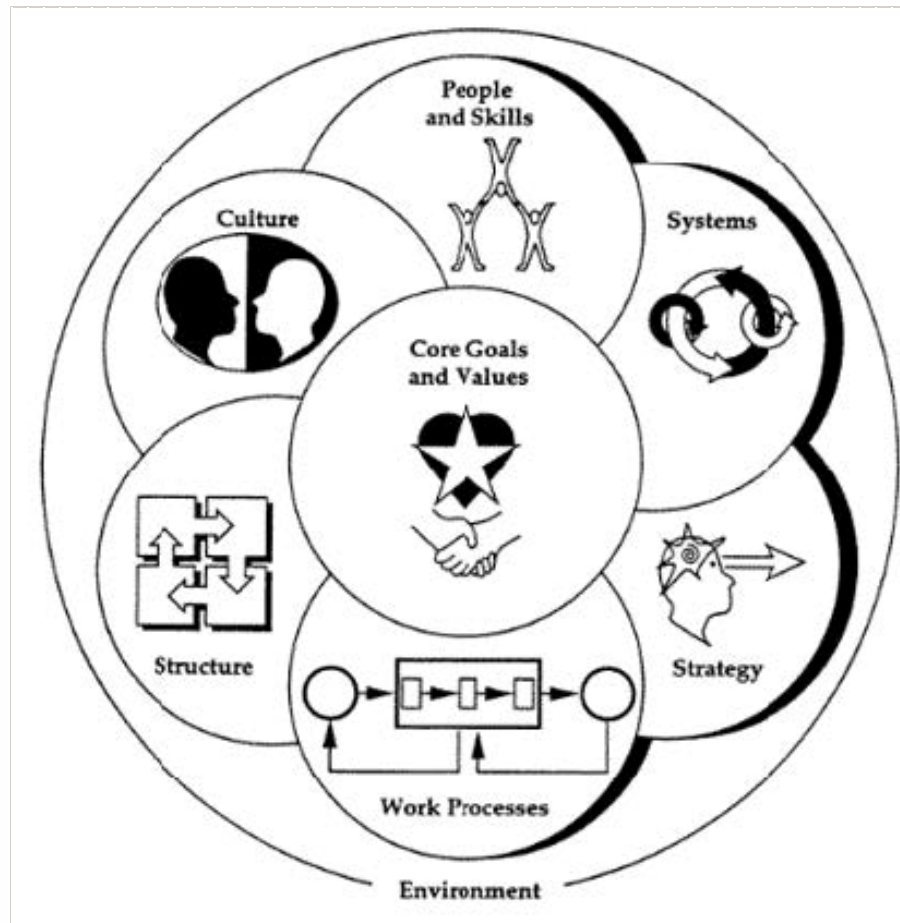
A Multidisciplinary Team: ... “a team whose members have developed sufficient trust and mutual confidence to transcend disciplinary boundaries and adopt a more holistic approach to a system level problem”

Solve System Level Problems

... “the traditional chemistry/physics/biology departmentalised university infrastructures - which are now clearly out-of-date and a serious hindrance to progress - must be replaced by new ones which actively foster the synergy inherent in multidisciplinary...”

Nobel laureate and President of the Royal Society of Chemistry, Professor Sir Harry Kroto

