Welcome

The BRC: A Historical Perspective

MSF
MOTORCYCLE
SAFETY FOUNDATION

4 Segments

1. General Chronology of MSF and Curriculum
2. General Development of MSF RETS and Curriculum Process
3. BRC/RETS Underpinnings
4. Pilot and Field Testing of the BRC

Motorcycle Safety Foundation

MISSION

"We make motorcycling safer, and more enjoyable, by ensuring access to lifelong quality education and training for current and prospective riders, and by advocating a safer riding environment."

MSF Curriculum Related Milestones

1972

- Organization of MIC Safety and Education Foundation, Inc.
- Board of Trustees contracted with Human Resources Research Organization to develop a motorcycle safety plan to serve as a planning basis for the operation of the Foundation.

MSF Curriculum Related Milestones

1973

- Separate office opened in Washington, D.C.
- Dr. Charles Hartman hired a director
- Name changed to the Motorcycle Safety Foundation, a separate corporation from MIC
- Alan Isley appointed MSF Trustee by Kawasaki

1974

- Dr. Hartman elected President of MSF
- Beginning Rider Course (BRC) published
- Moved offices to Linthicum, MD

MSF Curriculum Related Milestones

1974

- **Published:**
  - **Motorcycle Task Analysis**
  - **Motorcycle Instructional Objectives**

1975

- **Published:**
  - **Motorcycle Curriculum Specifications**

1976

- **Published: Photographic Task Analysis**
- **BRC replaced by more comprehensive Motorcycle Rider Course (MRC)**

MSF Curriculum Related Milestones

1978

- Feasibility Study of MRC (Colorado)
  - Studied…
    - Instructor effectiveness
    - User acceptance
    - Administrative feasibility
  - Recommended…
    - No street lessons
    - Adjust time and re-order exercises
    - Shorten classroom
    - Stress emergency stopping and evasive maneuvers

MSF Curriculum Related Milestones

1979

- Established Chief Instructor training program

1980

- Better Biking Program introduced
- Rhode Island first state to fund rider education

1981

- Hurt Study released

1982

- Established four MSF regional offices
- Established main office in Chads Ford, PA
- Established MSF Curriculum Advisory Committee

MSF Curriculum Related Milestones

1984

- **Council for State Motorcycle Safety Coordinators established**
- **Alan Isley elected president**
- **Offices relocated to Costa Mesa, CA adjacent to MIC**

1985

- ***Motorcycle RiderCourse: Riding and Street Skills* (MRC:RSS); updated and shortened to 15 hours**

MSF Curriculum Related Milestones

1988

- Moved to 2 Jenner Street, Irvine, CA
- Revised and updated the Experienced RiderCourse (ERC)

1989

- National Association of State Motorcycle Safety Coordinators established

1993

- Celebrated 1 million riders trained on 20th anniversary

MSF Curriculum Related Milestones

1995

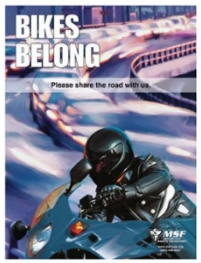
- Restructured Foundation to consolidate staff functions and focus on key priorities

1996

- Tim Buche named president
- Proposed new curriculum in collaboration with curriculum advisory committee

1998

- Rider Education and Training System Development and Oversight Team (RETSDOT) formed



MSF Curriculum Related Milestones

2000

- MSF formally launches *DirtBike School*
- National Agenda for Motorcycle Safety (NAMS) developed

2001

- New Basic *RiderCourse* introduced
- Learning Centers conducted

2003

- ERC *RiderCourse* Suite introduced
- National Learning Centers implemented

4 Segments

1. General Chronology of MSF and Curriculum
2. **General Development of MSF RETS and Curriculum Process**
3. RBRC/RETS Underpinnings
4. Pilot and Field Testing of the BRC

Curriculum Development Team

- Date: March 1996
- Project: RSS 2000
- Members
  - **Tom Garcia, ASI Chief Instructor Trainer (MSF Staff)**
  - **Charles Kreszock, Chief Instructor (North Carolina)**
  - **Ray Ochs, Facilitator, Chief Instructor (Kentucky)**
  - **Robert Reichenberg, Chief Instructor Trainer (MSF Staff)**
  - **J. T. Smith, Chief Instructor Trainer (Tennessee)**
  - **Ron Thompson, Chief Instructor/State Coordinator (Wisconsin)**

To work in a parallel process with MSF/SMSA Curriculum Advisory Committee

MSF Curriculum Development Team

- Charge
  - To develop and facilitate program planning for a revised edition of the MRC:RSS
  - To collaborate with the MSF/SMSA Curriculum Advisory Committee
  - To determine the development and design parameters for a new MRC:RSS
  - Meet with MSF/SMSA committee at annual conference to develop next steps

MSF Curriculum Development Team

Goal: to answer…

1. **What should the development process be?**
2. **What should the new curriculum look like?**

Considerations:

1. **Instructionally effective and administratively efficient**
2. **Participant friendly and instructor friendly**
3. **Universally accepted and stakeholder accepted**
4. **Utilize "best thinking" and appropriate expertise**

MSF Curriculum Development Team

- Results of MSF CDT (12-page Report)
  - 3 Strands of Thought
    - Start with blank page
    - Use a 70/30 paradigm (“Edit” MRC:RSS)
    - Build from best of MRC:RSS

Results of MSF/SMSA Committee: Spokesperson announces that they are not in agreement with the assumptions, and the MRC:RSS doesn’t need revised. Parallel development process ended.

RETSDOT Established

- Initial meeting in June 1998
- 11 initial members
- Invested and divested
- Expertise in
  - Policy
  - Program Administration
  - MSF Oversight
  - Instructional Systems Design
  - Evaluation and Performance Measurement
  - Traffic Safety Education
  - MSF curriculum and certification operations
  - Research and Evaluation
  - Organizational Communication
  - Communication and Facilitation

Curriculum Underpinnings

1. Research and Experience
2. Safety and Risk Management
   Principles
3. Adult Learning and Development
   Principles
4. Motor Skills Development
   Principles

1. Research and Experience

- Review of Curriculum Specifications
- Review of Research
  - Task Analysis
  - Photographic Analysis
  - Hurt Study
  - Colorado Feasibility Study
- Review of MSF Curricula
  - BRC (original)
  - MRC
  - MRC:RSS
  - BBP
  - ERC
- Curriculum Development Team (‘96)
- Joint SMSA / MSF MRC:RSS Enrollment Questionnaire (’98)
- SMSA Curriculum Advisory Committee (’98)
- MSF / ASU Study (’98)
- RETSDOT Facilitation
- MSF Stakeholder Focus Group Research (‘98)
- MSF Student Focus Group Research (’99)

