Creating More Effective R&D Cultures for Innovation

Part 1: Bottom-Line Business Success from Creating a More Innovative & Effective Research Culture

Kurt Swogger, Dow Chemical & Greg Stevens, WinOvations, Inc.

Part 2: Implementation in Dow Automotive

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IIR PDMA

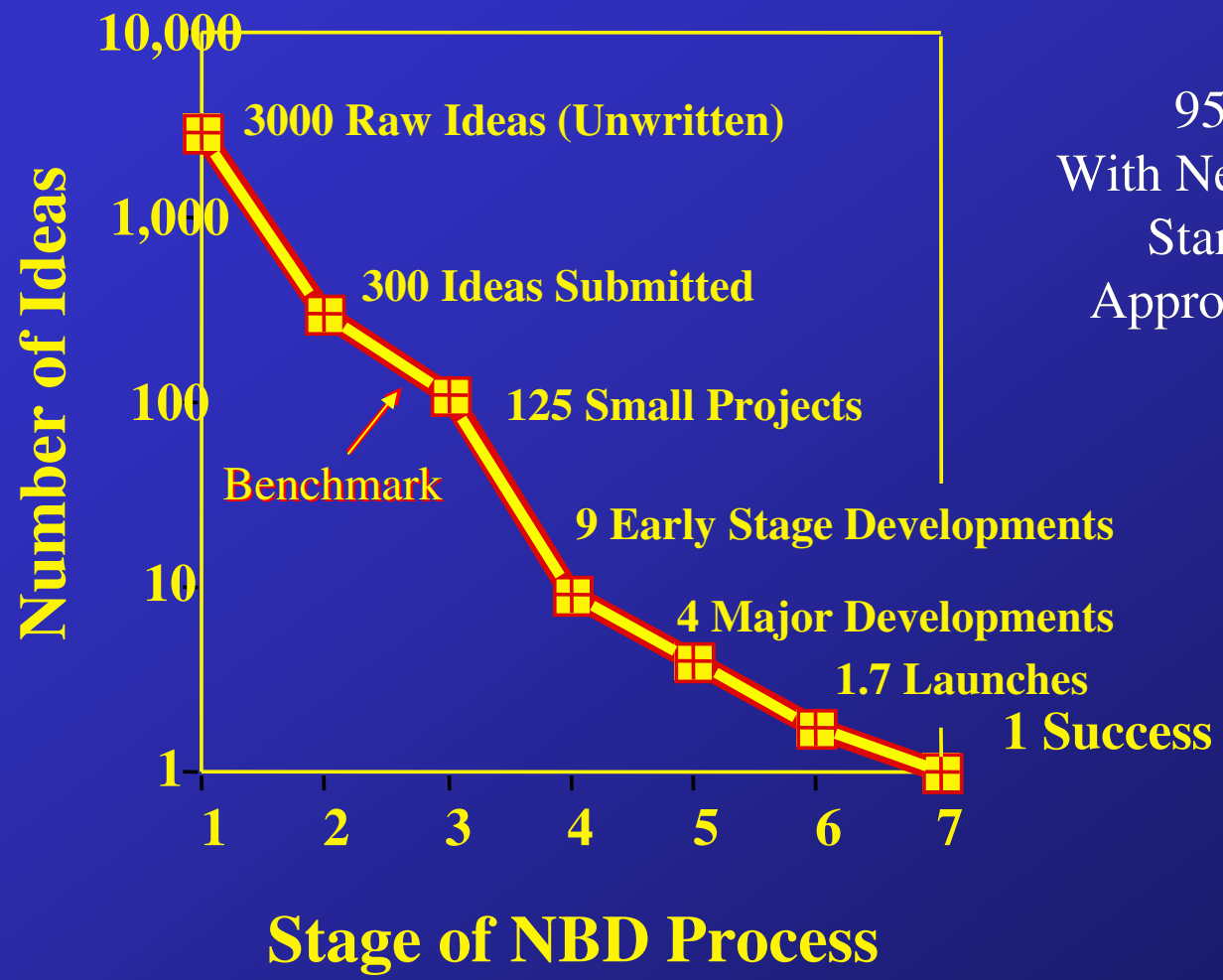
Team NPD: Orchestrating a Winning Culture

Wednesday, July 19, 2006

Colorado Springs, CO

Low Odds on Universal Success Curve Define "The NBD Problem."

Removing Multiple Barriers to NBD Provides More Than a Nine Fold Improvement In Yield and Speed, Vs. Universal NBD Success Curve



95% Success Rates
With New Tools vs. 11% with
Standard Staged-Gate
Approaches, From Stage 4.

Ref's: 1. Stevens & Burley, May-June 1997, *Research•Technology Management*
2. Stevens & Burley, Piloting the Rocket of Radical Innovation, March-April 2003, *Research•Technology Management*

Part 1: Bottom Line Business Results from Creating a More Innovative & Effective Research Culture :

- Background & Approach
- Dow PO&E R&D Experience 1991-2005
  - Model for Increasing R&D Effectiveness
  - *Starters* & *Finishers,* & Fit with Job Roles
- Metrics to Measure
  - Dow PO&E Chosen Outstanding Corporate Innovator, 2003
- Organizational Culture Definitions
- Speed-Based-Development: Spreading Across Dow

Building An Innovative Business Culture Based On

- It's The People, Not Just The Process!
- People Are Hard-wired On How They Think!
- Deploying People Matching The Way They Think To The Task Requirements Dramatically Improves Performance!

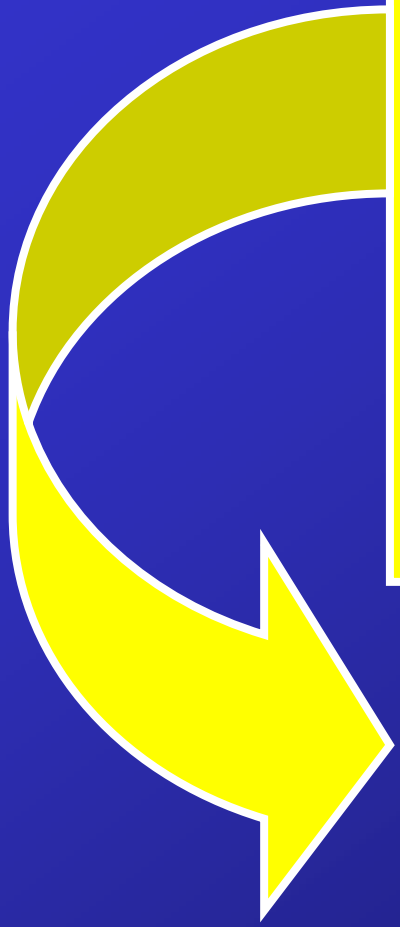
Dow's Polyethylene Business - 1991

- Portfolio Mature
- Losing (Lost) Competitive Advantage
- To Be Sold Or Merged
- ***Do Something!***

Developed a New Technology Area Called INSITE™ Technology

- Molecular Architecture
- Model Based (Computerized)
- Design Cycle (6 Months – 2 Years → 1 Hour)
- Hit Rate From 33% To 85%

Developed a Concept Called Speed Based Philosophy



Get The Right Leadership
Select The Right People
Pick The Right Tasks
On The Right Projects
With The Right Information
Do It The Right Way

Gets

The Right Results ($)

Products Launched Using The INSITE™ Technology Approach

AFFINITY™ Polyolefin Plastomers	1993
ENGAGE™ Polyolefin Elastomers	1994
ELITE™ Enhanced Polyethylene	1996
NORDEL**IP EPDM (Solution EPDM)	1996
AFFINITY™ Adhesives	1998
INDEX™ Interpolymers	1999 (RIP)
Thermoplastic Polyolefins (TPO's)	2000
INSPiRE™ HMS Performance Polymers	2000
Gas Phase Polyethylene (Assigned to BP)	2001
Slurry Phase Polyethylene (Assigned to Univation)	2001

**Trademark of Dupont Dow Elastomers

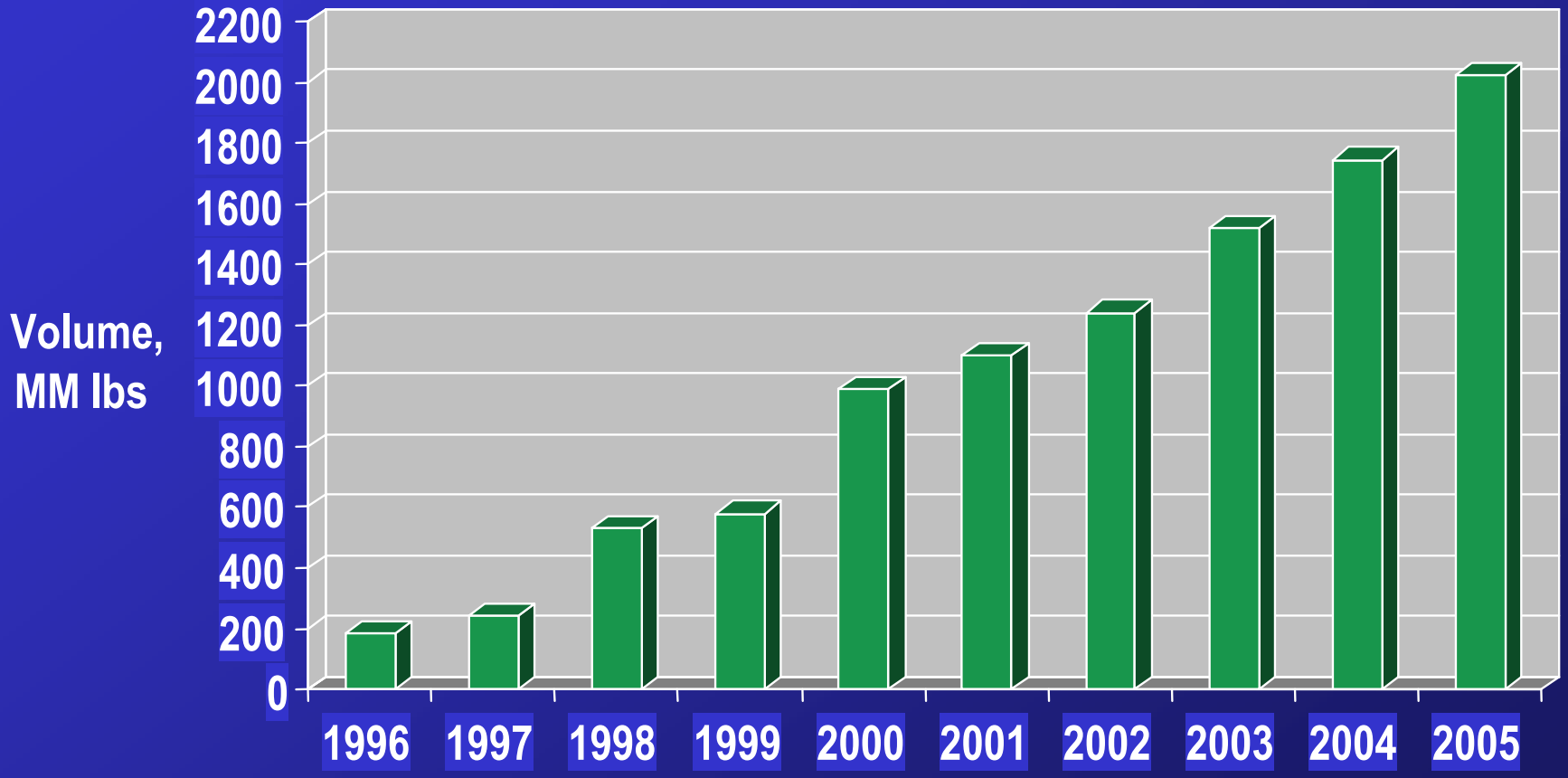
Products Launched Using The INSITE™ Technology Approach