The Multidisciplinary Team Environment



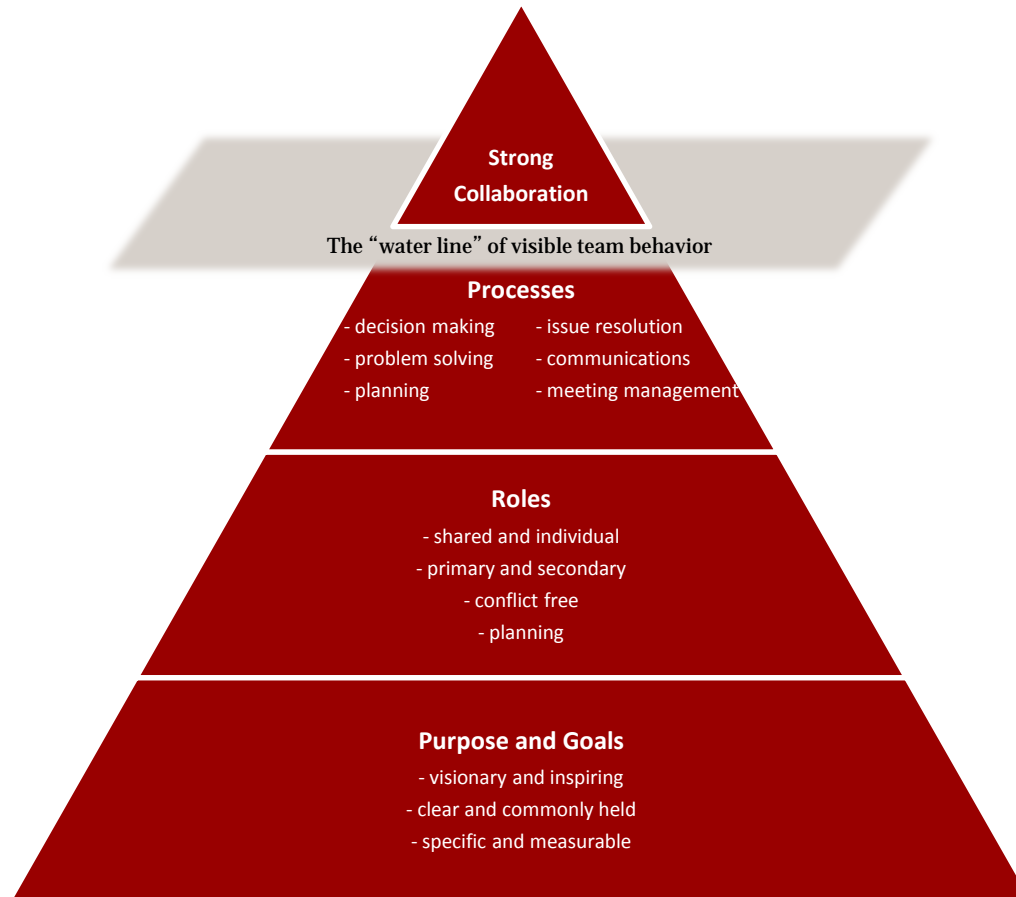
Major Dysfunctions

- Internal politics and individual competitiveness
- Fear of losing power and authority
- Fear of conflict
- Confusion about roles, accountability, and relationships
- Power struggles/absence of trust
- Lack of commitment

Major Dysfunctions (Continued)

- Being too busy
- Pre-occupation with prior projects and tasks
- Communication difficulties
- Slower decision-making
- Disagreements

The Team Pyramid



Absolutely Essential

Collaborative Culture

- Core Values
- Leadership Behaviors

Creating a Shared Vision

- Context to understand everyone's roles and responsibilities
- Communicating frequently and consistently about the goals and purpose