Yielded 147 Recommendations for an Improved Curriculum

MRC:RSS – Curriculum Recommendations

1. Developmental Considerations = 10
2. Administrative Considerations = 15
3. Curriculum in General = 27
4. Classroom = 42
5. Range = 53

Total = <u>147</u>

2. Safety and Risk Management

Traffic Safety

- Human Factors
  - Ability
  - Judgment
  - Perception
  - Personality
  - Motivation
- Operator Tasks
  - Mental: Process information and make decisions
  - Physical: Skilled and properly timed actions
  - Social: Interaction with others in a traffic mix
- Haddon Matrix

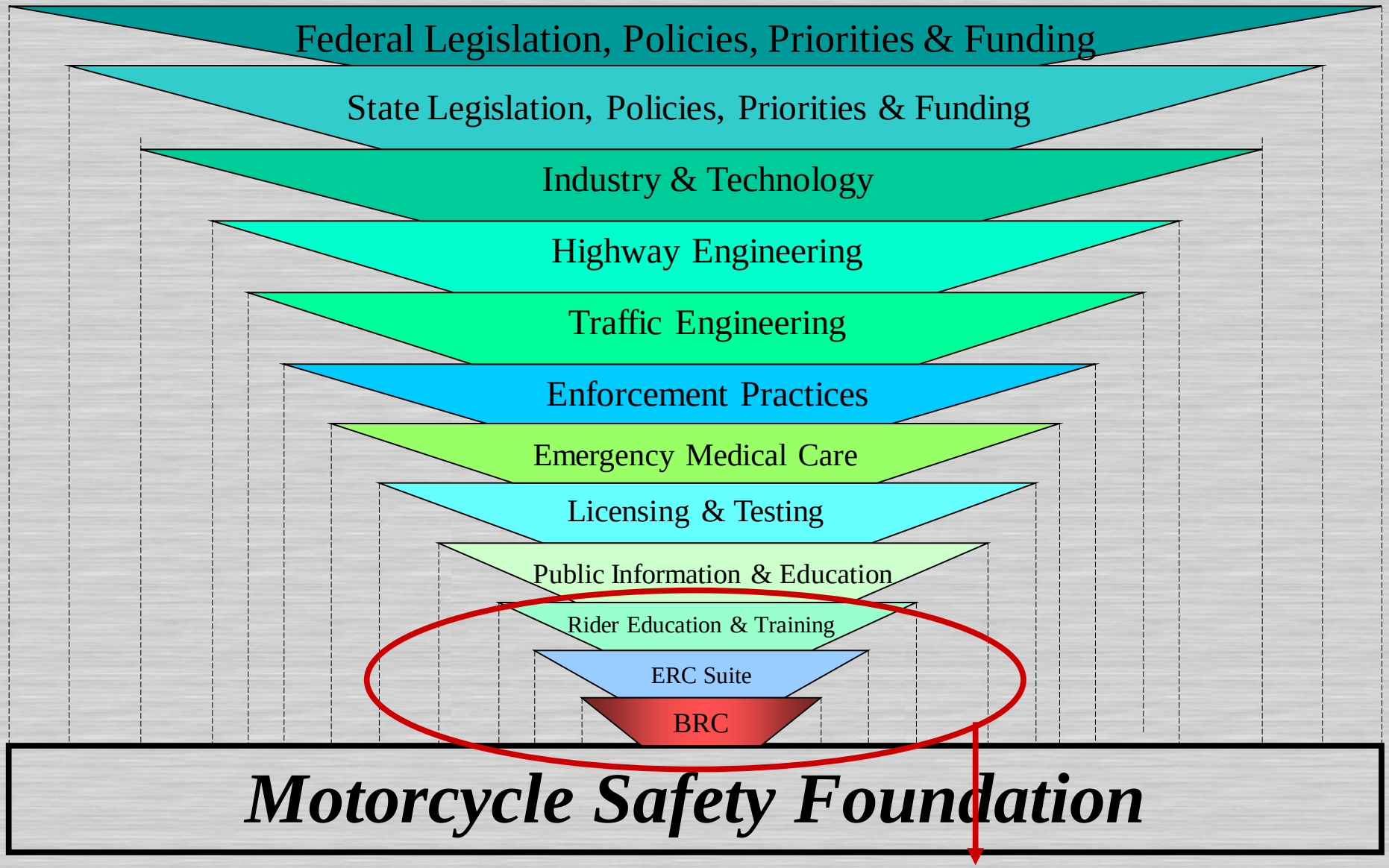
Haddon Matrix

	Human	Vehicle	Environment
Pre-Crash			
Crash			
Post-Crash			

NHTSA Motorcycle Safety Program

	Human Factors	Vehicle Role	Environmental Conditions
Crash Prevention (Pre-Crash)	• Rider education/ licensing • Impaired riding • Motorist awareness • State safety programs	• Brakes, tires, and controls • Lighting and visibility • Compliance testing and investigations	• Roadway design, construction, operations, and preservation • Roadway maintenance
Injury Mitigation (Crash)	• Use of protective gear	• Occupant protection	• Roadway design, construction, operations, and preservation
Emergency Response (Post-Crash)		• Automatic crash notification	• Education and assistance to EMS • Bystander care • Training for law enforcement • Data collection and analysis

Curriculum Exists in a System



(Soon to add advanced course, on-road course other training modules)

2. Safety and Risk Management

- Traffic Safety
  - Human Factors
  - Haddon Matrix
- **Motorcycle Safety**
  - **Crash Causation Data**
  - **Hurt Study**
  - **Motorcycle Task Analysis**
- **Risk Taking Principles**
  - **General Risk vs. Moment-to-Moment Risk**
  - **Risk Homeostasis**

3. Adult Learning & Development

- **Pedagogy vs. Andragogy**
- Factory Model vs. Facilitation
- Instructor-Centered vs. Learner-Centered
- Context of Meaningfulness
- Accelerated Learning

Quotes

"For some time now I have been aware of the fact that the products of our educational system don't know how to learn, they only know how to be taught."
(Malcolm Knowles, 1980)

"We know more about how animals (especially rodents and pigeons) learn than we know about how children learn; and we know much more about how children learn than about how adults learn." **(Malcolm Knowles, 1980)**

"The worst mistake my generation has made is to treat people as if they were rats." **(B.F. Skinner,1990)**

3. Adult Learning & Development

- Pedagogy vs. Andragogy
- **Factory Model vs. Facilitation**
- **Instructor-Centered vs. Learner-Centered**
- **Context of Meaningfulness**
- **Accelerated Learning & Brain-Based Learning**

