The Limits of "I'll Know It When I See It"

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Overview

- Individual Expertise
- Effective Delegation
- □ Blending Expertise In a Team



Questions for Audience: Role

- Individual Contributor
- Manager / Project Manager
- Consultant
- Solo Entrepreneur
- Startup Founding Team



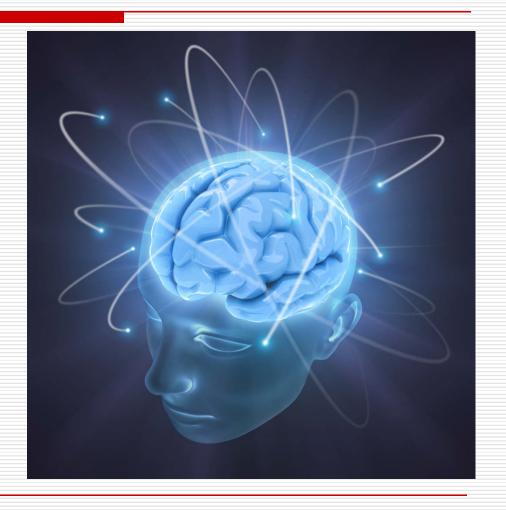
Questions for Audience: Discipline

- Engineering
- Sales & Marketing
- Finance & Operations
- Executive Management



Individual Expertise

- ☐ I'll Know It When I See It"
 - UnconsciousCompetence
 - Not Available To Introspection





"I'll Know It When I See It"

- □ Examples
 - Reading A Pap Smear
 - A Gestalt: Whole Is More Than Sum Of Parts
 - A Detail You See That Is Often Overlooked



What is Expertise?

"Experts perceive things that are invisible to novices, such as the characteristics of a typical situation. They make high-quality decisions under extreme time pressure. When difficulties arise, experts find opportunities for improvising solutions."

Gary Klein "Sources of Power"



Example Of Expertise: Physician

- 1. Elicit Symptoms (May Include Tests)
- 2. Offer a Diagnosis (Root Cause Analysis)
- 3. Explain Differentials (Sensitivity Analysis)
- 4. Suggest a Prescription (Course of Action)
- 5. Outline Prognosis (Likely Outcomes)
- 6. Use Outcomes to Refine Rules & Models



Expertise: Personal Mastery

- Master Not Only The Technical
 - But Also Emotional Aspects Of a Problem
 - Self-Debugging
- Deliberate Practice
 - Predict Outcomes of a Decision & Follow-Up
 - 10,000 Hour Rule (Ericsson)

"They Can Because They Think They Can" Virgil



Expertise: Holistic Intuition

- Unconscious Competence
- Pattern Recognition
- ☐ Muscle Memory
- Backtracking & Self-Evaluation



What's The Difference Between

- □ Talented Contributor & Effective Manager
- Solo Entrepreneur & Entrepreneurial CEO

Effective Delegation



Two Types of Delegation

- Crystallize & Codify
- □ Form A Small Team With A Shared Mission



Crystallize & Codify

- Externalize Insights
- ☐ Formalize Approach
- Thought Process Available For Evaluation
 - Basis for Self-Improvement
- Defined and Repeatable Process





Approaches To Crystallize & Codify

- Sketch A Drawing
- □ Run A Google Search
- □ Craft A Metaphor (e.g. Computer Virus)
- Write A Program To Solve Part Of Problem
- Build A Spreadsheet



Examples of Crystallize & Codify

- □ Rules Of Thumb
- Checklists
- Recipes
- Model or Simulation



Now That It's Out Of Your Head

- ☐ You Can Have Conversations
 - Solicit SuggestionsFor Improvement
 - Compare NotesWith Other Experts
 - Refine Based On Broader Experience





Questions For Audience: Crystallize

- □ How Do You Capture Your Expertise?
 - I Will Jot Or Sketch On a 3x5 Card
- Anyone Want to Offer an Example?



Recap: The Difference Between

- Talented Contributor & Effective Manager
- Solo Entrepreneur & Entrepreneurial CEO

Effective Delegation



Two Types of Delegation

- Crystallize & Codify
- □ Form A Small Team With A Shared Mission





Keys To Forming A Small Team

- A Common Mission or Desired End
- Metrics For Measuring Progress
- Shared Situational Awareness
- Each Member Can Link Actions to Goals



Limit of "I'll Know It When I See It"

- Problem Grows Bigger Than One Person
- You Need a Team
 - Often With Several Experts



Product Team Example

- One Table / Two-Pizza Meeting
- Need Different Engineering Experts
 - Power, Mechanical, Software, ...
- Engineering Is About Tradeoffs
 - Cost, Performance, Development Time



Individual Expertise vs. Team Decision Making

- □ Two Key Differences
 - Trust
 - Shared Situational Awareness
- New Challenge:

Blending Expertise On A Team



Models That Blend Expertise For Team Decision Making

- Recognition Primed Decisions Klein
- Principles of Maneuver Warfare Lind
- Decision Tree Model Howard
- Analysis of Competing Hypotheses Heuer



Recognition Primed Decision

- Useful in Emergencies and Crises
 - Depth-First Search of Possibilities
- Agree On a Model of Situation
- Generate Possible Courses of Action
- □ Select First One That Works

Klein "Sources of Power" & "Intuition"



Principles of Maneuver Warfare

- Useful For Rapid Decision Making
- One Mission / One Main Effort
- Push Decisions Down (Close to Facts)
- Reconnaissance Pull: Guided By Facts

Lind "Principles of Maneuver Warfare"



Decision Tree Model

- Used to Organize Sequence of Decisions
- Helps Bound Uncertainty
- Identify Choices and Probable Outcomes
- Each Outcome In Term has New Choices
- Example: Fault & Diagnostic Trees

Howard "Decision Analysis"



Analysis of Competing Hypotheses

- Offers Clarity on Facts & Key Hypotheses
 - Avoids "A vs. B" Thinking; More Options
- Make a Table
 - Hypotheses In Columns, Facts in Rows
 - Cell: Fact Supports, Contradicts, or No Effect
- Shifts Focus to Getting New Facts

Heuer "Psychology of Intelligence Analysis"



Improving Team Decisions

- Gary Klein's Pre-Mortem Technique
 - Assume Project Has Failed
 - Identify Possible Sources of Failure
 - Add Risk Mitigation Efforts to Address
- Russell Ackoff's Decision Record
 - Each Participant Writes Down Separately
 - Reasons for Decision, Likely Outcome(s).
 - Review As Impacts Become Clear



Limits of "I'll Know It When I See It?"

- Moving Beyond Personal Expertise
- Two Types of Delegation
 - Crystallize & Codify
 - Form A Small Team With A Shared Mission
- Effective Teams Have Many Experts
 - Requires Clarity on Facts and Hypotheses



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- We Offer Customer Development Services
 - New Technology Introduction
 - Focus: Early Customers & Early Revenue
- We Assist On Strategic Decisions
 - Niche Identification and Selection
 - Pricing
 - Negotiation Sequence and Framework



Please Turn In Evaluations

Help Us Improve The Recipe for This Talk



BACKUP