Promote Core Strengths

- Leadership and teaming capabilities
- Research/Education Expertise

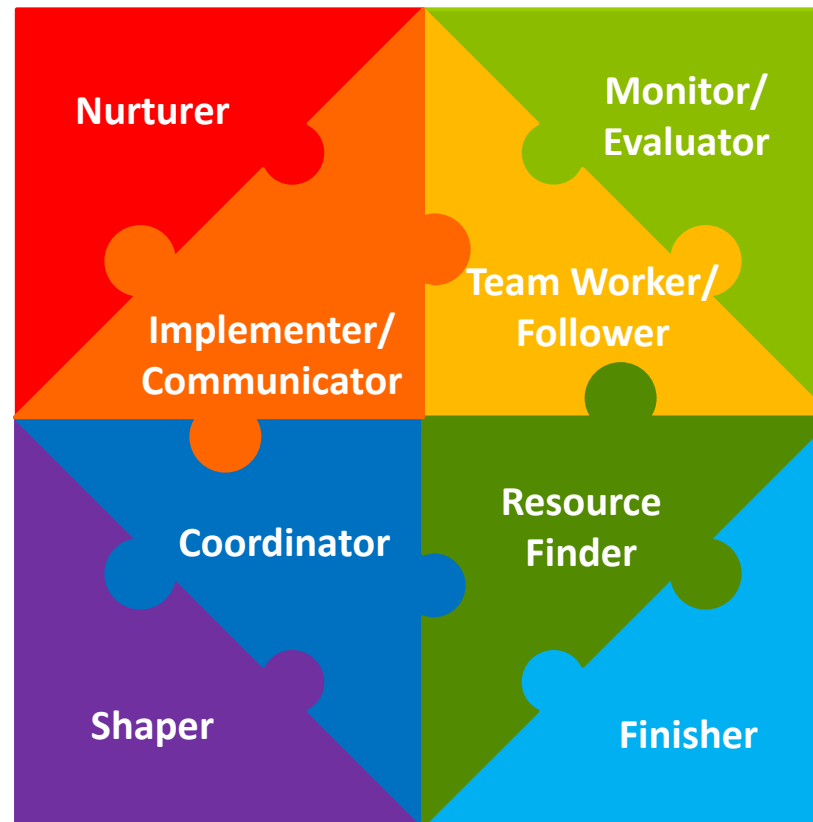
An Evolving Process

- Develop a clearer understanding of the problem being addressed
- Understand the capabilities that each member of the team brings to solve a system-level problem
- Understanding of system-level problem
- Buy-in
- Commitment, Roles, Tasks, and Timeline

An Evolving Process (Continued)

- Management protocols
- Team decision-making
- Synergy and inter-dependence
- Resource planning and allocation
- Accountability and progress

Several Hats for the PI



Role of PI

- Provide leadership
- Establish a vision and clear expectations
- Explain context and motivation
- Require commitment from all
- Identify appropriate collaborators based on needs of the proposal
- Assign responsibilities and specific tasks with deadlines

Role of PI (Continued)

- Explain interdependence of roles and proposal tasks
- Foster shared decision-making
- Explain management, communication, and proposal development protocols
- Recognize organizational culture of external partners, including industry partners
- Be accountable and hold others accountable

Role of PI (Continued)

- Establish a trusting and collaborative climate through mutual respect, regular communication, listening, and constructive feedback
- Be open to constructive criticisms
- Obtain upper management support

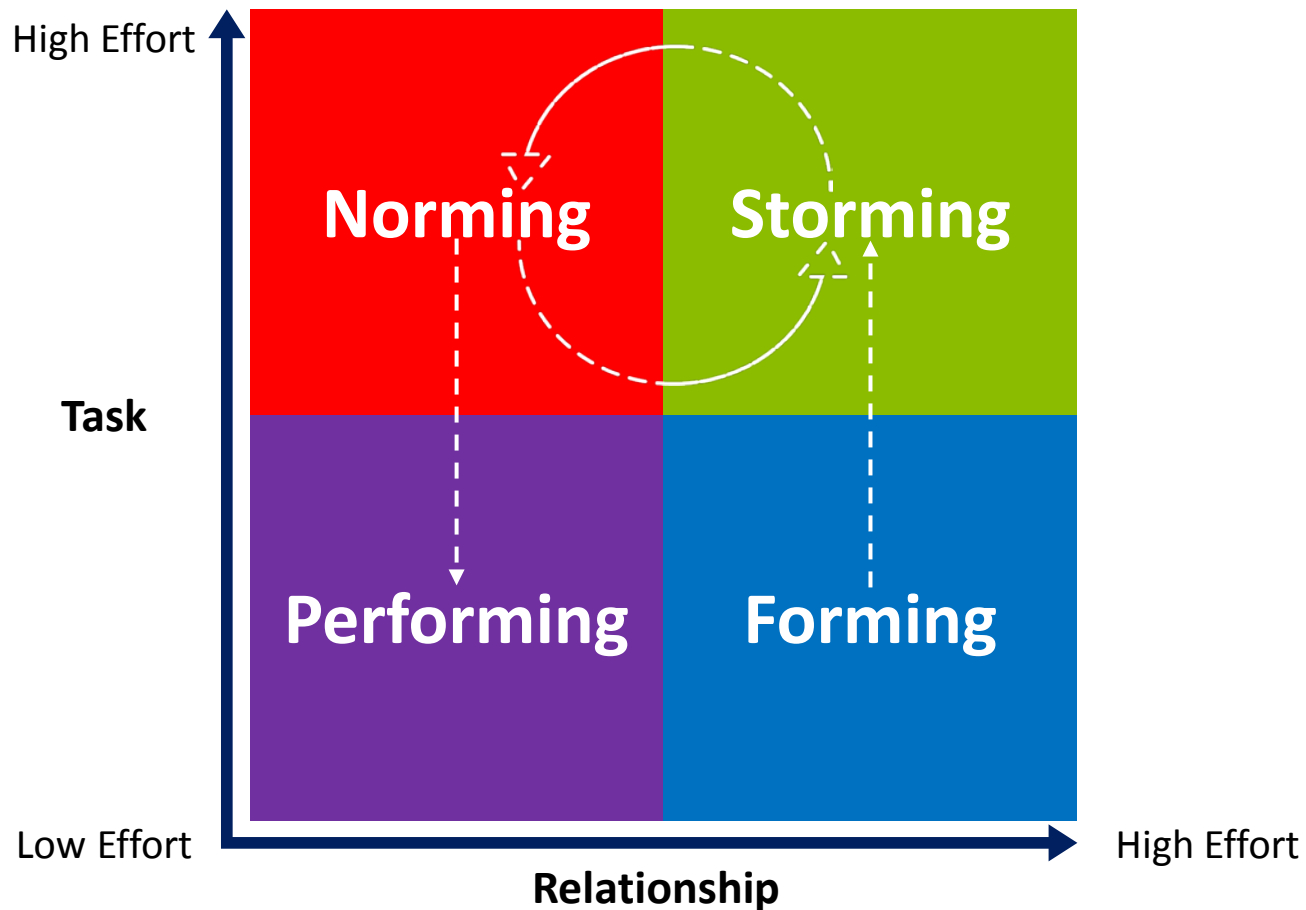
Role of the Research Development Professional