Education History

Instructor-Centered

- **Behaviorism**
  - Scientific Method, Imitation, Observation, Repetition
- **Cognitivism**
  - Information Processing, Modeling, Gestalt
- **Constructivism**
  - Experience, Collaboration, Andragogy
- **Humanism**
  - Emotion, Meaningfulness

Learner-Centered

From → To

Traditional Learning

- Rigid
- Somber and Serious
- Competitive
- Verbal
- Controlling
- Time-Based

Accelerated Learning

- Flexible
- Joyful
- Collaborative
- Multi-Sensory
- Nurturing
- Results-Based

4. Motor Skills Development

- **Instructing vs. Coaching**
  - ***Instruct more in early range exercises and early in each exercise***
- **Whole vs. Part Instruction**
  - ***Learn whole motor skill with parts learned in context***
- **Gross vs. Fine Motor Skills**
  - ***Major muscles vs. smaller muscles***
- **Speed vs. Accuracy**
  - ***Basic skills first, speed develops naturally with practice***
- ***Feedback***
  - ***Proprioceptive***
  - ***Kinesthetic***
  - ***Augmented***

Motor Skills Development

- **Mental Practice Principles**
- **Over-Coaching and Over-Verbalization**
- **Being Directed vs. Practice on Own with Feedback**
- **Skill Development as Natural vs. Forced**
  - ***Natural*:**
    - **Development is subtle, progressive, and contextual**
    - **Improvement occurs with practice**

Curriculum Development

Objectives + Content + Terminology

Macro = Structure

Micro = RC + Rider Interactions

Core Prerequisite = How Do People Learn?

Macro: The System Perspective

MSF Rider Education & Training System

PRELIMINARY PROGRAMS

- Web-Based Safety Awareness & Training
- (P '06) Self Assessment
- Spokesperson
- (A) Motorcyclist Awareness: Pre-Permit
- Product Familiarization
- Introduction to Motorcycling

HANDS-ON PROGRAMS

- (A) Basic Course
- (A) ERC Suite:
  - (A) Skills Practice
  - (A) License Waiver
  - (A) Skills Plus
- (P'05) Advanced Braking & Traction Mgt. *RiderCourse*
- (P'05) On-Road *RiderCourse*
- (A) ScooterSchool *1*
- Dual Sport
- (A) MILMO Military
- (A) DirtBike School -
  Youth/Adult -
  CRE/OTS -
  DBS:Street Riders

CLASSROOM PROGRAMS

- (A) Motorist Awareness
- M/C Maintenance
  - •Basic
  - •Advanced
- (A) Group Riding
- (P '05) Seasoned Rider
- Touring
- Driver Education
- Rider Improvement Violator School
- Mental Preparation
- (A) Riding Straight
- (P '05) Perceptual Training

OTHER PROGRAMS

- Special Needs
  - •General
  - •By Course
- Referrals
  - •Trailers
  - •Sidecars
- Enforcement Training
- First Responder
  - •Pro
  - •Buddy
- Non-Rider Awareness
- Do Motorcycling Right
- Peer Mentoring
- Competition
  - Adult
  - Youth
  - MX
  - Road Racing
  - Drag Racing

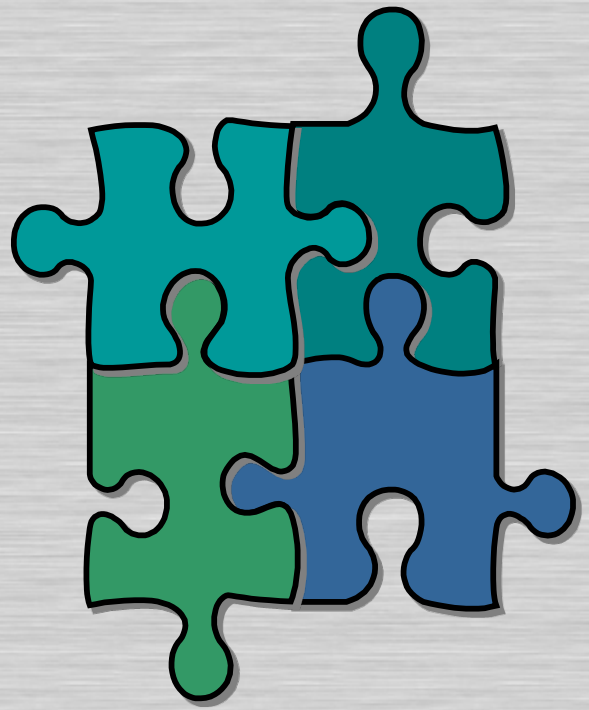
(A) AAMVA Licensing Assistance

•Premier Training Sites

(A) = Available Now
(P) = Priority

System Characteristics

- **Comprehensive model**
- **Custom-tailored for riders**
- **New opportunities for RiderCoaches℠**
- **Flexibility for jurisdictions**



Curriculum Development

Objectives + Content + Terminology

Macro = Structure

Micro = RC + Rider Interactions

Core Prerequisite = How Do People Learn?

MICRO

Instructor

From Authoritarian

To Learner-Centered

Content

From Simple

To Complex

Instructor-Participant Interactions

Context

From Formal

To Informal

Learner

From Dependent

To Self-Directed

Curriculum Development

- Instructional Systems Design (ISD)
- **ADDIE & DACUM (Developing a Curriculum)**
  - Analyze
  - Design
  - Develop
  - Implement
  - Evaluate

Pilot Test

Field Test

Curriculum Development

- Instructional Systems Design (ISD)
- **ADDIE & DACUM (Developing a Curriculum)**
  - Analyze
  - Design
  - Develop
  - Implement
  - Evaluate

Pilot Test

Field Test*

* **Repeated and complete iterations with focus on average novice motorcyclists**

Quotes

"Human learning is one of the most complex subjects of the scientific and scholarly world." ***(The Adult Learner,* 1998*)***

"Teaching-learning transactions are, after all, dynamic interactions—psychosocial dramas in which unforeseen eventualities, serendipitous circumstances, and individual idiosyncrasies constantly distort our neatly planned visions of how our learning groups should function." **(Brookfield, 1986)**

Field Testing / Component Feasibility Testing

The Cycle

Pilot Testing and Field Testing

1. Pilots in Kentucky and New Mexico
   - MSF staff and contractors
2. Field testing in New Mexico, Kentucky, and Pennsylvania
   - MSF Staff, Contractors and Instructors
3. Began October 9, 1998
4. Range and classroom content developed interdependently
5. Formally completed Fall, 2000
6. Rolled out March, 2001