INCLOSIA[B] electronic equipment enclosures and professional design services	2001 or 2003
DOW XLA™ Elastic Fibers	2002
NORDEL** MG EPDM (Gas Phase EPDM)	2002
INSPiRE™ HST Performance Polymers	2003
Waxes	2004 (RIP)
VERSIFY™ Propylene Plastomers and Elastomers	2004
INSTEP™ W&C free radical cure control technology	2004
INFUSE™ Olefin Block Copolymers	2006
Polyolefin Dispersions	2006

**Trademark of Dupont Dow Elastomers

www.winovations.com
Tel: 1-989-779-7790

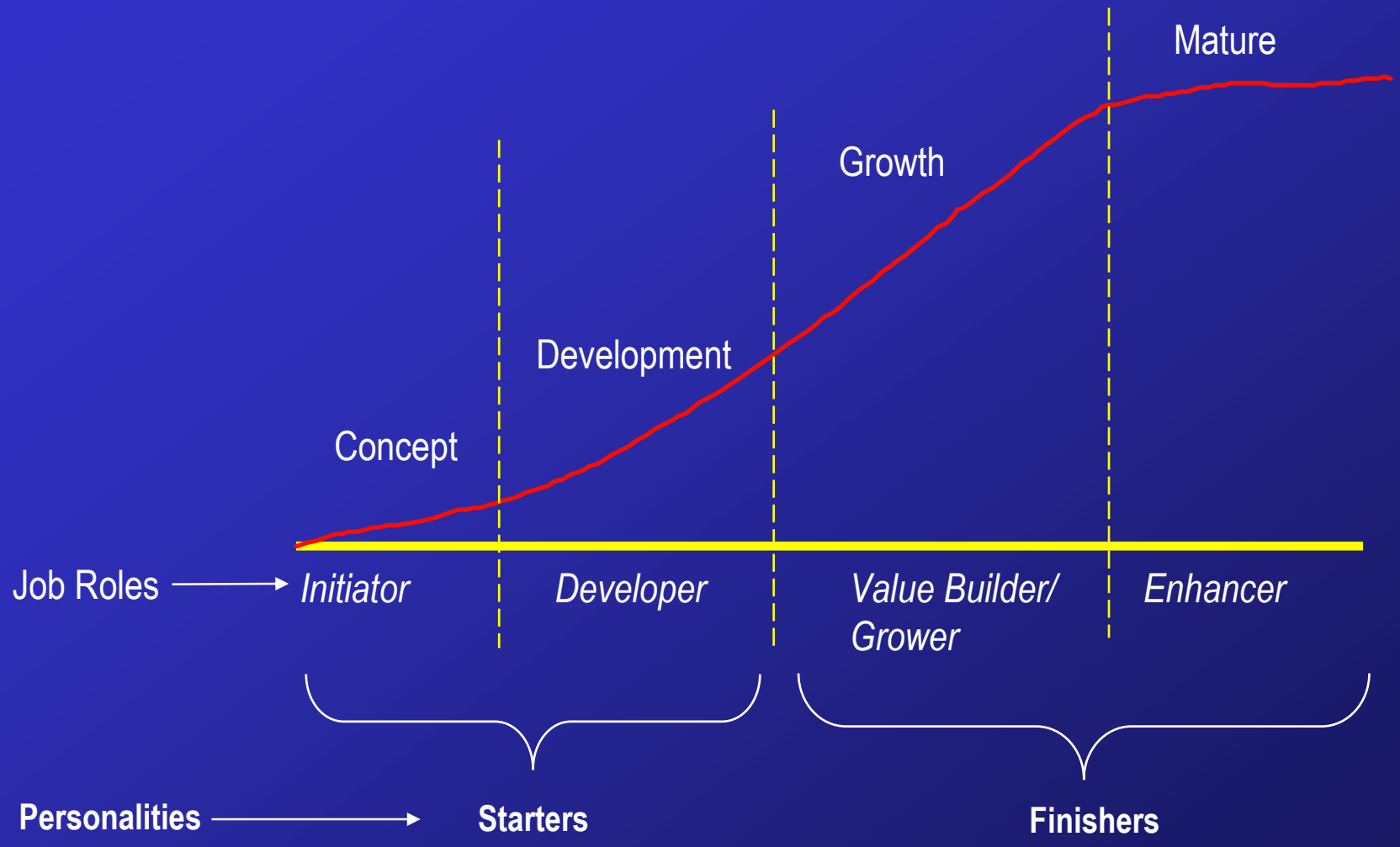
Sales Volume of INSITE™ Technology Materials



Key Premise in Speed Based Development Philosophy *"Pick the Right People"*

- Attitude – Winning, Confident, Committed
- Aptitude – How Do People Solve Problems?

Product Life Cycle vs. Personal Aptitude

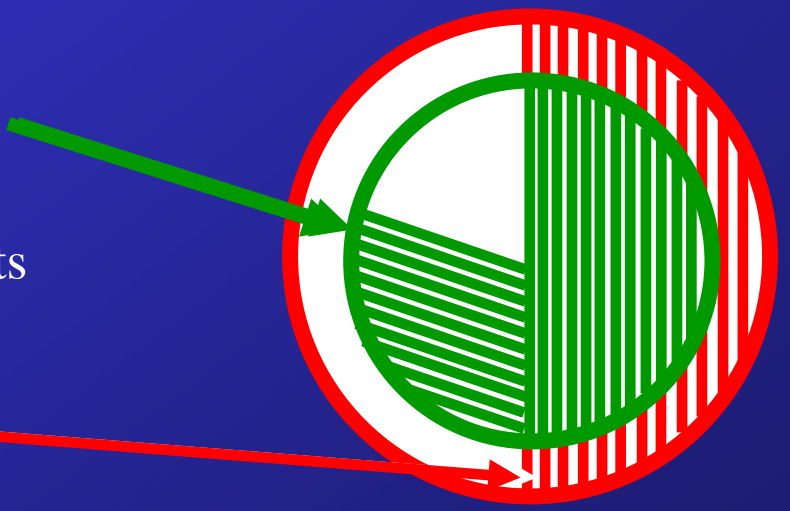


We Had Developed A Qualitative Way To Determine Aptitude But Cycle Time Is Long (6-12 Months)

- Stevens And Burley Had A Hypothetical Quantitative Method Using Myers-Briggs Testing
- Could We Validate And Use This As A Quantitative Method?

Understanding of the *Genetic Nature of Personality* Is A Key to Making Improvements

- **~80% Core Adult Personality Genetic***
  - When Correct For Test-Retest Variability in Psychological Instruments
    - Including the MBTI®
- Minimum of 50% Due to Genetics
  - When Do Not Correct



*Bouchard, Thomas et al. "Sources of Human Psychological Differences: The Minnesota Study of Twins Reared Apart," *Science,* 12 October, 1990. pps 223-228.

How Top Management Can Identify *"Starter"* and *"Finisher"* Personality Types

- ***"Starter"*** Personality Types:
  - ≥ 122 on ***"Starter-Index."*** [9,10]
    - *Often* "NTP" MBTI® Type Preferences;
    - Continually Challenge Status Quo, & Ask "Why Not?"
    - Creative, Risk Takers, Usually Hard to Manage, Often Unfocused
    - Tend to Dislike Detail, Often Impractical, Procrastinators
- ***"Finisher"*** Personality Types:
  - <122 On ***"Starter-Index"***
    - Often "STJ" MBTI® Types
    - Respectful of Authority and Rules. Fraternal.
    - Well Focused & Task Oriented. Manage Time Well. Steady Workers
- Subsequent Trial & Error (But *Far Less Error* Than Before)
  - Make Assessment, Assign to Job Accordingly.
    - ***Quickly*** Reassign if Needed (In 6-12 Weeks)

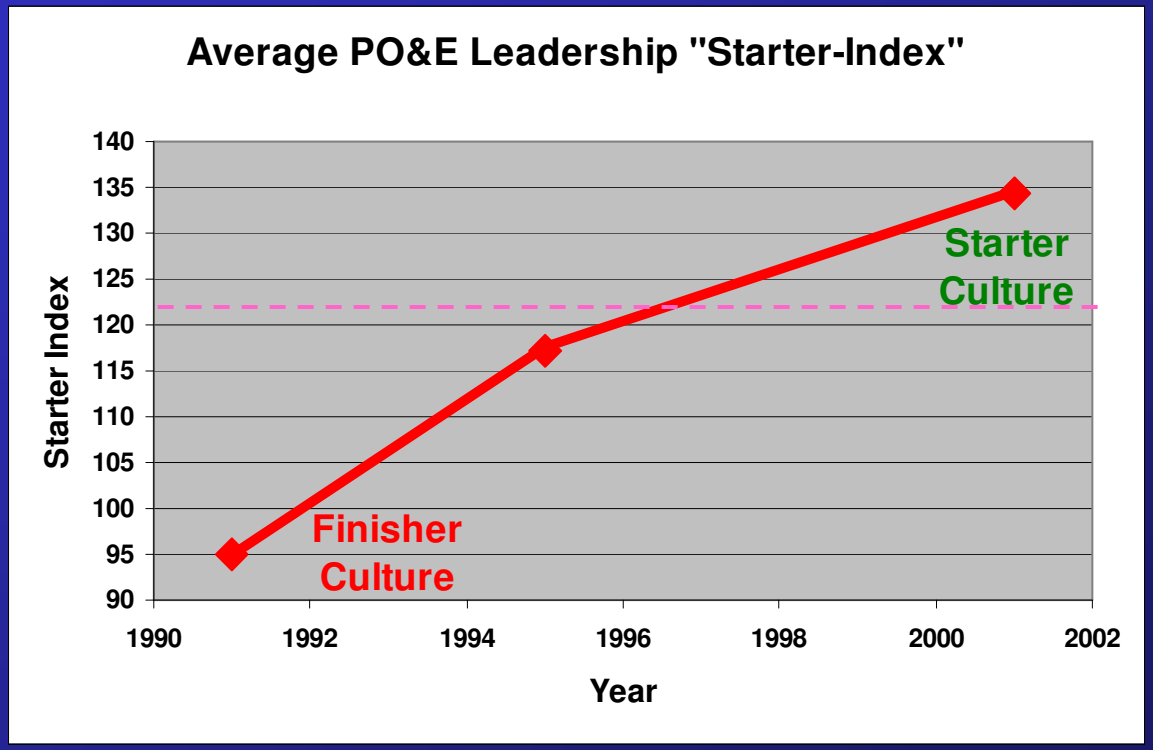
Organizational Culture Is Defined Here As the Average Personality of The Organizations' Leadership