- Leading proposal development and facilitation processes
- Establishing priorities, clear goals, protocols, and timeline
- Maintaining timeline with strict project management protocols
- Assisting in team development, including diversity

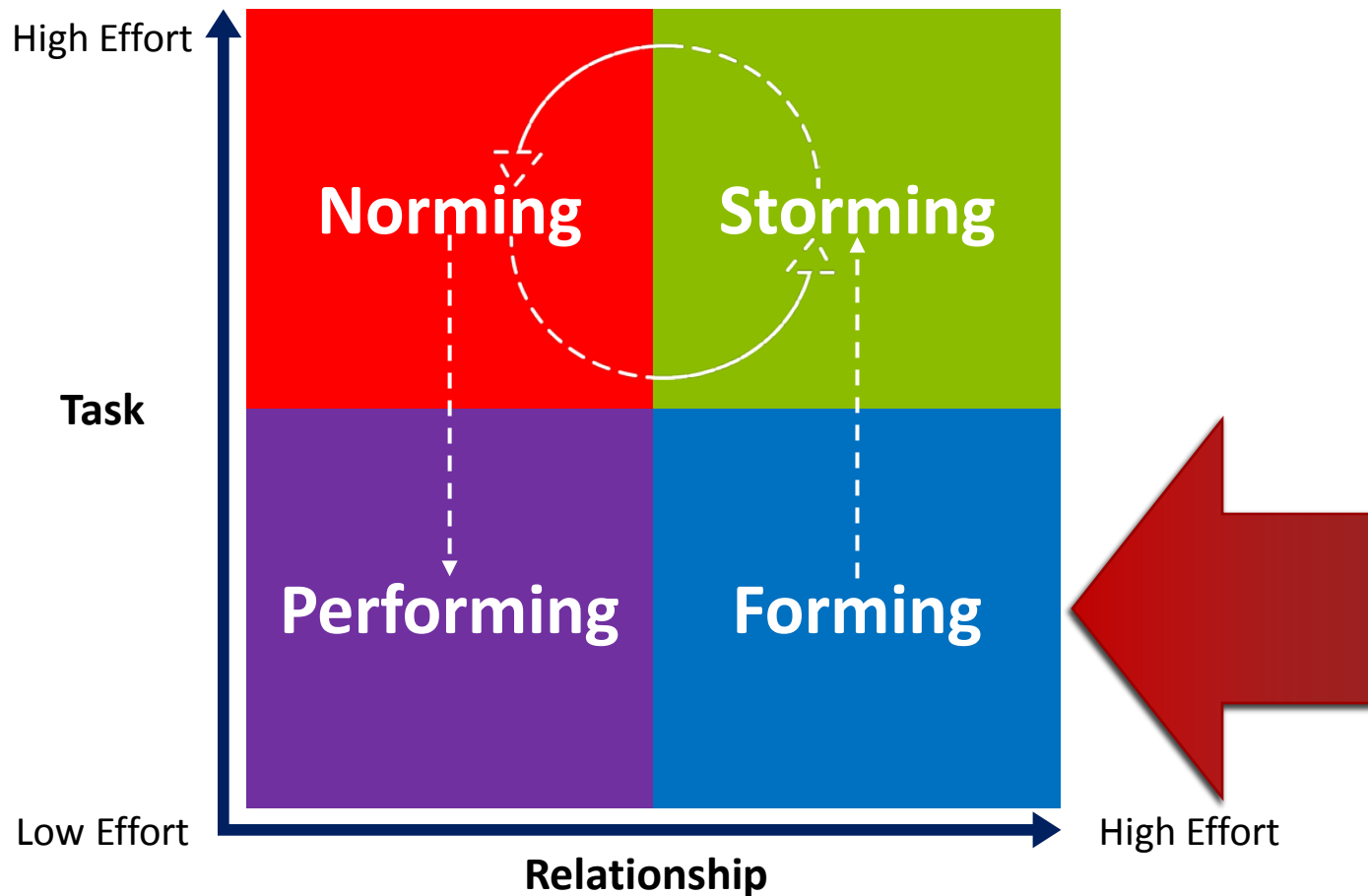
Role of the Research Development Professional (Continued)

