FUNDAMENTALS OF TEAM DYNAMICS

TEAM COMPOSITION (SIMPLE PROJECT TEAM)

• ADMINISTRATORS
  – MANAGERS
    • LEAD THE DEVELOPMENT
    • PUSH FOR DECISIONS
  – CONTROLLERS
    • ASSESS PROGRESS
    • DETERMINE RESOURCE NEEDS
    • PROVIDE QUALITY CONTROL
    • MAINTAIN THE TEAM COMPOSURE
TEAM COMPOSITION (SIMPLE PROJECT TEAM)

- TECHNICAL PERSONNEL
  - SPECIALISTS
    - COMPLETE DESIGNS OF SPECIFIC COMPONENTS
    - MAY DESIGN OVERALL CONTROL SYSTEMS
  - GENERALISTS
    - DO THE SYSTEMS DESIGN AND INTEGRATE PROJECT COMPONENTS
    - DEVELOP OPERATING DOCUMENTS

MECHANICS OF TEAM FORMATION

- FORMING
  - CRITICAL DECISION PERIOD
  - GENERAL SCOPE
  - SELECTION OF PERSONNEL
  - TESTING OF LEADER
  - MANAGER MAKES MOST OF THE DECISIONS TO GET THE PROJECT ACTIVATED

(http://www.businessballs.com/tuckmanformingstormingnormingperforming.htm
MECHANICS OF TEAM FORMATION

– STORMING
  • DEFINE SCOPE
  • DETERMINE TEAM MEMBER RESPONSIBILITIES
  • ESTABLISH LINES OF COMMUNICATION AND OTHER MECHANICS OF INTERACTION
  • COMPETITION UNTIL COMPROMISES ARE ACHIEVED

– NORMING
  • DEVELOPMENT OF THE PROCESSES
  • ACCEPTANCE OF THE COMPROMISES FROM STORMING
  • DELEGATION BASED ON INITIAL EXPERIENCE
MECHANICS OF TEAM FORMATION

- PERFORMING
  - UNIFORM DIRECTION TOWARDS A SHARED VISION
  - TEAM FUNCTIONS WELL IN TERMS OF GOALS AND RELATIONSHIPS
  - THE MANAGER HAS DELEGATED MUCH OF THE DECISION MAKING ACTIVITIES TO THE REST OF THE TEAM

EFFECTIVE TEAM PERSONALITY

- (BASED ON A PRESENTATION BY RICK WILLSON, INTEL CORP)
  - AN EFFECTIVE TEAM NEEDS DIVERSITY OF PERSONALITIES
  - DISC PERSONALITY PROFILE
  - NOT A TEST
## PERSONALITY EVALUATION

<table>
<thead>
<tr>
<th></th>
<th>1-4</th>
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<tbody>
<tr>
<td>1</td>
<td>Bold</td>
<td>Attractive</td>
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<td></td>
<td>Enthusiastic</td>
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<td></td>
<td>Daring</td>
<td>Charming</td>
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<tr>
<td></td>
<td>Outgoing</td>
<td>Sympathetic</td>
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</tbody>
</table>

## PERSONALITY EVALUATION

<table>
<thead>
<tr>
<th></th>
<th>5</th>
<th>6</th>
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<tbody>
<tr>
<td>5</td>
<td>Pioneering</td>
<td>Good Mixer</td>
</tr>
<tr>
<td></td>
<td>Talkative</td>
<td>Even-tempered</td>
</tr>
<tr>
<td></td>
<td>Gentle</td>
<td>Thorough</td>
</tr>
<tr>
<td></td>
<td>Well-disciplined</td>
<td>Competitive</td>
</tr>
<tr>
<td>7</td>
<td>Easygoing</td>
<td>Reserved</td>
</tr>
<tr>
<td></td>
<td>Controlled</td>
<td>Direct</td>
</tr>
<tr>
<td></td>
<td>Dominant</td>
<td>Appealing</td>
</tr>
<tr>
<td></td>
<td>Sociable</td>
<td>Kind</td>
</tr>
</tbody>
</table>
**PERSONALITY EVALUATION**

| Vigorous   | Expressive | 9 |  |
| High-spirited | Considerate | 10 |  |
| Amiable    | Diplomatic |   |  |
| Accurate   | Restless |   |  |

