Session H6
How NASA Builds Teams:
Mission Critical Soft Skills for Scientists, Engineers and Project Teams

By
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Your Wellness & Performance Enhancement Manual

Briefing Overview
- Acquaint you with novel processes for enhancing both team performance and individual effectiveness.
  - Information you might need to survive/prosper in the coming economy
- Topics:
  - Managing performance by managing “social context”
  - Quantitative results from ~200 NASA teams
  - mentioning our trio of team context diagnostics (free slides at NASAteambuilding.com)
    - Innate Personality
    - Culture Diagrams
    - Project Mindsets (Paradigms)
  - The “4-D” ad-hoc “Context Shifting Worksheet” (CSW)
    - Organizes How NASA Builds Teams, “4-D” Workshops and “4-D” Coaching (>70% of our sessions)
  - Changed a client’s profit from 67% to 96% (page xix)
Chapter 1: Think You Can Ignore Social Contexts?

Think You Can Ignore Social Contexts?

"There was a leadership failure."

Actually, a "social context" failure put good people in bad places.

Hubble is in its 19th year of operations with over 8,000 articles in peer-reviewed journals.

Chapter 2: Managing Social Context Manages Technical Performance

It's the Context, Stupid

Which statement do you believe is more true?

With regard to the power of flawed social contexts:

A. They are root causes of all major space mishaps and powerfully diminish all teams’ performance?
B. Limited to the unique Hubble situation?

Does your character have more to do with:

A. How you were raised (inside-out)?
B. The context (environment) you sustain around you (outside-in)? (See Tipping Point)

During the 90's Korean Air crashed at 17 times the industry average because:

A. They imported the Korean social context into cockpits?
B. KAL pilots were less competent than others?

80% of team performance shortfalls are caused by:

A. Inadequate individual training; or
B. Team context shortfalls? (See Training Ain’t Performance)

Chapter 4: The 4-D Assessment Process

Eight Behavioral Norms and Contexts

Want this?

Do this!
Chapter 4: The 4-D Assessment Process

Measuring Behaviors to Measure Context

Histogram of 300 teams' average behavioral norms

Feel Disincluded
Unappreciated
Low Trust

Measuring Behaviors to Measure Context

Conflict
Ave.
Blind Optimism
No Drama
Systems, 2000-2009

Which would you rather work in?
Which would perform better?

Chapter 5: NASA's 4-D Teambuilding Results

NASA Team Results Summary

We grouped the 198 teams with multiple assessments into one of five quintiles. The image below is the ~40 teams beginning in the bottom quintile.

Planned reassessments, on the intellectual foundation of workshops, are your most efficient development tools.

Chapter 5: NASA's 4-D Teambuilding Results

Efficiency Enhancement per Reassessment

Teams, First and Following Percentile Ranks

198 NASA Teams

Teams using 4-D processes increased their average efficiency with every Reassessment!
Managing Context to Manage Performance

Need “Blue” Visioning leaders (architects) for the formulation phase. Creative, driven to be the “best.”

Need “Orange” Directing leaders for the implementation phase. Plan the work, work the plan.

Need “Greens” and “Yellows” to lead large, complex teams.

Chapter 6: Using the 4-D System to “Color” Your Personalities

Your Culture—Another Aspect of Context

“In a fight between you and the world, bet on the world.”
– Franz Kafka

“In a fight between you and the culture, bet on the culture.”
– 4-D Systems

Project Mindset Coherent Across Stakeholders

“I wanted to explain why some project managers are fired when cost goes from $400M to $410M and others get medals for projects that go from $400M to $750M.”
– John Casani, Project Manager, JPL
Context Shifting Worksheet ("CSW")

1. DEFINE THE PROBLEM/SITUATION:
- Situation you want to resolve:________
- Outcome you want to achieve:
  - "Win, Good contract, happy customer, sanity"
  - "Year "Great" empowering
  - "Social context management, program success"

2. VISUALIZING DIMENSION:
- What can you authentically appreciate about the other party or the difficult situation?
- What do they want that you can want for them also?