- Facilitating task assignment and communication
- Coaching for success
- Influencing and negotiating
- Providing feedback
- Managing conflict
- Getting rid of obstacles
- Facilitating administrative tasks
- Reducing disagreements

Stages of Team Development



Stages of Team Development



Most Frequent Comment..Oh No!



Are you Ready?



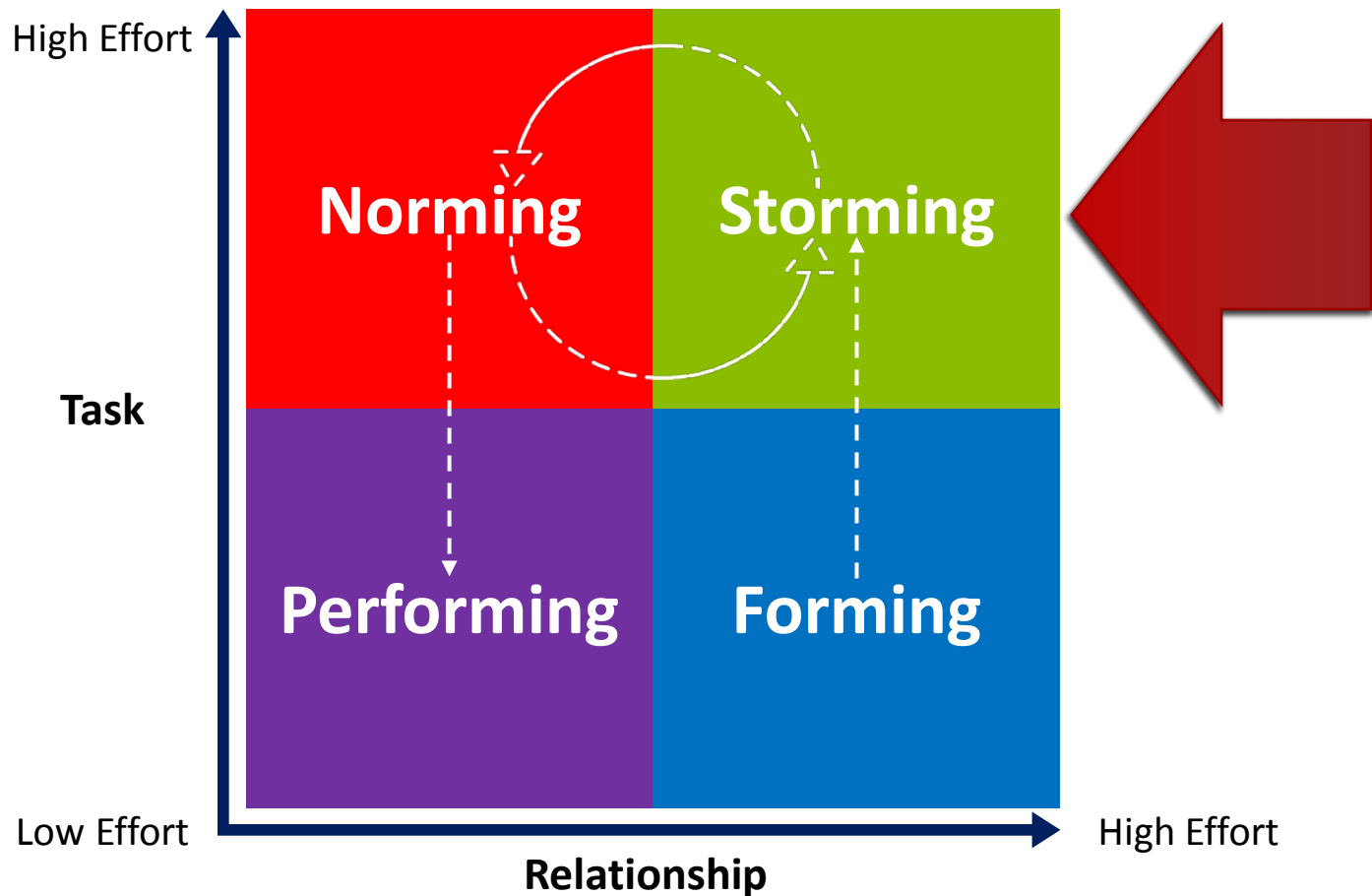
Forming....