- *Organizational Cultures*: Also Largely Genetic
  - Because They Consist of Individual *Genetic* Personalities
  - Genetic Nature of Organizational Cultures Explains Why Most Resist Change
    - Cultures of Organizations Become **"Hard Wired"** Over Time
  - Organizational Culture Also Determines Inherent Innovativeness of Organizations
- For R&D:
  - Organizational Culture Includes *Both* Managerial and Scientific Leadership

Earlier PO&E Results - Cultural Assessment:

Group *Starter Index* Was Increased Substantially from 1991 to 1995-2001

- MBTI® Based "NTP," or *"Starter Index"*
- ***Highly Correlated to Creativity***

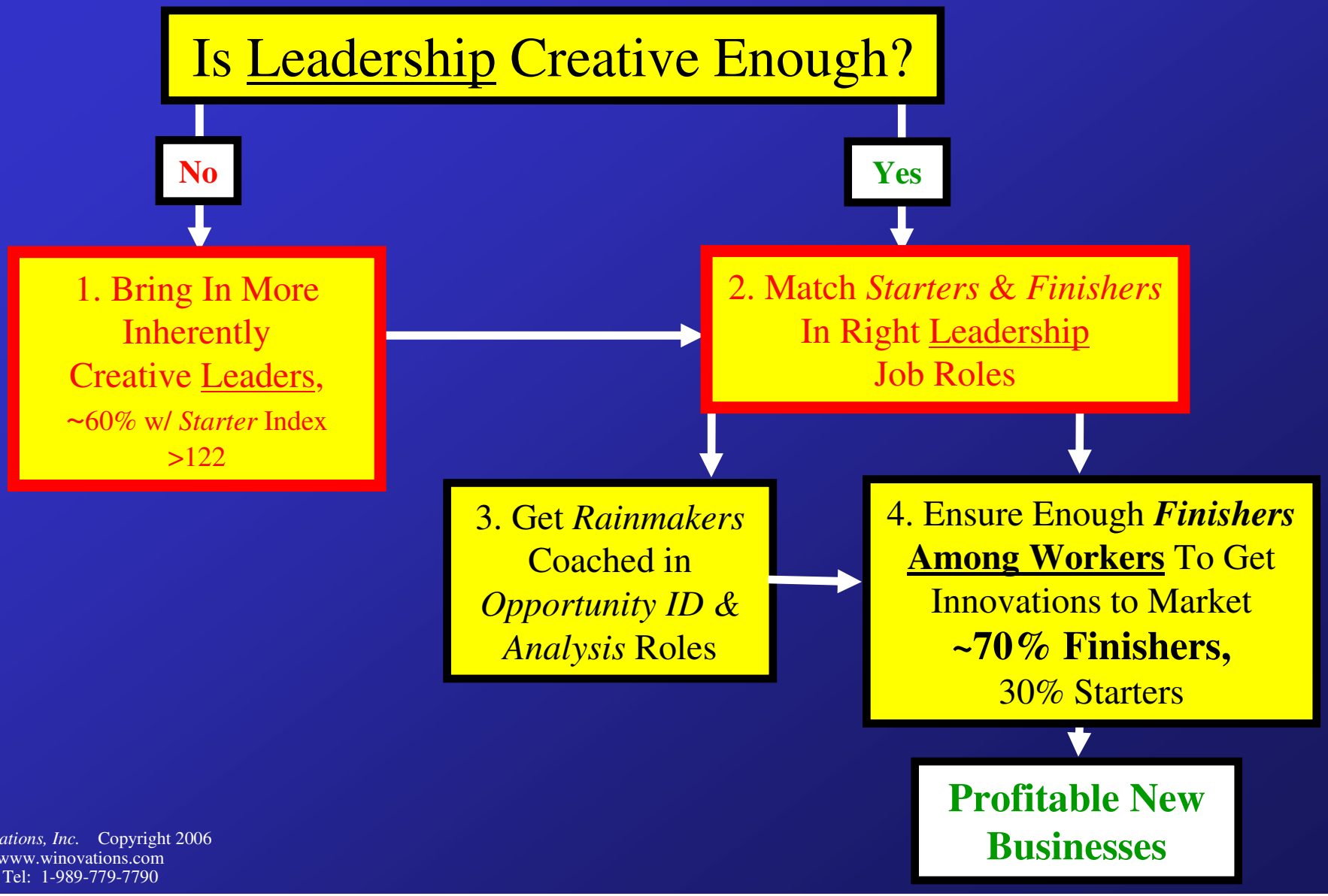


For R&D Leaders Over 10 Year Period

If These Conclusions Are Accurate We Should Be Able To Much More Accurately Predict Which People Are Innovative

- Select An Organization Which Is Not Producing Innovation
- Check Leadership's Profiles Using Myer-Briggs
- Check Match Of Profiles Vs. Roles
- Rearrange To Improve Effectiveness

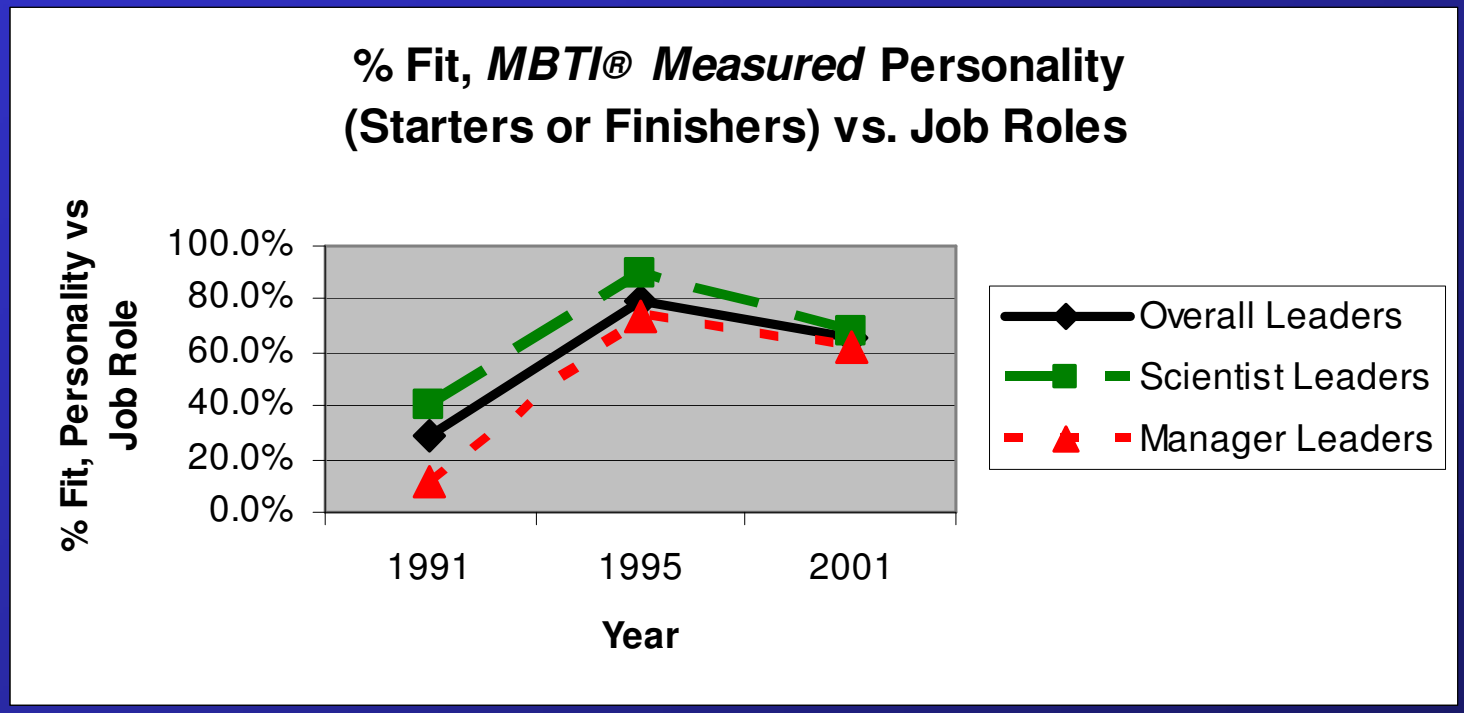
Steps 1&2: of Four-Step Model for Increasing R&D Group Effectiveness



Earlier PO&E Results – Assessment of Personality Measures:

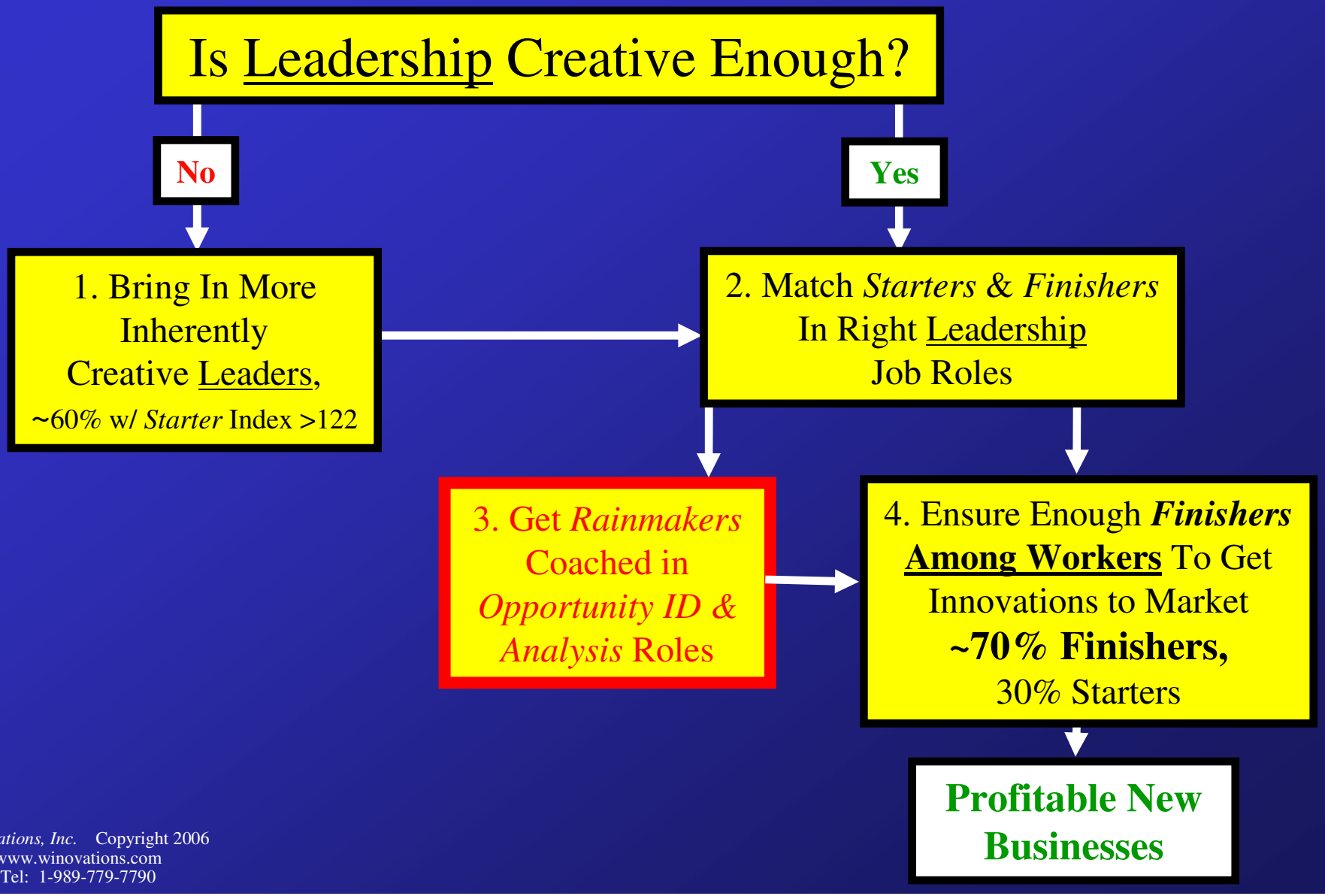
Match of Personality to Job Role Was Increased Substantially from 1991 to 1995, & 2001