3. INCLUDING DIMENSION:
- List everyone you need to include to succeed
- What implicit or explicit agreements have you broken that you must now process?

Specific Actions/Requests you will now take/make:

Chapter 11: Manage Your Emotions to Manage Your Team's Energy

Managing Your Emotions at Work

• Glad: Do you use joyful feelings to uplift people?
  - And, how essential is humor in difficult times?
• Mad: Do you use real or acted anger to motivate people?
  - Is it Ok to express anger in e-mails?
• Sad: Have you ever used sadness to mourn a loss?
  - E.G. Mourning HST's flawed mirror.
• Scared: Have you ever used fear to motivate people?
  - Can you ask "What would I do if I had no fear?"
  - Fear has unique power to control others.
• Love: Have you ever used affection to engage people?
  - As loving your work, your company, or your Agency?

You can, and must manage your expression of emotions at work (and at home).
Chapter 12: People Need to Feel Appreciated by You

Mastery Through "HAPPS" Appreciation

From the emotional state of gratitude (glad-group) express appreciation:
- Habitually - As a matter of habit (Habits are our personal bureaucracy);
- Authentically - Live in the mindset of gratitude to experience what you appreciate about others;
- Promptly - The closer in time to the valued behavior, the better;
- Proportionally - make the statement of appreciation (verbal, financial...) proportional to the contribution;
- Specifically - the more specific, the more powerful. Avoid repetitions as in "good job" as a matter of routine.

"HAPPS" is an effective appreciation mnemonic.

Chapter 12: People Need to Feel Appreciated by You

Learn from "911" - Do it Now!

Many words were spoken into the ears of the dead that they yearned to have heard while they were alive.

Your homework assignment. Tonight, express authentic appreciation for someone in your life.

Context Shifting Worksheet ("CSW")

1. DEFINE THE PROBLEM/SITUATION:
   - Situation you want to resolve: We are in a tough $18 competition and must win.
   - Outcome you are committed to realizing: Win.
   - Your "need": Giving. "Good customer service" is our mission.
   - Your "need": Empowering. Storytelling: "Social context management = program success =.Anxious (Scared-group) vs. Excited (Glad).

2. EXCLUDING DIMENSION
   - What can you authentically appreciate about the other party or the difficult situation?
   - What do they want that you can want for them, also?

3. INCLUDING DIMENSION
   - List everyone you need to include.
   - What implicit or explicit agreements have you broken that you must re-negotiate?

4. BIDIRECTIONAL DIMENSION
   - Any story lines you need to process?
   - Any unclear Roles, Accountability, or Authority agreements?

Specific Actions/Requests you will now take/ make:
Finding My Boss’s Shared Interests

Chapter 13: Mine the Gold in Your Shared Interests

What does my boss want that I can want for him also?

A Hubble Servicing Mission success.
Peace with his Admin + other Directors.
Not having to testify about another Hubble failure.
If the servicing mission fails, we can truthfully say he provided everything I requested.
I then accept accountability and resign.

What does she want that I can want for her also?

Power and control over me? No Way!
The ability to do her job.
For me not to end-run her in the future.
So, can you now imagine the conversation?

Context Shifting Worksheet ("CSW")

1. DEFINE THE PROBLEM/SITUATION:
   - What can you authentically appreciate about the other party or the difficult situation?
   - What do you want that you can want for them also?

2. CULTIVATING DIMENSION:
   - What are the fair & open process story-lines and expressed emotions that support:
   - Science results, Program success

3. INCLUDING DIMENSION:
   - What implicit or explicit agreements have you broken that you must now resolve?

4. VISIONING DIMENSION:
   - What uncomfortable reality must you confront to create the outcome you want?
   - The % level of commitment to each story-line, expressed emotions, story-lines, and agreed upon goals

5. DIRECTING DIMENSION:
   - Any unspoken takeaways you need to process?
   - Any unclear rules, accountability, or authority agreements?

Specific Actions/Requests you will now take:

Chapter 14: People Need to Feel Included by You

What’s Next Most Important?