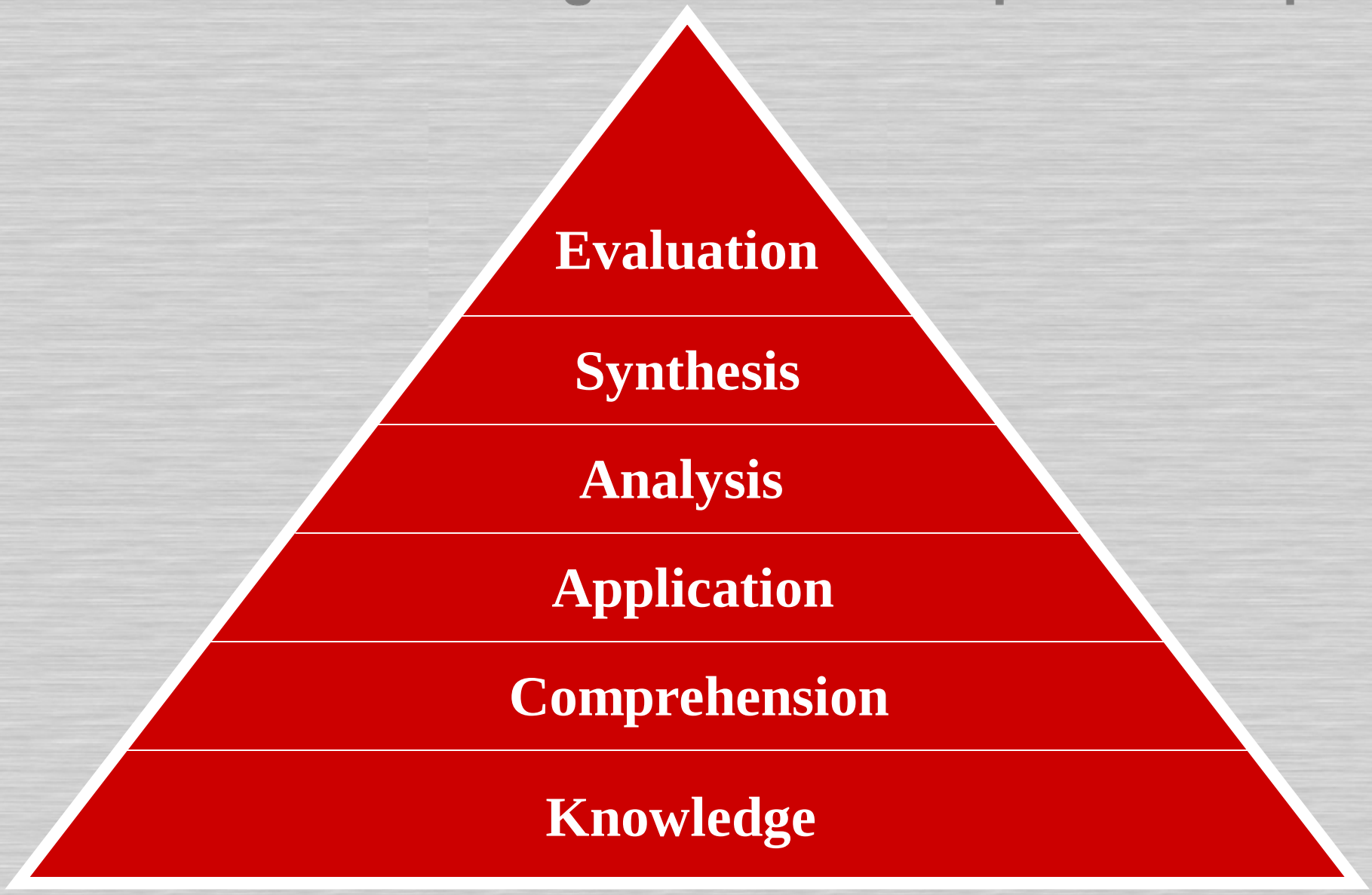
Decision Making in Classroom Field Testing

1. Appropriate, targeted content
2. Driven by objectives and intentions
   - Basic motorcycle safety knowledge
   - Strategy to see and be seen
   - Stress risk management and personal responsibility
3. Validation of content and sequence
4. Provide a basic template allowing for flexibility and creativity
5. Honor principles of learning
   1. Adult learning
   2. Learning styles
   3. Brain-based learning
6. Results oriented stakeholder feedback