- For PO&E Leadership Group, Matched Intuitively Without MBTI®,
  - & Later Measured via MBTI®



- Leadership Group Size:
  - 1991 = 14; 1995 = 29; 2001 = 86 (Harder to Do Well Without MBTI)

Step 3: of Four-Step Model for Increasing R&D Group Effectiveness



Earlier Key Discovery:

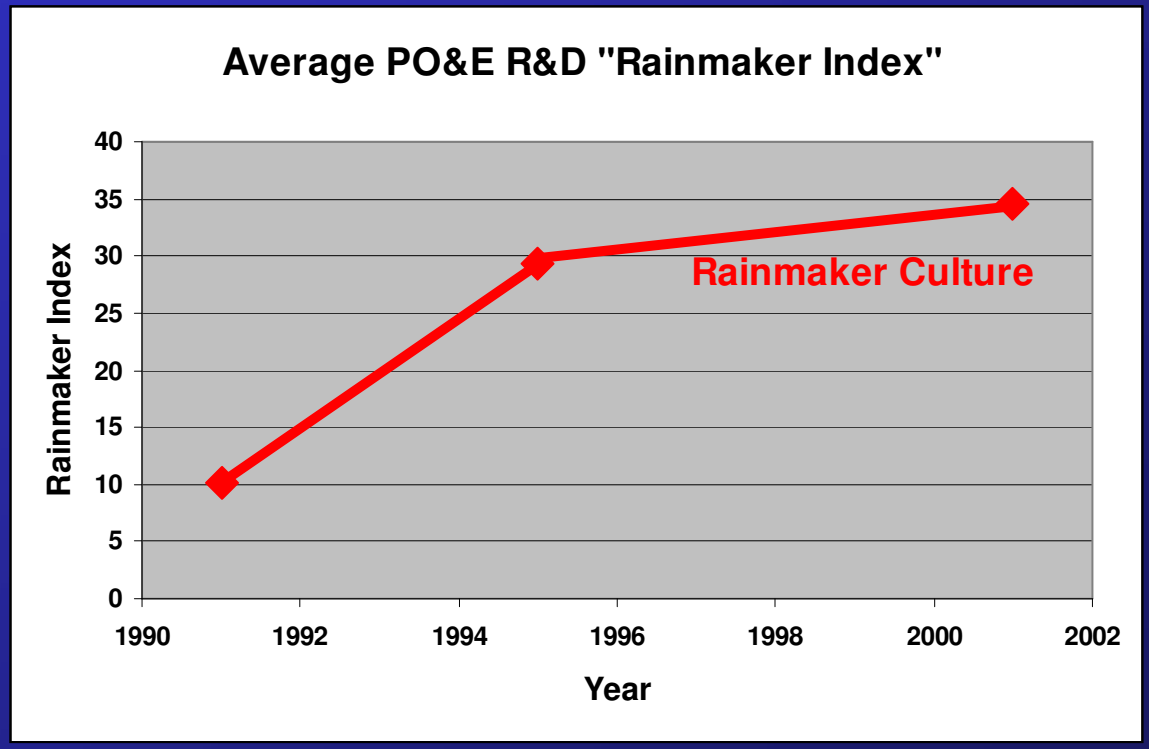
Rainmaker Genetic Personality Types Outperform in *Early-Stages of NBD*

- Top-Third on ***Rainmaker-Index***℠ Personality Profile Out-Earns Bottom-Third by 9,500%. [9]
  - $8.0 Million vs. $0.09 Million: 1991-2001
    - Per ***Opportunity-Analyst***
      - In Roles An Average of Just ~2 Years
        - (Longer Assignments Recommended Now: 5+ Years)
        - Tracked Results Over Ten Years
    - With Identical New Business Development Process Training and Coaching
  - Gone On to Be >>$20 MM Profit Per ***Rainmaker***

9. Stevens, Greg & James Burley, Piloting the Rocket of Radical Innovation, March-April 2003, *Research*Technology Management,* pps. 16-25.

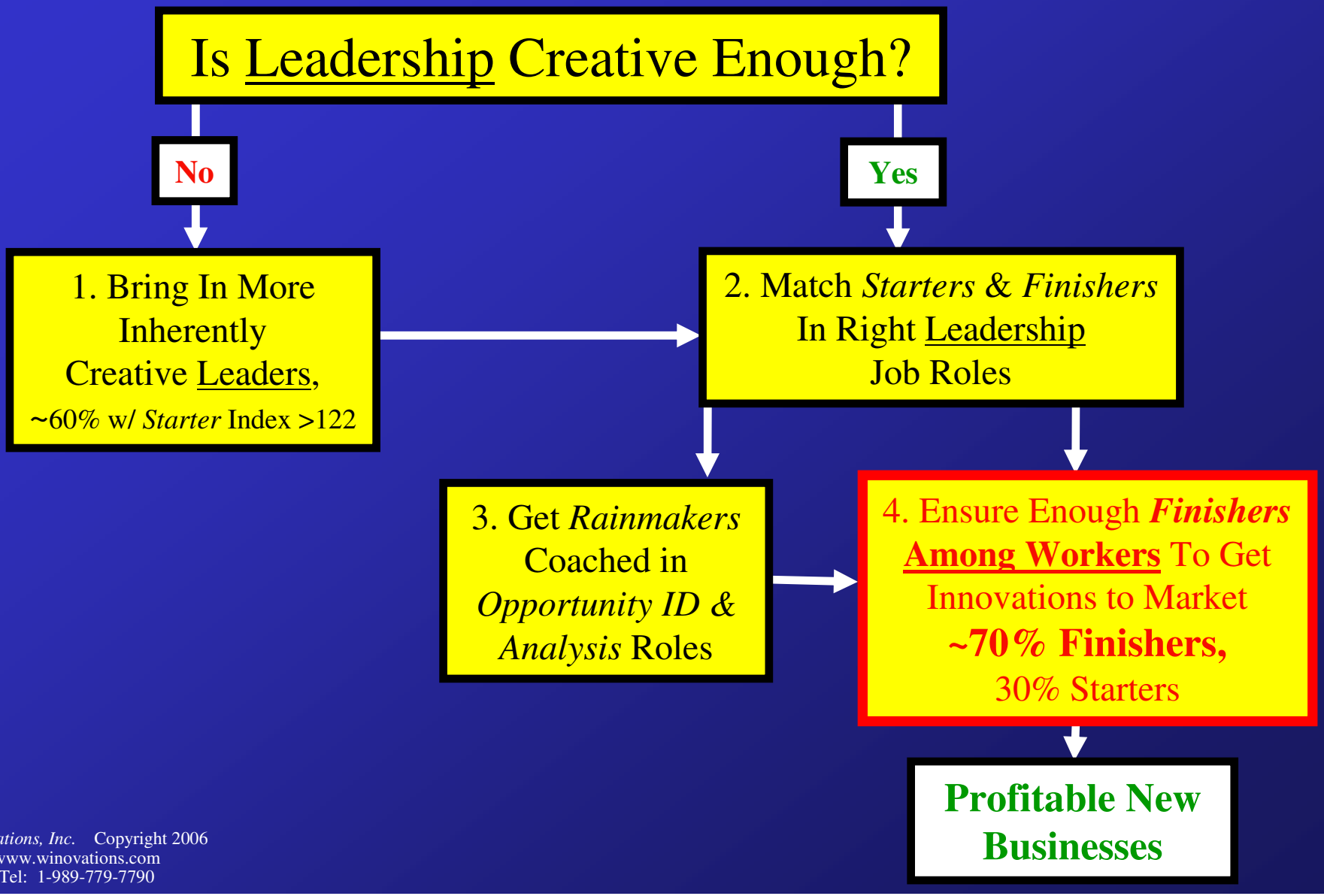
Earlier PO&E Results - Cultural Assessment:
Group ***Rainmaker Index*** Increased Substantially from 1991 to 1995-2001

- MBTI® Based "NT," or ***"Rainmaker Index"***
- Many Coached and Trained in ***Opportunity-Analysis*** Roles