- Are we ready?
- Deal with the "big picture" in the first few meetings
- Develop an appropriate pool of expertise – expertise profile matrix
- Create a vision, objectives, and team accountability expectations

Forming...(Continued)

- Identify a core team
- Develop a collaborative dialogue, ask for opinions, and identify potential challenges
- Require commitment of all members
- Develop a schedule with specific tasks
- Establish a technology-based networking tool for collaborative meetings, information and data-sharing, and version control

Stages of Team Development



Storming....

- **Reality sets in...**this is the stage when large center proposals fail...
- Team members are often unclear about the objectives and their roles
- PI, Co-PIs are generally overwhelmed with the amount of work
- PI feels that he/she does not have adequate buy-in and support

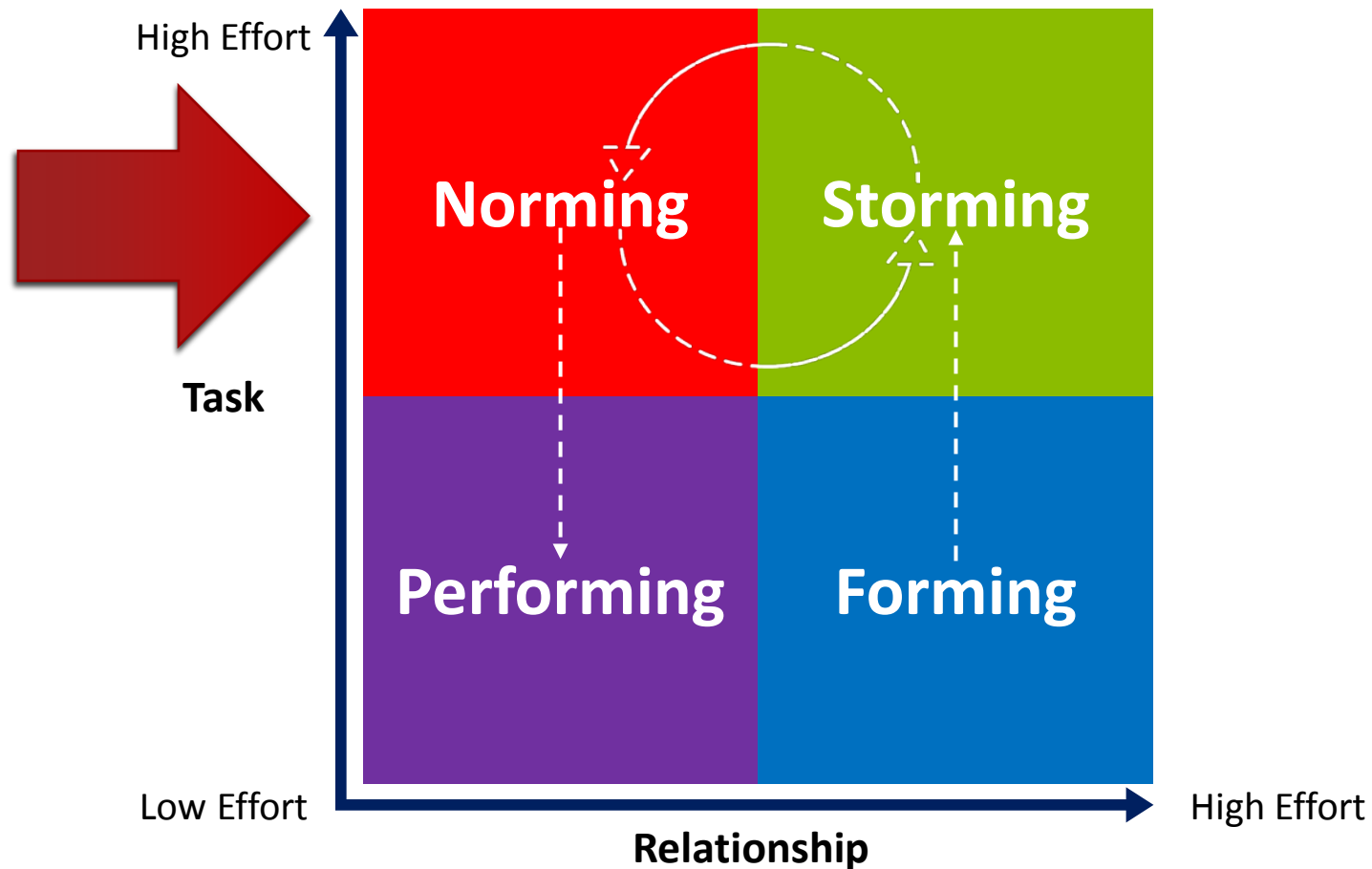
Storming.... (Continued)