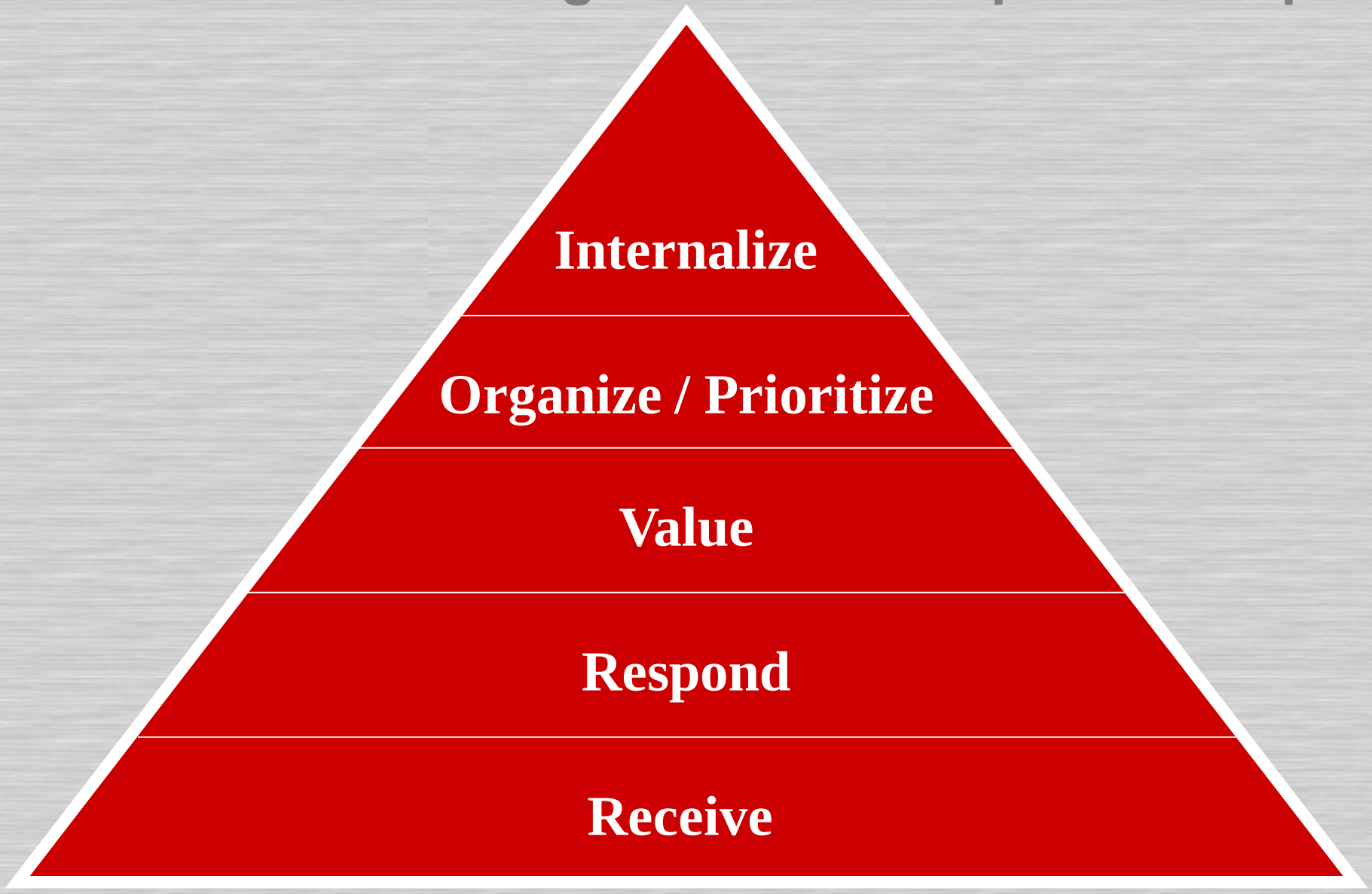
Bloom's Taxonomy

1. Cognitive
2. Affective
3. Psychomotor

Bloom's Taxonomy of Cognitive Development: Categories from Simple to Complex



Bloom's Taxonomy of Affective Development: Categories from Simple to Complex



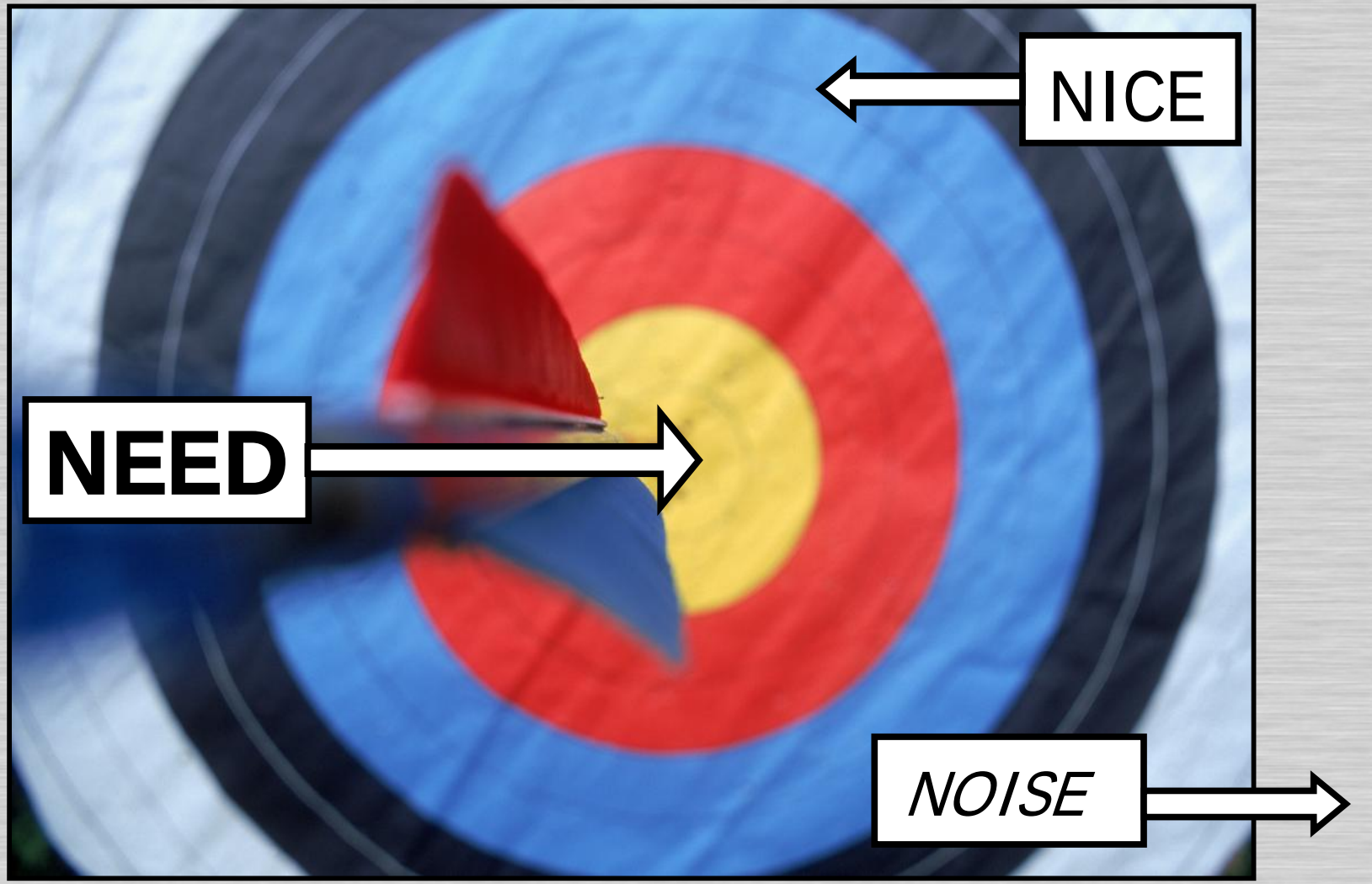
Progression of Classroom Development

1. Use MRC:RSS Classroom and Field Test Range Exercises
2. Use Learner-Centered Style MRC:RSS Classroom and Field Test Range
3. Develop Topical Areas and Content Based On:
   - What Is Basic? How Does It Fit System?
   - From Encyclopedia to Basic Rider Handbook