**SUMMARY OF RESULTS:**

D I S C

---

**PERSONALITY EVALUATION**

- Defines your preferred style of operations – your behaviour in work situations
- Allows you to recognize how others are affected by your style
- Allows an opportunity to appreciate and leverage different styles present on your team
- Should allow you to be more effective in accomplishing team tasks by improving relationships
- Provides some alternative styles that you can utilize in various work situations – you may change your style to make the team more effective
PERSONALITY DIMENSIONS

– PRIMARY CATEGORIES
  • D – DOMINANCE AND RESULTS
  • I – INFLUENCE AND PEOPLE
  • S – STEADINESS AND METHOD
  • C – CONSCIENTIOUS AND ENVIRONMENT

PERSONALITY DIMENSIONS

• MOST PEOPLE FALL INTO A COMBINATION OF CATEGORIES THAT CAN BE PLOTTED ON THIS FIGURE
PERSONALITY DIMENSIONS

• D AND I TYPES TEND TO BE ACTIVE WHO ADOPT GOALS AND INITIATE ACTIVITIES TO ACHIEVE THEM
• S AND C TEND TO BE REACTIVE AND PREFER TO CONSIDER THE EFFECTIVENESS OF THE PROCESS BEFORE STARTING AN ACTIVITY

CATEGORY CHARACTERISTICS
D – DOMINANT
TOP 10 BEHAVIORS

<table>
<thead>
<tr>
<th>EGOCENTRIC</th>
<th>FORCEFUL</th>
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</thead>
<tbody>
<tr>
<td>DIRECT</td>
<td>RISK TAKER</td>
</tr>
<tr>
<td>DARING</td>
<td>ADVENTURESOME</td>
</tr>
<tr>
<td>DOMINEERING</td>
<td>DECISIVE</td>
</tr>
<tr>
<td>DEMANDING</td>
<td>INQUISITIVE</td>
</tr>
</tbody>
</table>
BEHAVIORAL TENDENCIES - D

– HIGH SENSE OF PERSONAL WORTH
– TASK-ORIENTED – NEEDS RESULTS
– BASIC FEAR – BEING TAKEN ADVANTAGE OF
– MAY BE PERCEIVED TO LACK CONCERN FOR OTHERS VIEWS AND FEELINGS

GENERAL CHARACTERISTICS - D

– FOOD
  • KNOWN TO EAT OVER THE SINK
  • NEVER FOLLOWS RECIPES WITHOUT MAKING CHANGES
  • IMPULSIVE SHOPPER – DOES NOT USE A LIST
GENERAL CHARACTERISTICS - D

- MESSY DESK
  - SAYS “THERE IT IS, YOU LOOK FOR IT”
  - NEWSPAPERS
  - READS THE HEADLINES AND SCATTERED SECTIONS

- ATTITUDE
  - STRONG EGO, DECISIVE, RISK-TAKING, AND SELF-CONFIDENT

CATEGORY CHARACTERISTICS

I – INFLUENCE
TOP 10 BEHAVIORS

<table>
<thead>
<tr>
<th>ENTHUSIASTIC</th>
<th>SELF-PROMOTING</th>
</tr>
</thead>
<tbody>
<tr>
<td>GREGARIOUS</td>
<td>TRUSTING</td>
</tr>
<tr>
<td>PERSUASIVE</td>
<td>INFLUENTIAL</td>
</tr>
<tr>
<td>IMPULSIVE</td>
<td>AFFABLE</td>
</tr>
<tr>
<td>EMOTIONAL</td>
<td>SOCIABLE</td>
</tr>
</tbody>
</table>
BEHAVIORAL TENDENCIES - I

- Optimistic
- People-oriented
- Motivated by social recognition
- Basic fear – social rejection
- May be perceived as disorganized

GENERAL CHARACTERISTICS - I

- Food
  - Has all the latest kitchen gadgets but does not know how to use them
  - Tells you where everything is located in the store, whether you ask them or not.
GENERAL CHARACTERISTICS - I

- DESK
  - DOES NOT KNOW WHERE THINGS ARE, BUT WILL NOT ADMIT IT
  - SAYS "GIVE ME A FEW MINUTES AND I WILL FIND IT"