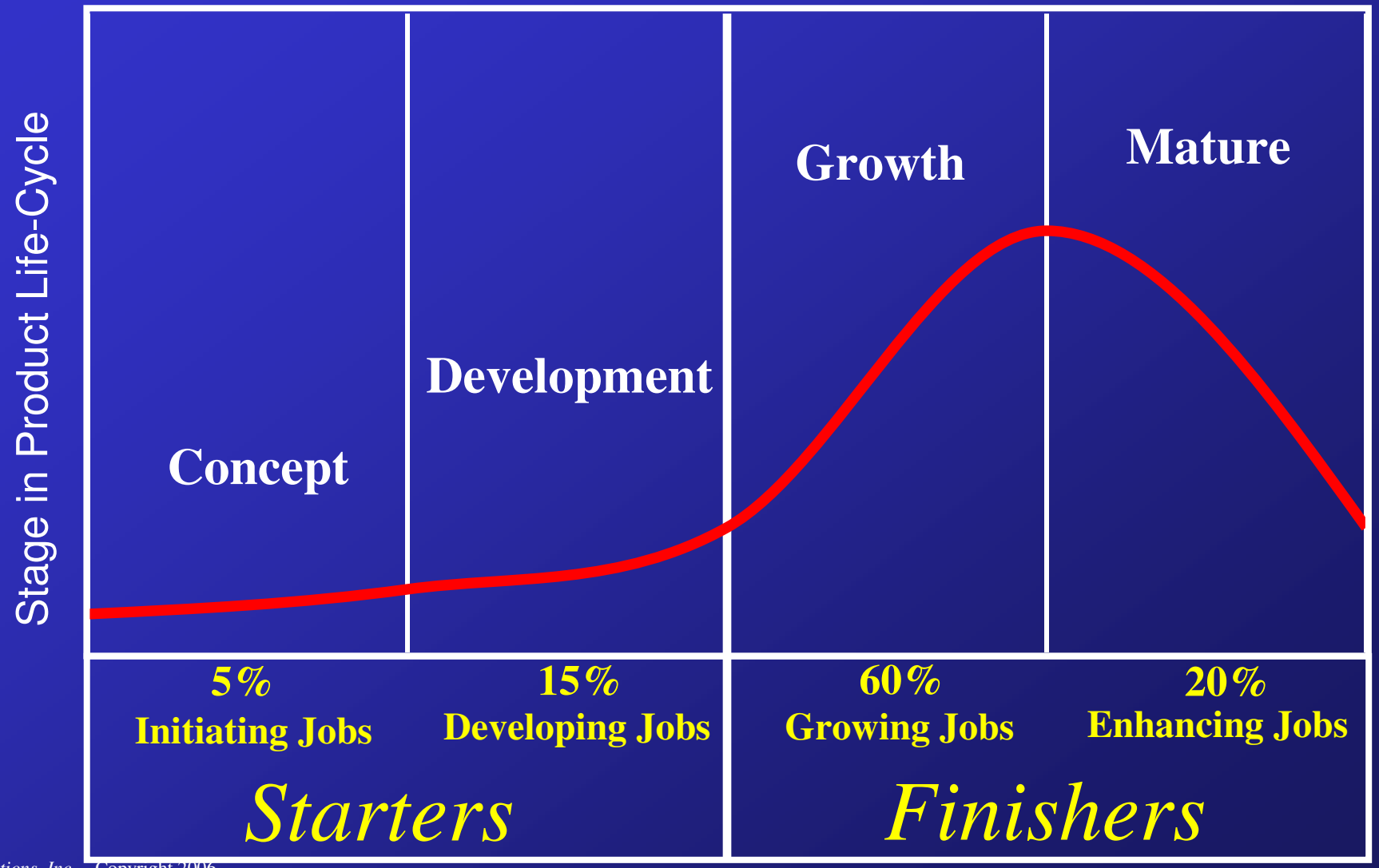


For R&D Top Decision Makers Over 10 Year Period

Step 4: of Four-Step Model for Increasing R&D Group Effectiveness



Need To Balance "Human Portfolio" With Business Portfolio



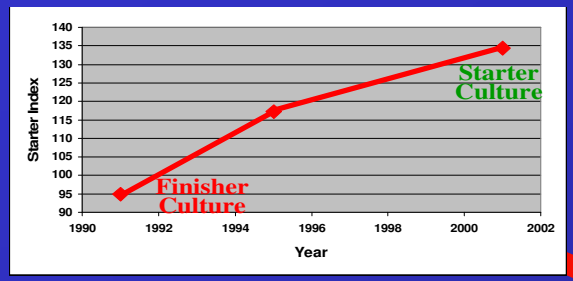
New *Forward Looking* R&D Performance Metrics From R&D Initiatives Related to Human Resources

- R&D Leadership: ~60% *Starters*
- Degree of Match In Right Job Roles: ~75-80% Match Desired
  - Starter Personalities
    - Initiating & Developing Job Roles
  - Finisher Personalities
    - Growing & Enhancing Job Roles
  - Room for Exceptions, Depending on Individuals
    - But Exceptions Are Exceptional

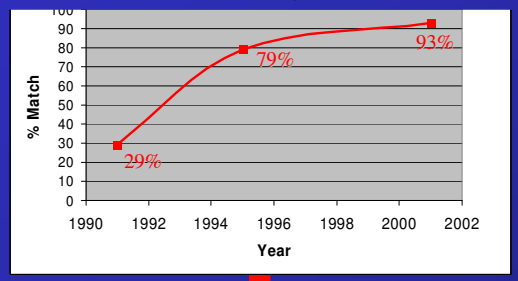
- With Right Mix of ***Finishers*** Among Non-Leadership Professionals
  - ~30% *Starters (Half That of Leadership Group),* ~70% *Finishers*
    - Someone Has to Carry Out the Vision, Get the Work DONE!
    - Non-Leadership Professional Percentages Currently Being Better Defined
      - ***%Starters & %Finishers***, via Additional Research

"Forward Looking" PO&E Human Metrics
Drove Financial Success in "Backward Looking" R&D Metrics

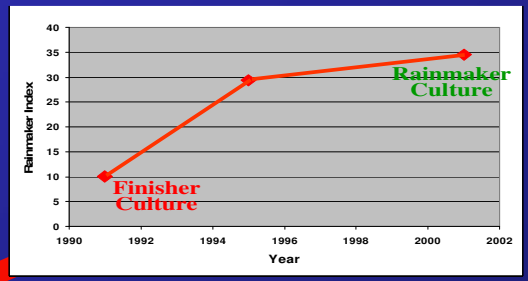
More Visionary Leaders



Better Fit Between Personality & Job



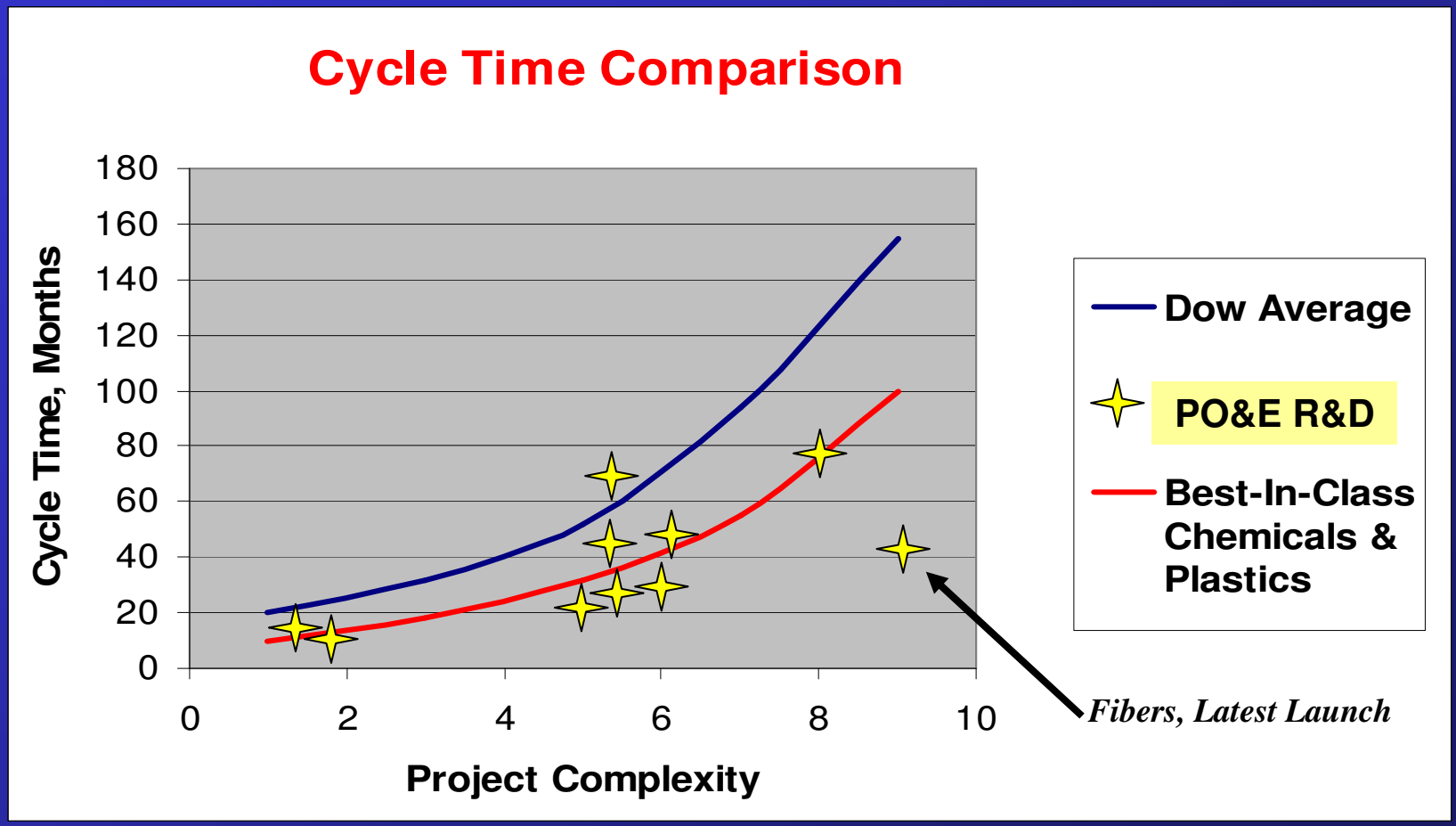
Rainmakers* Doing Quality *Opportunity-Analyses



Performance Metric	Change	2001 vs. 1991
Intellectual Property, # of Patents	**4**	Times More
Pilot Plant Efficiency	**18**	Times Better
Technical Service Efficiency, Lbs Serviced Per Person	**2.6**	Times Better
Speed to Launch	**3 to 4**	Times Faster
Number of New Product Launches	**13**	New Launches
Sales from Products Less than 5 Years Old	**4.3**	Times More
Increased Capacity from Existing Plants	**2.5**	Times More
Job Creation	**4.8**	Times More
Increased Value, Net of R&D		***Huge***

WinOv
Tel: 1-989-779-7790

Dow PO&E *"Speed Based"* R&D: Cycle Time Performance* Now Best-In-Class



*Development Time to First Customer Sale

Summary

- Dow's Polyolefin Group Dramatically Changed Its Innovation And Results
- Selecting and Assigning People Properly Critical to Success
- Dow Used a Qualitative Measure
- Greg Steven, ***WinOvations***, develops Rainmaker™ Index with Quantitative Measure
- Correlation Between Qualitative and Quantitative is Excellent!
- How Can This Understanding Be Used to Get Better Results *Faster?*