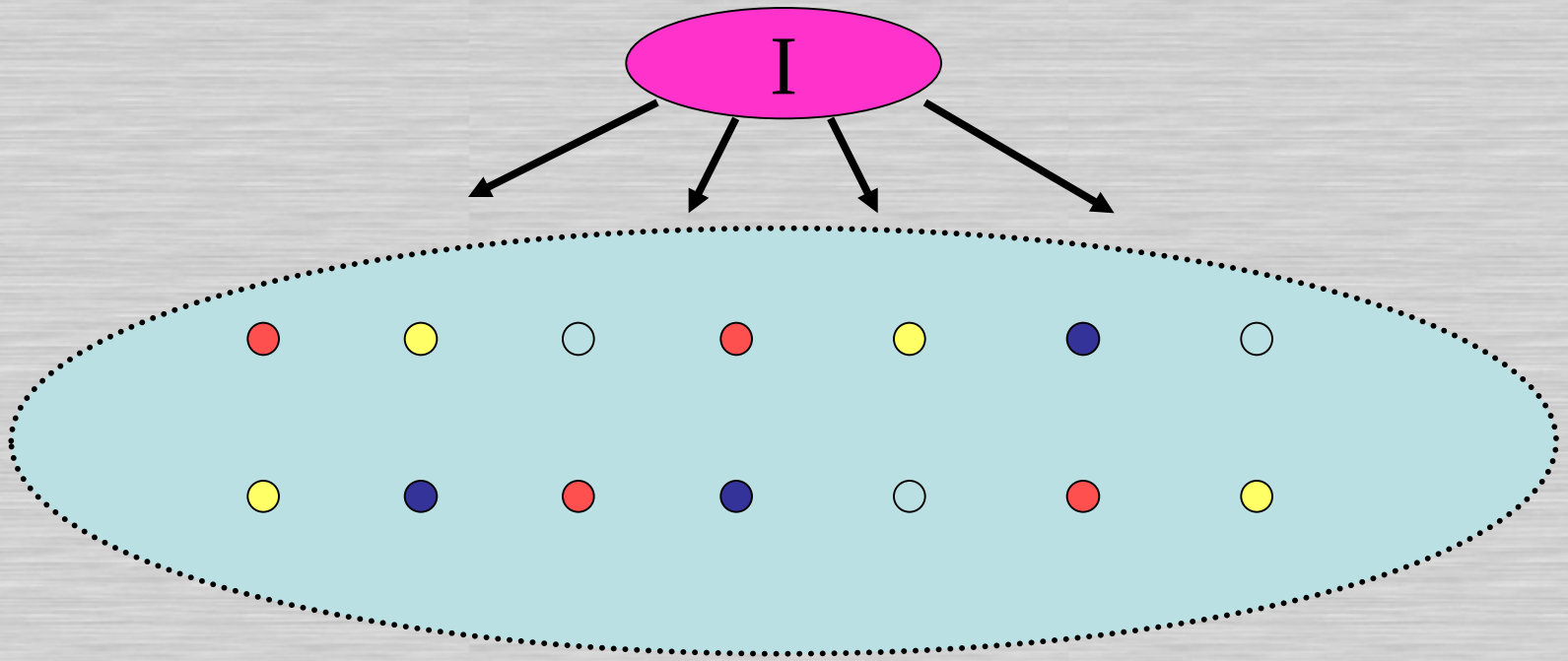
Classroom Steps (EZ-3)

1) **Setup**
2) **Activity / Discussion**
   - **Learner-Centered**
   - **Creative** ***(FEEL: Fun, Effective, Efficient, Learner-Centered)***
   - ***Why?*** ***(Why do you think this is important?)***
   - ***So What?*** ***(In what way does this help you?)***
3) **Capstone** ***(Training Aid)***

How “basic” is the Basic *RiderCourse*?