- Reinforce vision
- Analyze partnership base and tailor team composition, if necessary
- Assist in reducing team disagreements on proposal vision, objectives, and scope by seeking alternatives
- Solicit consensus
- Make people feel valued and necessary

Storming.... (Continued)

- Enable collaboration by providing structure through efficient communication and proposal development processes
- Remove administrative roadblocks and facilitate upper management support
- Provide strategic and timely feedback on proposal scope, components, and partnership base

Stages of Team Development



Norming....

- Majority of time going back and forth between the Forming and Norming Stage
- The team is beginning to work synergistically
- Trust and mutual respect are beginning to get established
- Foster shared decision making and consensus
- Provide and constructive feedback

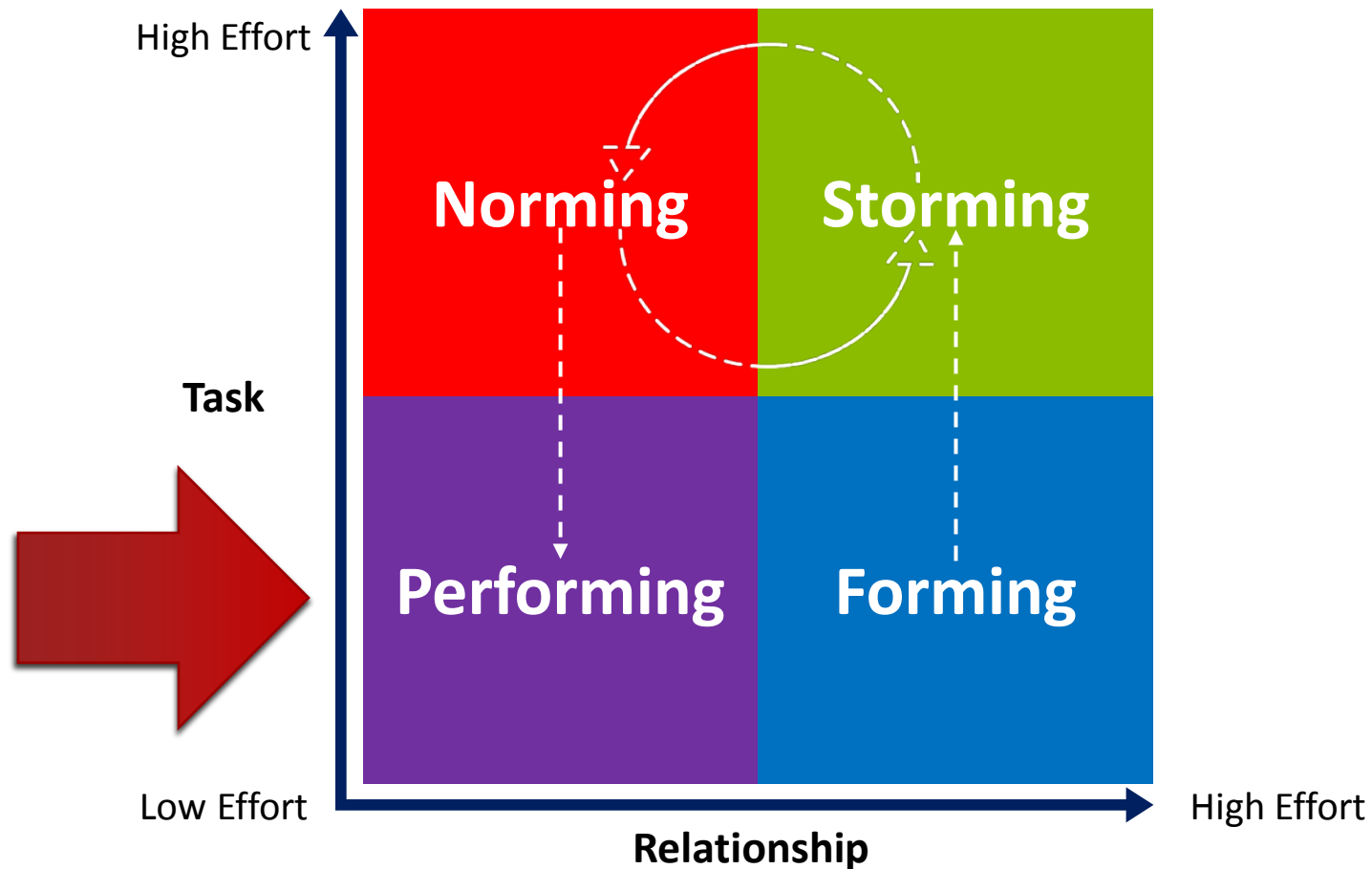
Norming....(Continued)