- NEWSPAPERS
  - READS THE OBITUARIES TO SEE IF THEY RECOGNIZE ANYONE

- ATTITUDE
  - OPTIMISTIC, ENTHUSIASTIC, CHARMING, SOCIABLE, AND PERSUASIVE

CATEGORY CHARACTERISTICS

S – STEADINESS
TOP 10 BEHAVIORS

<table>
<thead>
<tr>
<th>RECEPTIVE</th>
<th>SERENE</th>
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</thead>
<tbody>
<tr>
<td>PATIENT</td>
<td>PROTECTIVE</td>
</tr>
<tr>
<td>LOYAL</td>
<td>SELF-SATISFIED</td>
</tr>
<tr>
<td>PREDICTABLE</td>
<td>TRANQUIL</td>
</tr>
<tr>
<td>TEAM-PERSON</td>
<td>RELAXED</td>
</tr>
</tbody>
</table>
BEHAVIORAL TENDENCIES - S

- PRAGMATIC – TEAM PLAYER AND FAMILY ORIENTED
- PEOPLE-ORIENTED
- MOTIVATED BY ESTABLISHED PRACTICES
- BASIC FEAR – LOSS OF STABILITY
- MAY BE PERCEIVED TO BE POSSESSIVE, WILLING TO RECEIVE BUT NOT WILLING TO GIVE

GENERAL CHARACTERISTICS - S

- FOOD
  - EATS FROM THE 4 BASIC FOOD GROUPS EACH DAY
  - VALUES MEAL TIME AS FAMILY TIME
  - HAS A LIST AND GETS SHOPPING DONE EFFECTIVELY
GENERAL CHARACTERISTICS - S

- DESK
  - EVERYTHING FILED IN EITHER ALPHA ORDER OR COLOR CODED
- NEWSPAPERS
  - LOOKS OVER THE ENTIRE PAPER AND CLIPS INTERESTING ARTICLES
- ATTITUDE
  - TEAM PLAYER, FAMILY PERSON, PATIENT, STABLE AND EASY GOING

CATEGORY CHARACTERISTICS
C – CONSCIENTIOUSNESS
TOP 10 BEHAVIORS

<table>
<thead>
<tr>
<th>PERFECTIONIST</th>
<th>CONVENTIONAL</th>
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<tbody>
<tr>
<td>ACCURATE</td>
<td>COURTEOUS</td>
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<tr>
<td>FACT-FINDER</td>
<td>CONSIENTIOUS</td>
</tr>
<tr>
<td>DIPLOMATIC</td>
<td>RESTRAINED</td>
</tr>
<tr>
<td>SYSTEMATIC</td>
<td>HIGH STANDARDS</td>
</tr>
</tbody>
</table>
BEHAVIORAL TENDENCIES - C

- ACCURATE – THE PRECISION QUALITY CONTROL PERSON
- TASK-ORIENTED
- MOTIVATED BY ADHERENCE TO STANDARDS
- BASIC FEAR – CRITICISM OF THEIR WORK
- MAY BE PERCEIVED TO BE OVERLY CRITICAL OF SELF AND DEMANDING OF OTHERS

GENERAL CHARACTERISTICS - C

- FOOD
  - KNOWS THE % OF PROTEIN, FATS, ETC., IN FOODS
  - READS ALL THE LABELS
  - BRINGS COUPONS AND A CALCULATOR TO SHOP
GENERAL CHARACTERISTICS - C

– DESK
  • MAY BE MESSY, BUT KNOWS WHERE EVERYTHING IS LOCATED
– NEWSPAPERS
  • CALLS THE NEWSPAPER COMPANY IF A WORK IS SPELLED INCORRECTLY
– ATTITUDE
  • ACCURATE, CONSCIENTIOUS, PRECISED, DIPLOMATIC, PERFECTIONIST, AND FACTUAL

HOW TO USE THESE TENDENCIES TO IMPROVE TEAM DYNAMICS

• CONSIDER THE LEVEL OF DEVELOPMENT OF THE PROJECT
  – BASED ON PERSONALITY CHARACTERISTICS, WHO SHOULD BE
    • MAKING DECISIONS?
    • IMPLEMENTING DECISIONS?
    • ASSESSING PROGRESS?
    • COORDINATING WITH THE CLIENT OR OTHER INTERESTED CONSTITUENCY?
TYPICAL ASSIGNMENTS – WHICH PERSONALITY WOULD YOU PREFER – WHY OR WHY NOT?