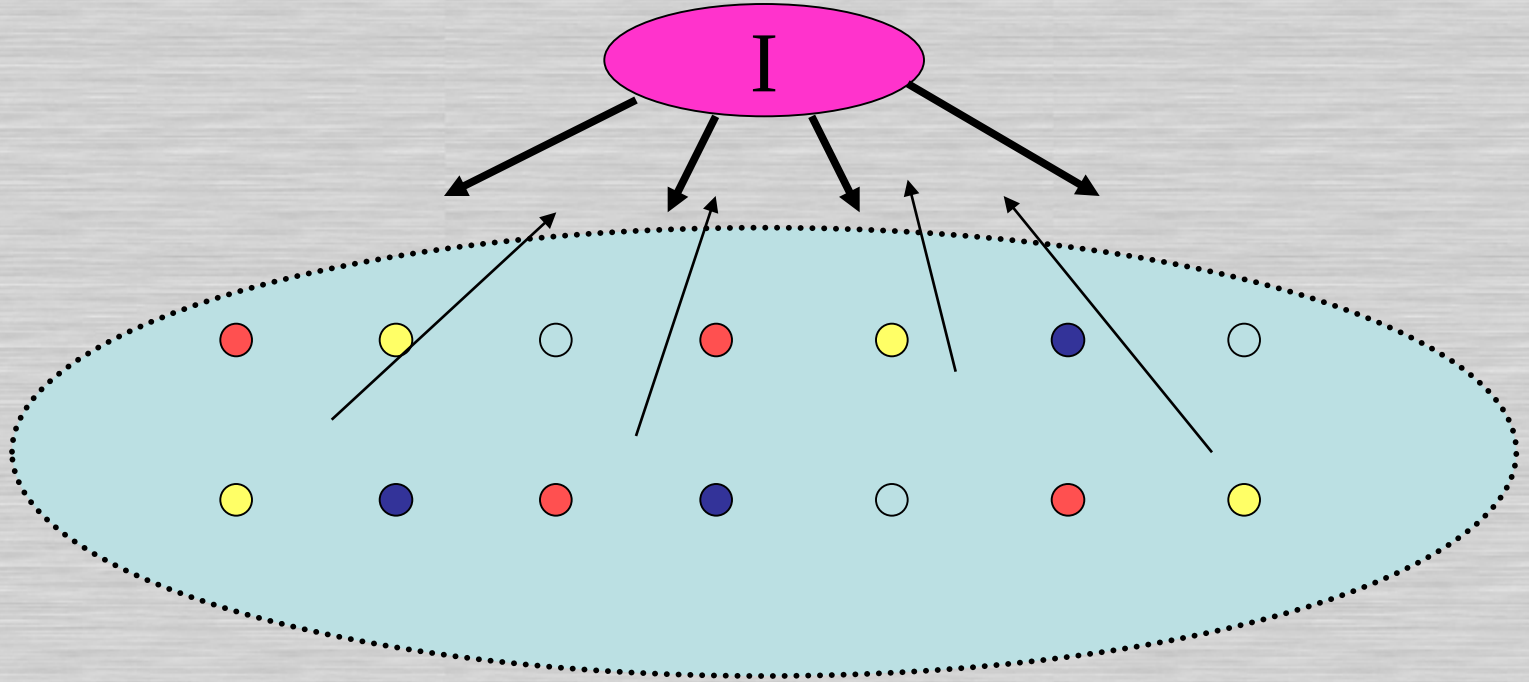


Fair to OK



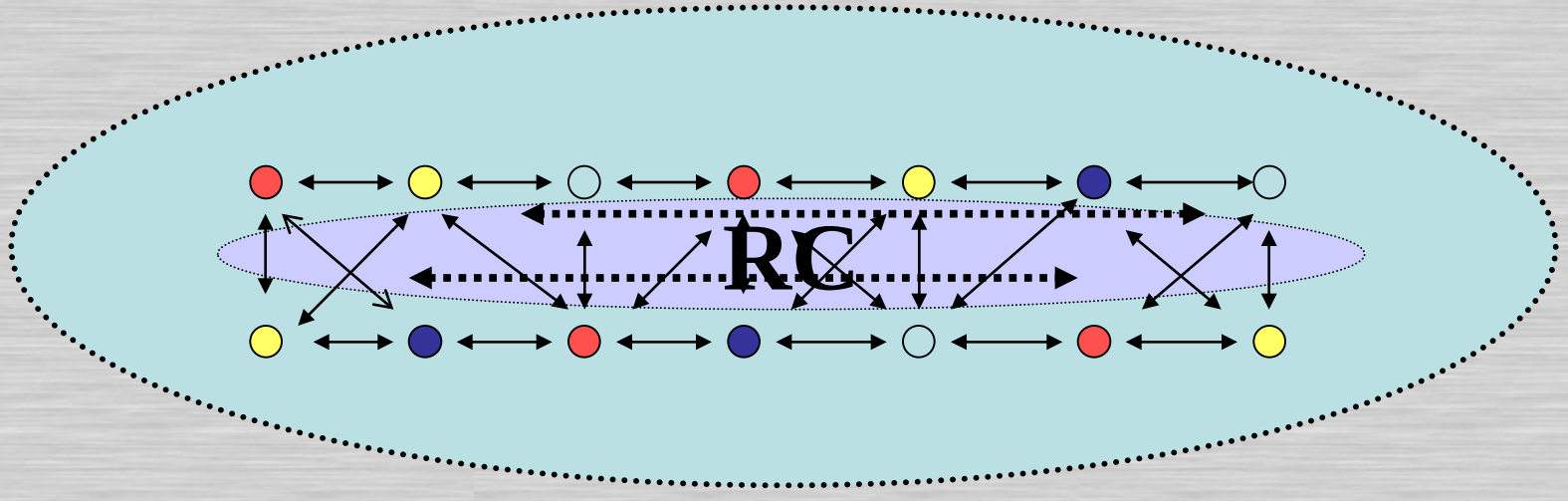
Lecture

Better



Q & A

Best



Group Facilitation

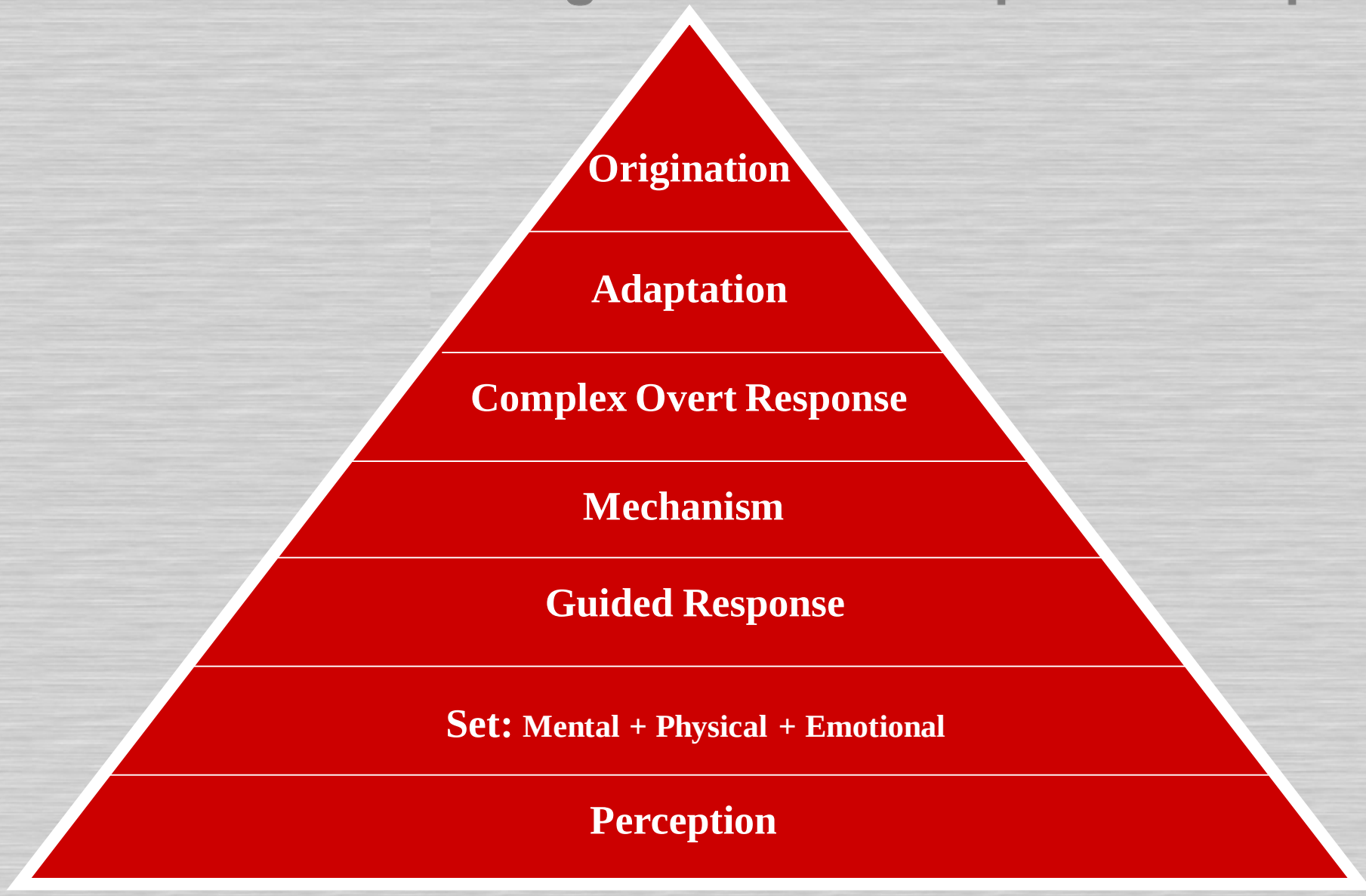
BRC: 5 Core Questions

1. What is the primary cause of motorcycle crashes? **(Interaction of factors)**
2. What is a good rider?
   (One who reduces factors s/he contributes)
3. How does a good rider reduce risk?
   (Applies a strategy—S.E.E.)
4. How long does it take to reduce risk?
   (It's a decision away!)
5. What is the primary challenge in safe, responsible riding?
   (Control personal behavior to ride within personal and situational limits)