- Help team members understand the importance of interdependence in proposal development
- Recognize the complexity of center proposals and be flexible and open to changes in proposal content and proposal development strategies
- Engage the upper management in institutional commitment resource allocation decisions

Norming....(Continued)

- Provide timely feedback on proposal development progress
- Hold people accountable
- Regularly assess team dynamics
- Be proactive in identifying challenges and pitfalls
- Remove roadblocks

Stages of Team Development



Performing....

- The final stage in the proposal development process
- Deadline is nearing fast
- Stress levels are high, going higher...
- Everything is on a critical path
- Personal life comes to a standstill...
- Delegate and monitor progress

Performing...(Continued)

- Maintain a strict schedule
- Mobilize additional administrative resources to ensure development of strong proposal and timely submission
- Red team reviews
- Remove administrative roadblocks
- Communicate, Communicate, Communicate!

Performing....(Continued)

- Recognize administrative and hierarchical protocols and plan accordingly
- Facilitate rapid decisions at the institutional level
- No surprises!

Common Mistakes and How to Avoid Them

- **The “Vision Thing”**: No overarching vision for the center
 - Vision usually comes from the PI/Technical Leader
 - How will the world be different after this center has done its work?
- **The ad hoc team**
 - Hold a meeting about the center opportunity and see who shows up
 - Attempt to craft a research vision based on their research interests
- **Late Start**
 - Late decision to pursue the center grant
 - Decision made early, but late start on proposal effort

Common Mistakes and How to Avoid Them

- **Team has no history of collaboration**
 - Need a core of strong researchers who have worked and published together
- **Research track record/qualifications of team do not meet expectations for center program**
 - Need previous funding by agency
 - Important publications in the field
- **Collaborators aren't contacted until late in the process**
 - Scramble for letters
 - No time to incorporate their ideas

Common Mistakes and How to Avoid Them

- **Siloed research plan**
 - Each thrust/theme leader develops and writes her/his research plan independently
- **All communication (or lack thereof) via email**
 - No regular meetings
 - No feeling of urgency among contributors until deadline draws near
- **Lack of attention to non-research components**
 - Standard (“boilerplate”) education and outreach
 - Commercialization, innovation, industrial partnership plans uninspired with no new ideas and no knowledge of agency’s latest thinking

Common Mistakes and How to Avoid Them

- **Lack of logistical support for PI**
- **PI is disengaged** (danger when decision to pursue center was “top-down”)
- **Lack of trust among research team members** (particularly if from different institutions, IP issues)
- **Roles and deadlines for contributors are unclear or not enforced**
- **Lack of preparation for site visit**

Summary

- **Developing a competitive center proposal is an immensely challenging undertaking**
- **Research Development Professional can play a key role in success of a center proposal**
 - Can't do it alone
 - Can make the difference between a functional or dysfunctional team
 - Can provide the institutional memory, skills and understanding of best practices

Open Discussion

What would you do, as a research development professional, to help a team from being dysfunctional to being successful in submitting a strong center proposal?

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Thank you!