Part 2: Implementation in Dow Automotive R&D

Building on
Speed Based Development
Approach Used In
Dow PO&E R&D/Business

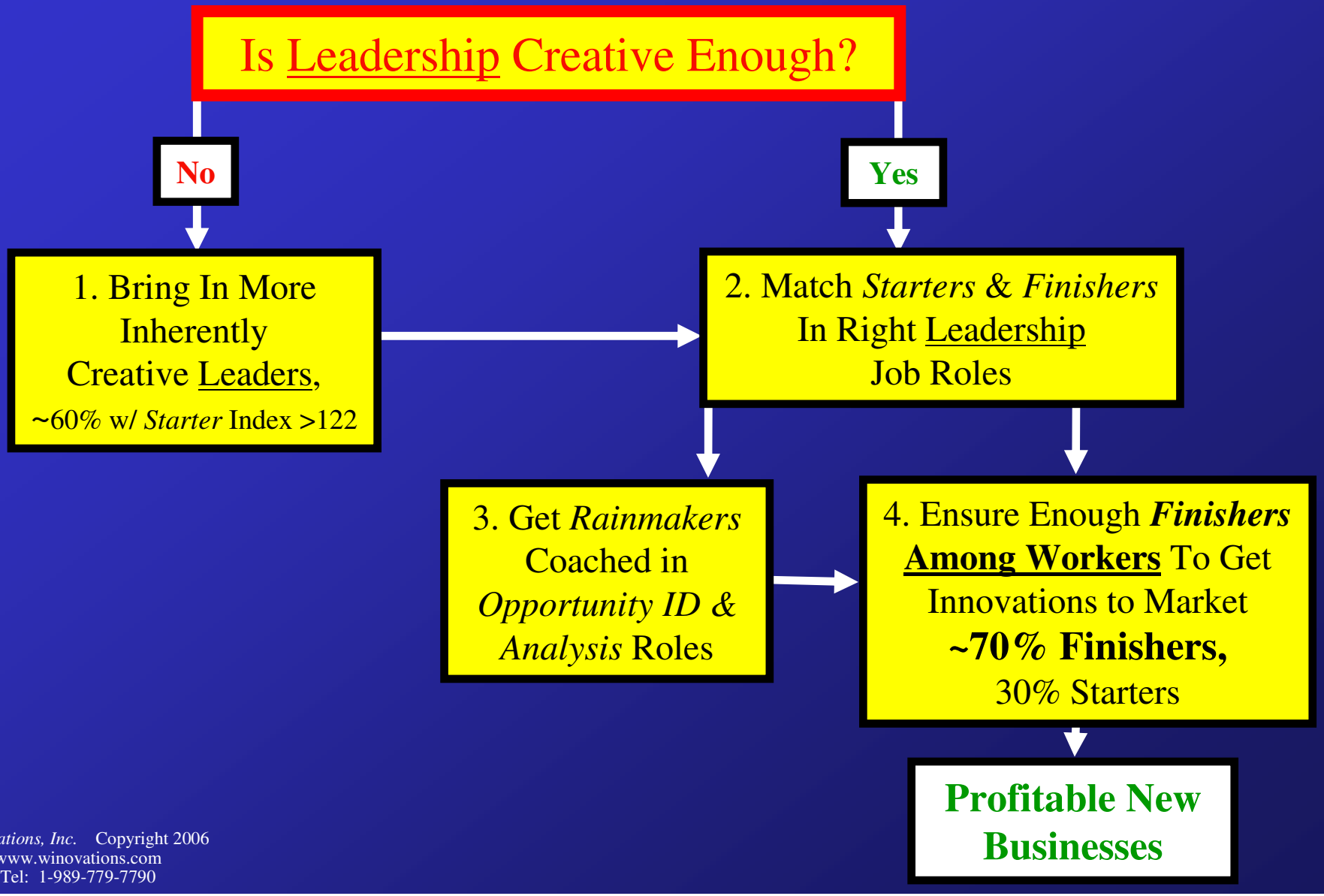
Can We Do It In 2-3 Years, vs. 4-10 Years?

Greg Stevens, *WinOvations, Inc.*,
& Steve Swartzmiller, Dow Automotive

At Outset, Top Management Believed Was *Not Enough Creativity* In Dow Automotive R&D Leadership (Nor In Commercial Leadership) To Create *Breakthroughs* Needed for Ambitious Growth Goals:

"More than Doubling the Dow Automotive Revenue & Profits By 2011"

Step 1: of Four-Step Model for Increasing R&D Group Effectiveness



Dow Automotive R&D MBTI® Measured For Two Groups

1. For R&D Leadership Cultural Assessment Job Level "L1" and Up: 49 Individuals
   - Both Scientist-Leaders and Manager-Leaders
   - >98% Agreed to Participate
   - >98% of Participants Agreed to Share Results with Top Management

2. & For Potential Group of ***Opportunity-Analysts:*** 28 Individuals
   - 93% Agreed to Participate (26 of 28)
     - 100% of Participants Agreed to Share Results with Management

MBTI® Instrument Measures 4 Personality Preferences, Determined to a Large Degree by Genetics

1. E/I Scale
   - E = Extroversion
   - I = Introversion
2. S/N Scale
   - S = Sensory, Practical
   - N = Intuitive
3. T/F Scale
   - T = Thinking
   - F = Feeling
4. J/P Scale
   - J = Judging, Getting to Closure
   - P = Perceiving, Open to Possibilities

Automotive R&D Leadership Findings: Already Has an "NT" or **Starter** Culture

- E/I = E4 — Barely on the Extroverted Side
- S/N = **N9** — Intuitive (vs. Sensory/Practical)
- T/F = **T33** — Far More Thinking than Feeling
- J/P = P1 — In the Middle for Judging and Perceiving (i.e. J~P)

Overall, Dow Automotive R&D *Leadership*
No Longer Lacking In Creativity!
(Already Fixed - Just Prior to Measurement)

	2001 PO&E R&D	2005 Dow Automotive
Creativity Index (ENTP)	287	299
Rainmaker Index (NT)	34.5	42.4
Starter Index (NTP)	134	143
% Starters	57%	63%

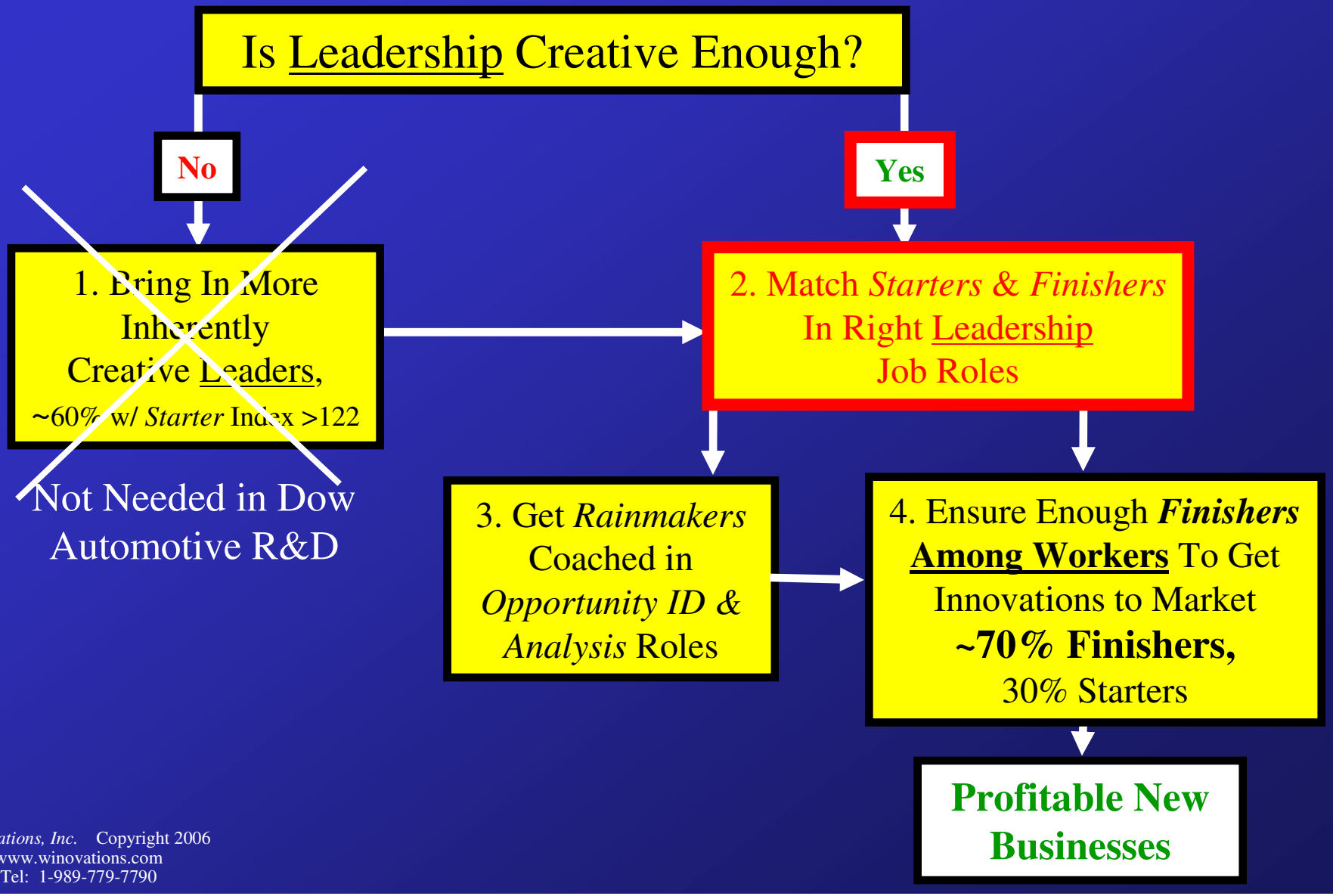
Now Slightly Higher Creativity

Culture Vs. Individual Dow Automotive R&D Leadership Groups

- Overall Auto R&D Leadership — E-4 **N-9 T-33** P-1

- R&D Sub-Group 1 — E-4 **N-6 T-24** P-7
- R&D Sub-Group 2 — E-3 **N-27 T-40** P-15
- R&D Sub-Group 3 — I-6 **N-23 T-37** P-10
- R&D Sub-Group 4 — E-21 **N-18 T-42** J-10
- R&D Sub-Group 5 — E-1 **S-12 T-37 J-23**
  - The Least Creative Leadership Group (*Finishers*) –Discussing If Change Is Needed. It May Be Warranted, Depending on Growth Goals

Step 2: of Four-Step Model for Increasing R&D Group Effectiveness



Example of Determining % Match of Personalities with Job Roles

- R&D Sub-Group #2: Leadership Job Role Assessments (Done By Steve Swartzmiller)
  - 1 Initiating Role
  - 3 Developing Roles
  - 1 Growing Role
  - 0 Enhancing Roles

  } 4 MBTI® Based *"Starters"*

  } 1 MBTI® Based *"Finisher"*

- 100% Fit Between *Starter/Finisher* Personalities & Job Roles
  - Outstanding
  - But Tasks Are Continually Changing!
    - Just Brought In A "Finisher" Leader for a *New Project* Growth Job Role

- Could There Be Too Many "Starters," Especially in Non-Leadership Professionals?
  - Open Question, To Be Determined

Conducted Similar Exercise for All Five Dow-Automotive R&D Leadership Groups

- R&D Directors:
  - Assigned One of Four Job Roles to Each R&D Leader's Job
    - Initiating, Developing; Growing, Enhancing
- ***WinOvations*** Collected Leadership Job-Role Assessment Data
  - & Compared vs. MBTI® Based *Starter/Finisher* Personality Assessments
  - Determined % Fit of Job Role vs. Personality for All 5 R&D Sub-Groups

Overall, 75% Match-up: Very Good

24.5% Mismatch of Leaders Personality vs. Job Role: 12 of 49 Total Mismatched In Automotive R&D

Leadership Groups Only	MBTI® Personalities		% Starters	# Mismatches		% Mismatch
	# Starters	*# Finishers*		*Starters* in Finisher Roles	*Finishers* in Starter Roles	
Automotive R&D	31	18	63.3%	6	6	24.5%
R&D Sub-Group 1	11	7	61.1%	2	3	27.8%
R&D Sub-Group 2	4	1	80.0%	0	0	0.0%
R&D Sub-Group 3	6	2	75.0%	1	1	25.0%
R&D Sub-Group 4	3	1	75.0%	1	1	50.0%
R&D Sub-Group 5	4	6	40.0%	2	1	30.0%

Swap?