# 1 - Feeling appreciated.
# 2 - Feeling included.

What’s it like to feel “left out”?

People need to feel included by you. (Second only to feeling appreciated, and both on the “emotional side.”)
Chapter 15: Building Trustworthy Contexts

Processing Broken Agreements

We all break agreements from time to time:
- Lack of discipline,
- Poor planning,
- Unexpected circumstances.

It doesn’t matter what caused the agreement to be broken. A broken agreement is a broken agreement. Period. How you handle it bears heavily on your trustworthy.

Now, practice the following process to reenter the state of integrity:
1) Tell the truth: “I broke my agreement with you;”
2) Describe the circumstances;
3) Tell how you will prevent this in the future;
4) Express regret/apologize; and
5) Check, “Are you and I OK now?”

Clear up any “glitches” when you return to work or home. (If these include marital infidelity, proceed cautiously)

Context Shifting Worksheet (“CSW”)

1. DEFINE THE PROBLEM/SITUATION:
   - Situation you want to resolve: We are in a tough $18 competition and must win.
   - Outcome you committed to realizing: To Win. Good contract, happy customer, sanity.
   - “Red” telling: Story-line: Our competition is cheating, it’s hopeless. Victim.
   - “Green” empowering: Story-line: Social context management, program success.
   - Your expression of appropriate emotion: Angry (Scared-group) → Excited (God)

2. OBJECTIVE DIMENSION:
   - What can you authentically appreciate about the other party or the difficult situation?
   - What do they want that you can want for them?
   - Science results: Program success

3. INCITING DIMENSION:
   - List exercises you need to include to succeed.
   - Just-us Management, their sponsors.
   - What implicit or explicit agreements have you broken that you must now process?

Specific Actions/Requests you will now take/make:

4. VULNERABILITY DIMENSION:
   - What uncomfortable reality must you confront to create the outcome you want?
   - The % level of Commitment your chosen Story-line and expressed Emotions support?

Specific Actions/Requests you will now take/make:

5. DIRECTION DIMENSION:
   - Any Drama-stakes you need to process?
   - Any unclear Rules, Accountability, or Authority agreements?

Specific Actions/Requests you will now take/make:
Chapter 16: Creating the Future You Want

Reality-based Optimism

From an oncologist: Hope is the elevating feeling when we see (in the mind’s eye) a path to a better future grounded in unalloyed reality.

Clear-eyed, hope gives us the courage to confront our circumstances and the capacity to surmount them. For all my patients, hope, true hope, has proved as important as any medication I might prescribe or any procedure I might perform. (The Anatomy of Hope)

Great vs. mediocre companies: “ Mediocre companies explain away brutal facts rather than confront them head on.” (Good to Great)

Blind optimism is willful ignorance.

We use the term “reality-based optimism” for what this oncologist calls hope.

Chapter 16: Creating the Future You Want

Outcome Commitment Reveals the Means

The moment one definitely commits oneself, providence moves too. All sorts of things occur, that would otherwise never have occurred. A whole stream of events issue, which no one could have dreamt...

— W. N. Murray, Scottish Himalayan Expedition (From Goethe)

We call this state “100% committed.”

Outcome commitment alters perception to reveal solutions.

Context Shifting Worksheet (“CSW”) #30

1. DEFINE THE PROBLEM/SITUATION
   1. We are in a tough $18 competition and must win
   2. Outcome you are committed to realizing: To Win
   3. Good contract, happy customer, sanity
   4. Your “hard” feeling story-line: Our competitor is cheating, it’s hopeless, Victim
   5. Your “soft” feeling story-line: Social context management = program success
   6. Your expression of appropriate emotion: Anxious (Scared group) = Excited (Glad)

2. CONTEXTING DIMENSION
   1. What can you authentically appreciate about the other party or the difficult situation?
   2. Justifying. The fair & open process
   3. What do they want that you can want for them also?