Decision Making in Range Exercise Field Testing

1. Rider Safety
2. Rider Learning
   - Knowledge, Skill, Attitude, Habits
3. Range Management (Instructor work, line markings, cone setups and transitions)
4. Opportunities for Effectively Observing, Analyzing and Reinforcing
5. Exercise Transitions
6. RiderCoach Satisfaction and Expediency

Bloom's Taxonomy of Motor Skill Development: Categories from Simple to Complex



Range Evaluation and Coaching

SEARCH

Range Management

Overall Range Safety	Rider Safety Margins
Lesson Sequential Steps	Smooth, Controlled Skill by Riders

Coaching Actions

Major Skills	Evaluations	Rider Actions
Clutch/Throttle Braking Straight-line Turning Shifting	New and Continuing Evaluation Points	Head/Eyes Shoulders Hands Knees Feet
Smooth/Coordinated	On Range Cards	Smooth/Coordinated

EVALUATE

Factors That Could Interact

Entire Range
Surrounding Areas
Time & Space for Individual Riders

Rider-Specific Core Error

(Prioritize Root Cause)

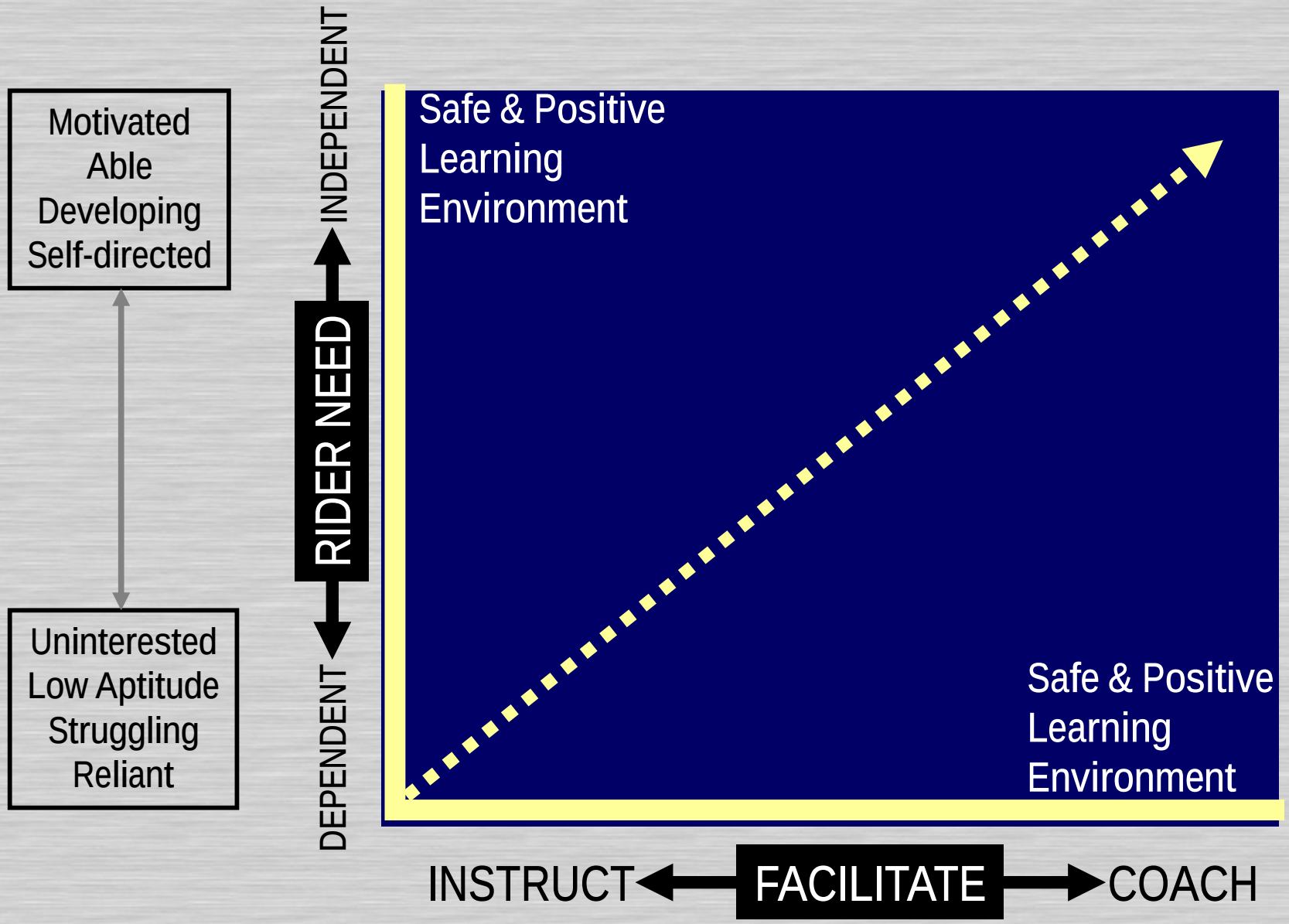
1. Perception
2. Decisions
3. Motor Skill

EXECUTE

Non-Verbal & Verbal Coaching for Overall Safety (Safety Margins)

Motivating Feedback for Development & Reinforcement of Procedures & Techniques

Rider-Specific Coaching



Formal Field Testing Events

1. RETSDOT
2. ResLabs and Component Feasibility Testing
3. Advisory Pool
4. Core development team
5. Open process with Instructor observation and input (and other stakeholders)
6. Alternate curriculum trials and experimentation
7. Demonstration at SMSA (Indianapolis)
8. Demonstration for State Coordinators & 1st person video
9. Demonstration for Rider's Edge
10. Continuous fine tuning of materials until release

BRC Skill Test Parameters

1. Motor vehicle administration interface – license waiver
2. Recognize distinctions between courses and DMV
3. Consider current motorcycle tests
   - MRC:RSS (equally stringent)
   - Motorcycle Operators Skill Test (MOST and MOST II)
   - Alternate Motorcycle Operators Skill Test (Alt-MOST)
   - Motorcycle Licensing Skill Test (MLST)
4. Results to have similar exit requirements as MRC:RSS
5. Safe, effective, efficient
6. Consider basic and collision avoidance skill sets
7. Consider rider fatigue
8. Consider real world exercise configurations
9. Consider RiderCoach ease of administration
10. Use exercises setups from curriculum