Probably Too Low

Probably Too High

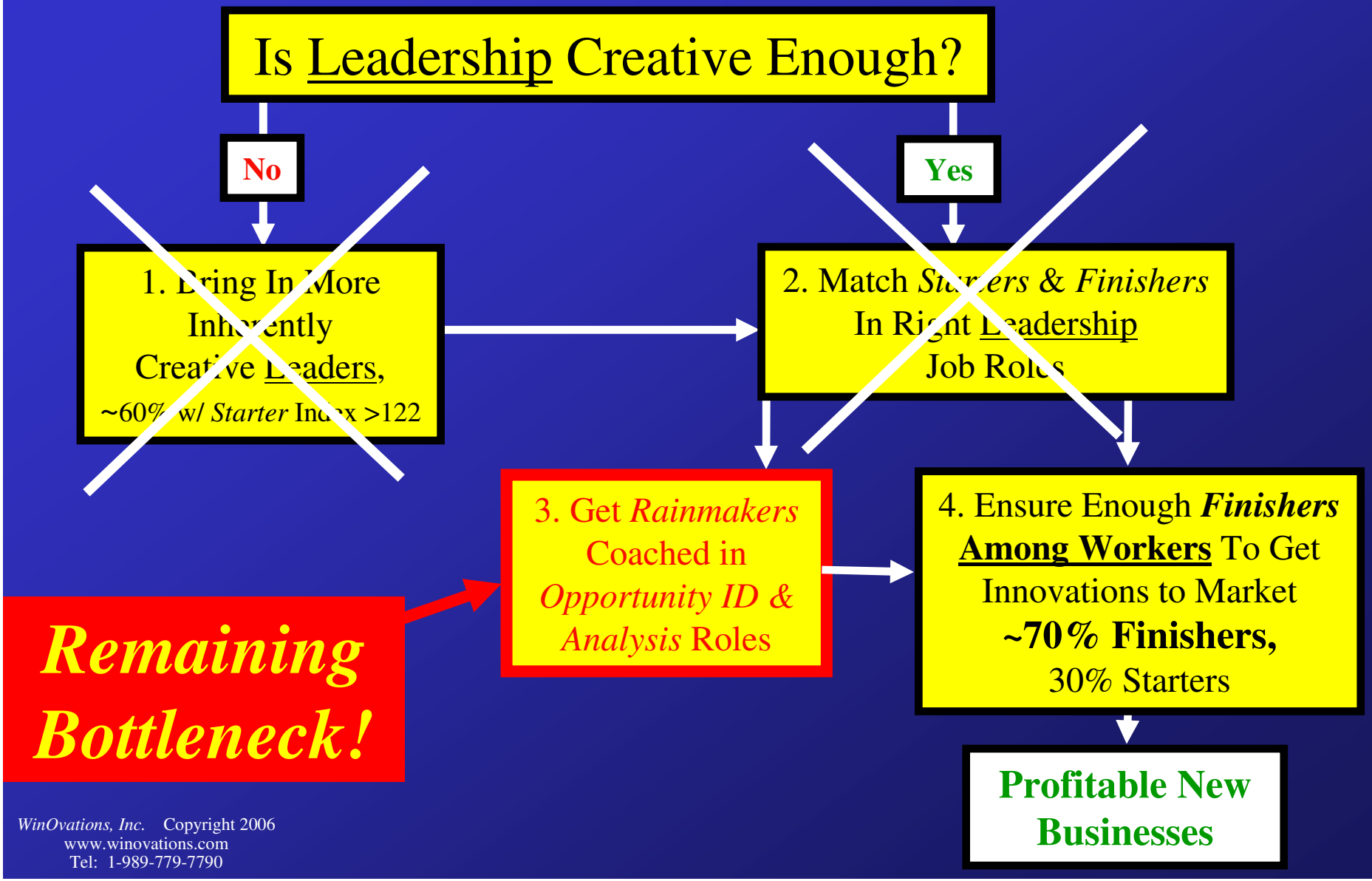
Optimization Now Being Done

Could Almost Swap 6 Each: Mismatched *Starters & Finishers!*

Value of Right Personality, Right Job Role >> $125,000/Person/Year Conservatively

- As With High ***Rainmaker-Index*** Personalities **in Opportunity-Analyst Job Roles**, In Most Job Roles 20% of the People Do 80% of the *Effective* Work.
- Better Matching the Right People to Job Roles Will Increase *Effectiveness* Conservatively 50% Per Mismatch (& More Likely 400%: 80%/20% = 4X More Effective)
  - Direct Savings of *At Least* Half of Total Salary + Overhead Cost/Person
    - $250,000/2 = $125,000 Per Person, If Better Matched
  - With *Much Greater Value Delivered From Previously Lost Opportunity Cost*
    - Not Counted in Above Exercise
- Good Reason to Consider "Fit" Exercise Across R&D Including Professions in Non-Leadership Roles

Step 3: of Four-Step Model for Increasing R&D Group Effectiveness



What Was *Not* Well Grounded in Recent Past?

- Was (Still Is?) Too Much A Culture of "Selling Projects" vs. Figuring Out What to Do, & How to Win
- Things to Improve:
  - Better Understanding of ***Gut-Level-Screen***
    - Now In Place
  - Understanding ***Functional-Requirements*** & Customer Needs - *Critical*
  - Earlier Use of System ***Cost-Performance-Models***
    - Vs. How Done Today & Tomorrow
      - Assessment of Value
  - Developing Means for Sustainable Competitive Advantage
    - For Winning Approach

Recent Bad Example Of Not Learning Customer Key Functional Requirements & ***Cost-Performance*** Models

- A Novel High Temperature Thermoplastic
  - Got "Sold" To Management *Without* Critical Analysis as an Engineering Plastic
  - Physical Properties Lacking
    - Actually Did Not Meet the Real Functional Requirements of Customers In the Marketplace
  - Manufacturing Process: *Too Expensive*

- Sold Just a Few Million Lbs/Yr. From a Full Scale 80 MM Lb. Production Plant
  - Finally Shut Plant Down:
    - You Have Not Experienced Real Paralysis…
      Until You *Build a Plant* Without Analysis

16 Potential *Opportunity-Analysts* (OA's) Identified In Dow Automotive

- Out of 26 Total Candidates Measured (i.e. 16 with MBTI® Based ***Rainmaker-Index***® ≥ 40)

- *Value of Each Properly Identified & Coached O.A. >$20 Million Profit, Empirically Measured Over 10 Years*
  - *MBTI® Helps Raise Odds of Finding Right Candidate from ~30% to Over 95%, adding at Least $13 Million More Profit/Analyst When Coached*
    - *65% Higher Probability x $20 Million = $13 Million*
      - *Actual Incremental Value Depends on % Starters (and % Rainmakers) in Non-Leadership Professionals – Being Determined by Additional Research*

Need to Establish Group of ***Rainmakers*** In ***Business-Opportunity-Analyst*** Roles In Dow-Automotive Business

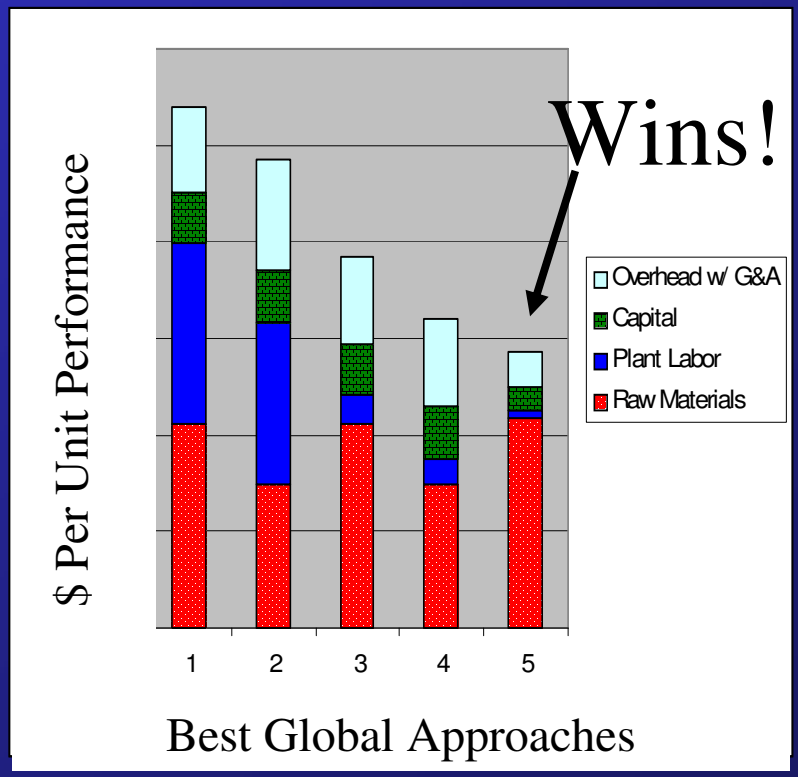
- With Own Internal Coach/Manager
  - Who Has Been Coached, and Certified in ***Business-Opportunity-Analysis***
    - & Helps Select Additional ***Rainmakers*** & Coaches Them in ***Opportunity-Analysis***
    - Self Sustaining Group
    - Sized to Meet Internal Growth Goals
      - For Substantially New Business Development
    - Most In Commercial Organization
      - Plus a Few In R&D

Better Understanding **Functional Requirements**: Key To Being Better Grounded

- Positive Example: Energy Absorbing Materials
  - Learned Functional Requirements
  - Oriented Structures Key
  - Will Grow to Over $100 Million
- Good Innovations:
  - Much Simpler *After* Drill Down To Real Functional Requirements
- Got There By Entering Business & Continuing to Learn
  - But Slow - How Can We Get There Faster & Cheaper?
    - ***Opportunity-Analysis*** – One Approach To Better Ground Opportunities

Rainmaker ***Business-Opportunity-Analyst*** Job-Roles:

- Compare "Fit" of Starting Ideas vs. Top Managements ***Gut-Level-Screen***
  - To Prioritize Quickly
- Prepare Draft Propositions (or Hypotheses) to Test With Customers
- Analyze Customers' Unspoken Needs
  - Many Direct Interviews & Plant Visits
  - Building **System-Cost-Performance Models** *from Customers' View*, for New Ideas vs. Best Alternatives Globally
- ***"Morph"*** Starting Ideas Into Winners
  - Based on Real Needs, & Real Value
  - Showing How to Win vs. Best in Class
  - **Requires Creativity, & Analysis**
- Present to Business Management
  - Only After Learn How to Win!
  - For Later Commercialization by Business



Key: Determining Customer's Functional Requirements, & Competitor's Costs of Meeting Them vs. Dow's.