Science results: Program success

3. DIRECTING DIMENSION
   1. What unfavorable reality must you confront to create the Outcome you want?
   2. Weakness in thermal design
   3. The % level of Commitment your chosen story-line(s) agrees with: Embrace support 100% to Customer & Program success

4. INCLUDING DIMENSION
   1. List everyone you need to Include to succeed
   2. Just as Management, their sponsors
   3. What explicit or implicit agreements have you broken that you must re-negotiate?
   4. Some: Missed some deadlines

Specific Actions/Requests you will now take

© 4-D
Chapter 17: Your Team Can’t Afford Drama

Mounting the Stage - Joining the Melodrama

Victim
“There’s nothing I can do.”

Rationalizer
“It really doesn’t matter.”

Rescuer
“I’ll do it!” (when I shouldn’t).

Blamer
“It’s your fault.”

There are four ways we “mount the stage” and create the drama.

Chapter 17: Your Team Can’t Afford Drama

Escaping the Hero/Rescuer Mindset

• Do I want more of this?
• First, buy a little time, “Could you let me think about this? - I’ll get back to you soon.”
• Deliver your “NO” response 4-Dimensionally.

- Appreciate person/situation. Speak to shared interests.
- Speak unalloyed reality. Vision good outcomes.
- Enhance your relationship. State commitment to integrity.
- Completely free of drama (feeling good). Ask for it.

Use 4-D contextualizing to say NO in a way that avoids power struggles.
(Do you remember Charlie’s two rules?)

Context Shifting Worksheet (“CSW”)

1. Define the problem/situation
- Situation you want to resolve: We are in a tough $18 competition and must win.
- Outcome you are committed to realizing: To Win, Good contract, happy customer, sanity.
- Your “best” feeling story-line: Our competitor is cheating, it’s hopeless. Victim
- Your “green” empowering story-line: Social context management = program success.
- Your perception of appropriate emotion: Anxious (Scared group) ➔ Excited (Glad).

2. Defining dimension
- The fair & open process
- What do you authentically appreciate about the other party or the difficult situation?
- The flawed process
- The% level of Commitment to your chosen story-line, your perception of impact on customer & program success.
- Science results. Program success.

3. Inclining dimension
- What uncomfortable reality must you confront to create the outcome you want?
- Weakness in thermal design vs.
- The % level of Commitment of your chosen story-line.
- Support each other in not blaming customer when frustrated.
- Some missed deadlines.

Specific actions/requests you will take/have taken.

Page Number 11
Roles, Accountability and Authority (RAAs)

Roles = The functions of a person in their team context.
Accountability = The results team members are to deliver.
Authority = Power granted to team members.

RAA requirements:
- Documented (e.g. performance plans, org. charts) and communicated (e.g. on office doors).
- Flowed in processes (e.g. monthly reviews, SE).

Two RAA failure modes:
- Lack of specificity ➔ first grade soccer?
- Lack of team-results ownership ➔ go for the fumble?

Failing to be totally clear about what you expect from people puts good people in bad places.

Context Shifting Worksheet ("CSW")

1: DEFINE THE PROBLEM/SITUATION:
- Situation you want to resolve: ______________________________________________________
- Outcome you are committed to realizing: _______________________________________________
- Your “Red” limiting Story-lines: _____________________________________________________
- Your “Green” empowering Story-lines: _______________________________________________
- Your expression of appropriate emotions: _____________________________________________

2: CULTIVATING DIMENSION
- What can you authentically appreciate about the other party or the difficult situation?
- What do they want that you can want for them?
- Science results, Program success

3: INCLUDING DIMENSION
- List everyone you need to Include to succeed
- Just the Management, their sponsors
- What implicit or explicit agreements have you broken that you must now process?
- Missed some deadlines

4: VISIONING DIMENSION
- What uncomfortable reality must you confront to create the Outcome you want?
- The % level of Commitment your chosen Story-lines and expressed Emotions support:

Specific Actions/Requests you will now take/make: _____________________________________

Our Closure

Never doubt that a small group of thoughtful, committed citizens can change the world.

Indeed, it’s the only thing that ever has.
- Margaret Mead, Anthropologist

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