• FOR THE PROJECT MANAGERS
  – FOR THE TOTAL PROJECT
  – FOR THE PROJECT ENGINEERING MANAGER
  – FOR THE DESIGN ENGINEERING MANAGER
• FOR PLANNING AND SCHEDULING THE PROJECT
  – FOR THE INITIAL PLAN AND SCHEDULE
  – TO MONITOR THE SCHEDULE OVER THE LIFE OF THE JOB

TYPICAL ASSIGNMENTS – WHICH PERSONALITY WOULD YOU PREFER – WHY OR WHY NOT?

• FOR DEVELOPING PROJECT SPECIFICATIONS
  – TO DEFINE OUTLINE SPECIFICATION CRITERIA
  – TO DEFINE DETAILED SPECIFICATION CRITERIA
• FOR DEVELOPING COMMUNICATION STRUCTURES
  – WITHIN THE TEAM
  – WITH THE CLIENT
  – WITH SUBCONTRACTORS AND VENDORS
• TO DEVELOP AND IMPLEMENT THE QA AND QC ACTIVITIES
CHECK OF RESULTS

• BASED ON YOUR STYLE, WHAT ADVICE (3 RECOMMENDATIONS) WOULD YOU GIVE TO OTHER TEAM MEMBERS TO WORK MOST EFFECTIVELY WITH YOU?

• FOR THE OTHER THREE STYLES, WHAT CAN YOU DO (2 RECOMMENDATIONS) TO WORK MORE EFFECTIVELY WITH THEM

CHECK OF RESULTS

• HOW CAN YOUR STYLE BE USED EFFECTIVELY FOR LEADING A TEAM?

• HOW CAN YOUR STYLE BE USED EFFECTIVELY AS A TEAM MEMBER?
LITERATURE RESEARCH
TECHNIQUES, PRESENTATIONS

– REFERENCE SOURCES THROUGH THE LIBRARY
  • PRIMARY COLLECTION
    (http://mill1.sjlibrary.org/screens/opacmenu.html)
  • ENGINEERING ARTICLES AND DATA BASES
    (INCLUDES A FULL TEXT LIST OF US PATENTS)
    (http://www.sjlibrary.org/research/databases/index.htm?catID=9&getType=1)
  • CITATION INDICES
  • TECHNICAL LIBRARIAN – SANDRA KAJIWARA

– METHODS OF LITERATURE SEARCH
  • LOCATE RELATED PUBLICATIONS
  • DETERMINE THE SIGNIFICANCE OF EACH ARTICLE
  • LOOK FOR COMMON REFERENCES IN PUBLICATIONS
  • USE A CITATION INDEX TO LOCATE OTHER WORKS BY PRIMARY RESEARCHERS
  • CONTACT SPECIFIC INDIVIDUALS WITH SPECIFIC QUESTIONS CONCERNING YOUR RESEARCH
PRESENTATIONS

– PRESENTATIONS ARE DEVELOPED ON POWERPOINT™ OR A SIMILAR SOFTWARE PACKAGE
– THE PRESENTATION SHOULD TELL A STORY
  • WITH A LOGICAL PROGRESSION FROM ONE ACTIVITY TO THE NEXT
  • WITH AN OUTLINE OF THE PRESENTATION AS THE FIRST SLIDE AFTER THE TITLE
  • WITH A CLEAR SUMMARY SLIDE AT THE END

EFFECTIVE SLIDE FORMATTING TECHNIQUES

– BASIC RULES
  • EACH SLIDE SHOULD ILLUSTRATE A SINGLE POINT OR IDEA;
  • USE LARGE, LEGIBLE LETTERS;
  • DO NOT CROWD THE SLIDE;
  • MESSAGE SLIDES SHOULD CONTAIN NO MORE THAN 7 LINES WITH 7 OR FEWER WORDS PER LINE
EFFECTIVE SLIDE Formatting Techniques