Many ***Opportunity-Analyses*** Were Conducted *Early* In the Revised PO&E Business

- Insite® Metallocene Chemistry
  - Packaging Opportunities
    - Meat Wrap & Many Other Applications
  - Durables
    - Elastomers for EPDM Replacement
      - Led to DuPont-Dow Joint Venture
    - Wire & Cable Compounds
  - Automotive
    - TPO's
  - Many Others
    - Shoe Soles

Real Targets

€, $, ¥

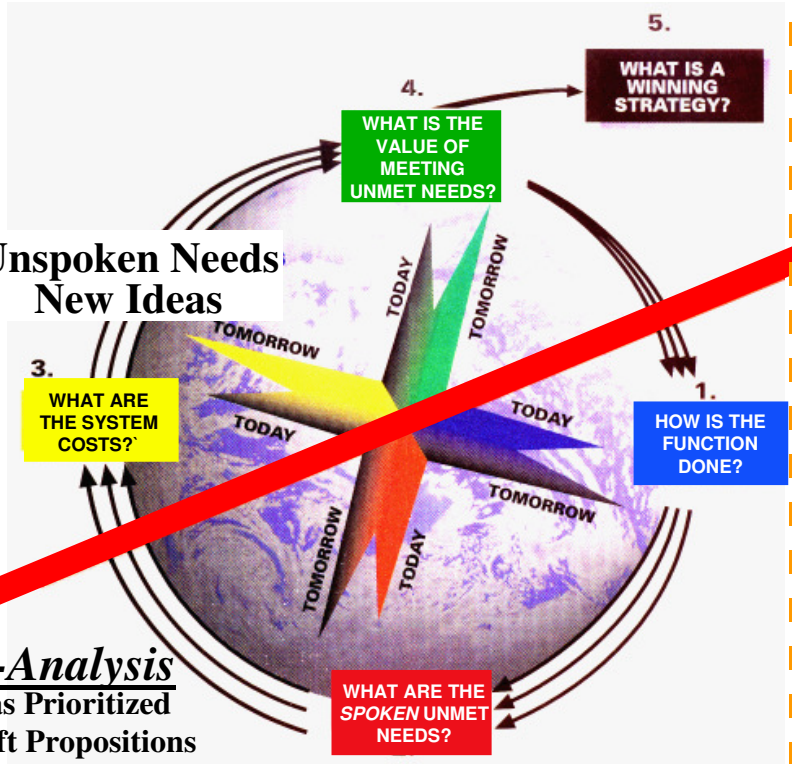
Early-Stages of NBD Process Summary

End of *Early Stages*

Profits

Winning Actions

Winning Tactics



Unspoken Needs
New Ideas

Gap-Analysis
Ideas Prioritized
Draft Propositions

Idea Management

Gut-Level-Screen

Success-Wheel
Customer Interviews

Stages: Ideation | Shaping | Analysis | Validation | Develop & Implement

Individual Opportunity-Analyst Predominates (Or Small Teams)

Teams Predominate with Project Leaders

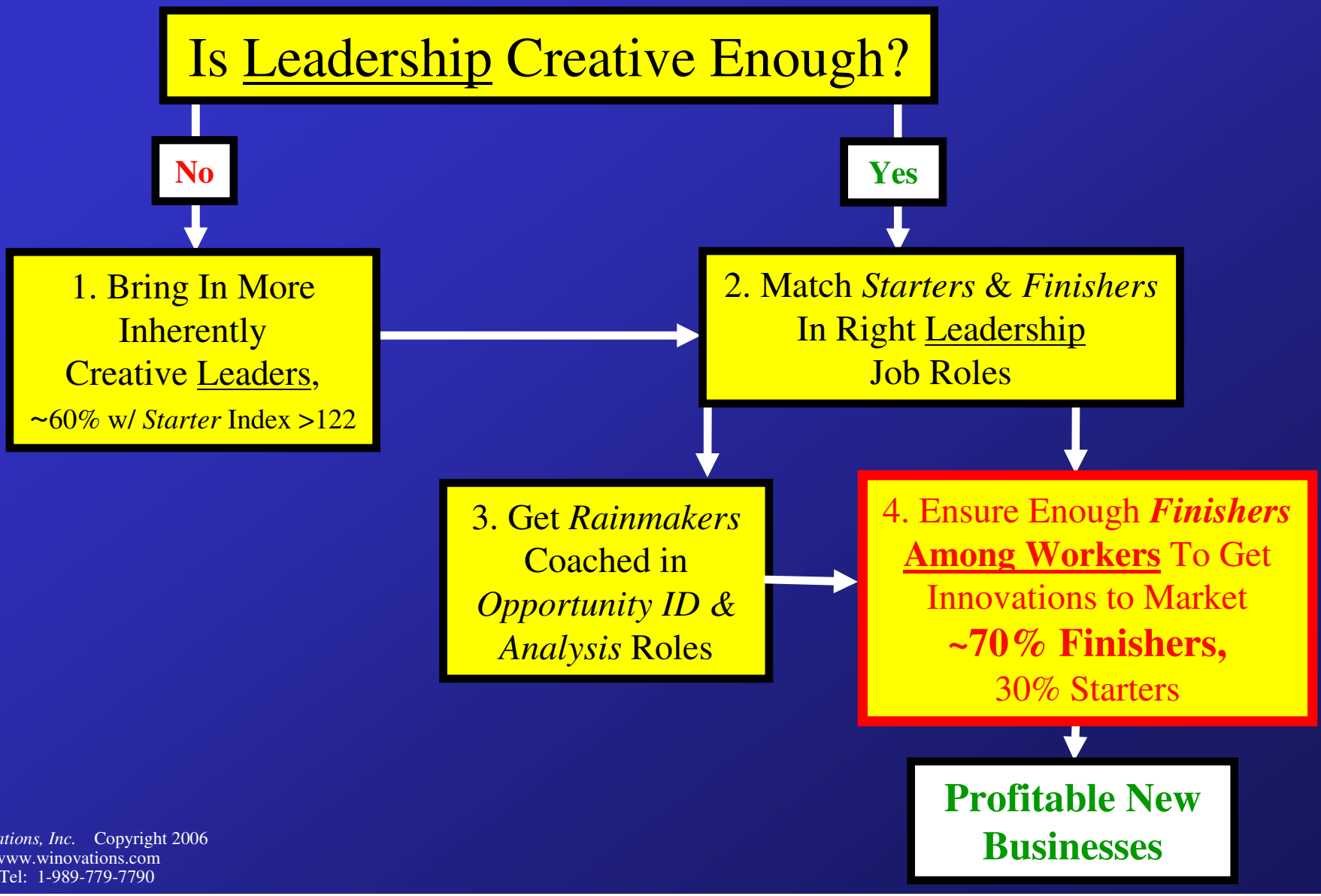
Emerging Positive Example: Brake Materials

- ***Business-Opportunity-Analyst*** Coached
  - Learning *Real* Customer Functional Requirements
  - Through Leading Brake Manufacturers
  - Initial Concept Has Already ***Morphed***
    - **Identified >$100 Million/Yr. Opportunity**
  - Key: Learning Functional Requirements
    - Before Locking Into a Solution

Rule of Thumb: ~$50 Million New Revenue Per Year, Per *Rainmaker* in ***Business-Opportunity-Analysis*** Roles

- Dow Automotive:
  Needs 5 ***Opportunity-Analysts***
  - Completing 20 Studies in Two Years
  - To Provide ~$500 Million in New Business Opportunities (Conservatively)

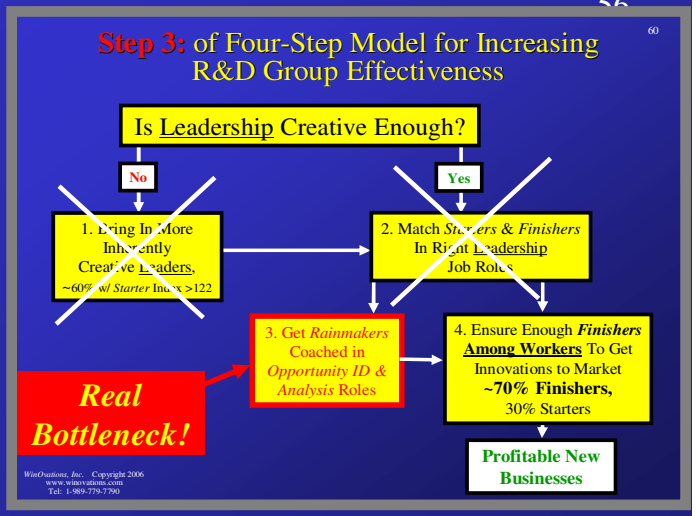
Step 4: of Four-Step Model for Increasing R&D Group Effectiveness



Ensure Enough ***Finishers*** **Among Workers** To Get Innovations to Market **~70% Finishers,** 30% Starters

- Remains to Be Measured
  - & Modified If Needed
  - Work Is Ongoing
- Concern:
  Not Enough ***Finishers*** Among Non-Leadership Professionals?

Recommendations – Dow Automotive R&D



- Good News! Have Creativity Needed for *Breakthrough* Innovations in Dow Automotive R&D Leadership
  - Fit of Personalities to Job Roles: Also Very Good
    - Further Optimizing
      - In Certain Leadership Sub-groups
      - & In Non-Leadership Roles

Recommendations:
Better Grounded Creative Thinking

- Lack of Activities In ***Business-Opportunity-Analysis*** Is Real Bottleneck Limiting R&D Effectiveness
  - 16 Potential ***Opportunity-Analysts*** Identified Based on *Rainmaker-Index* >140
    - Reduced to ~6 Based on Availability, Other Factors
      - Interview Potential O.A.'s Prior to Selecting & Coaching
        - » Requires Ongoing Management Support
    - Get ***Opportunity-Analysis*** Group Established Internally In Dow Automotive
      - to Meet Growth Opportunities in Two Years

- Fix: Then Measure Dow Automotive R&D Performance Metrics
  - Continue Measuring 5-10 Years Out
  - Correlate With New Human Resource Metrics
    - Personality & Job Roles, Degree of ***Opportunity-Analyst*** Training
    - Key To Verifying Value From Anticipated Changes
    - Adjust System As Continue Learning

ID Real Targets

€, $, ¥

Just One More Thing:

Lots of People Talk About It, But *You Have to Actually Do It*

And We Didn't Say It Would Be Easy
…Just Rewarding

Appendix 1: References

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11. Others Listed in the Body of the Presentation

Appendix 2:

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9. Torres, A. and G.M. Lancaster, C.D. Pappas, "Redefining the Management of Technology: Organizational Requirements for Speed Based Commercialization," SPE ANTEC Proceedings, 2953, 1996.
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Backup - Organizational Culture: Like a Composite Face (Photo-Mosaic) **Made Up of Individual Leader's Faces/Minds**

- The Personality or Culture of Organization
- Can Be Highly Appropriate…
  - Abe Lincoln

Or Inappropriate…

- **Charlie Chaplin**
- **Depending on The Job Function Required!**
- Both Were Masters at Their Jobs
  - Their Personalities Suited Their Jobs
  - & Neither Could Do What the Other Did
- Whatever the Case…. Organizational Culture Is
  - Largely Genetic
  - & Measurable
  - The "Hive Mind"