• KEEP THE DATA ON SLIDES SIMPLE
  – DIVIDE LARGE QUANTITIES OF DATA OVER SEVERAL SLIDES
  – SLIDES THAT TAKE OVER 20 SECONDS TO COMPREHEND WILL DISTRACT FROM THE VERBAL PRESENTATION
  – USE THE SLIDES AS AN OUTLINE AND DO NOT READ FROM THEM VERBATIM

• USE LARGE, LEGIBLE LETTERS

EFFECTIVE SLIDE Formatting Techniques

• FOR SLIDES IN COLOR
  – LIGHT COLORS, WHITE OR YELLOW, ON A DARK BACKGROUND PROVIDE THE BEST PROJECTION
  – AVOID INTENSE COLORS, SUCH AS RED OR PURPLE, THAT MAY LOOK GOOD ON A COMPUTER BUT DO NOT PROJECT WELL.
EFFECTIVE SLIDE FORMATTING TECHNIQUES

• LIMIT THE NUMBER OF SLIDES TO NO MORE THAN ONE FOR EACH MINUTE OF YOUR PRESENTATION
  – SLIDES ARE INTENDED TO SUPPORT YOUR VERBAL PRESENTATION AND EMPHASIZE IMPORTANT POINTS
  – EXCESSIVE READING FROM SLIDES DIMINISHES THE QUALITY OF YOUR PRESENTATION

EFFECTIVE SLIDE FORMATTING TECHNIQUES

– TEXT SLIDES
  • LINE SPACING SHOULD BE AT LEAST EQUAL TO THE HEIGHT OF AN UPPER CASE LETTER
  • TEXT SHOULD BE BRIEF AND TO THE POINT
    – CONSIDER USING OUTLINE FORM
    – LEAVE YOUR AUDIENCE WAITING TO KNOW MORE INFORMATION; THAT YOU WILL PROVIDE TO THEM.
    – THE AUDIENCE WILL PAY MORE ATTENTION TO YOU AND IT LOOKS LIKE YOU KNOW A LOT
EFFECTIVE SLIDE FORMATTING TECHNIQUES

– GRAPHICAL VERSUS TABULAR PRESENTATIONS
  • USE GRAPHICAL PRESENTATION INSTEAD OF TABLE WHENEVER POSSIBLE BECAUSE IT IS EASIER TO COMPREHEND
  • KEEP THE GRAPHS SIMPLE (AVOID THE FANCY 3 DIMENSION VERSIONS FROM THE SPREADSHEETS)
  • PROVIDE CAPTIONS

EFFECTIVE SLIDE FORMATTING TECHNIQUES

• GRAPHICAL VERSUS TABULAR PRESENTATIONS
  • USE APPROPRIATE GRAPHS FOR THE DATA
    – BAR CHARTS
    – LINE CHARTS
    – SCATTER CHARTS
    – PIE CHARTS
EFFECTIVE SLIDE FORMATTING TECHNIQUES

– TABULAR SLIDES
  • TABULAR DATA SHOULD BE PRESENTED IN CONCISE FORM
    – AVOID COMPLICATED TABLES
    – USE AS LARGE A TYPE AS POSSIBLE

FAIR USE OF COPYRIGHTED WORK (FIGURES AND GRAPHS)

• USE OF THESE FOR ACADEMIC PRESENTATION IS ACCEPTABLE WITH THE FOLLOWING CONSTRAINTS
  – THE WORK MUST BE CLEARLY ATTRIBUTED TO THE HOLDER OF THE COPYRIGHT
  – USE IS NON-COMMERCIAL
  – MATERIAL IS PRIMARILY FACTUAL – NOT CREATIVE
FAIR USE OF COPYRIGHTED WORK (FIGURES AND GRAPHS)

- USE OF THESE FOR ACADEMIC PRESENTATION IS ACCEPTABLE WITH THE FOLLOWING CONSTRAINTS
  • ONLY A SMALL PORTION OF THE COPYRIGHTED WORK IS USED FOR THE PRESENTATION
  • USE IN A THESIS WILL REQUIRE APPROVAL FROM THE COPYRIGHT OWNER
  • FAILURE TO RESPECT THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS IS UNACCEPTABLE AT SJSU