Effective AV Policy Creation

TECHNOLOGIES | MARKETS | REGULATIONS

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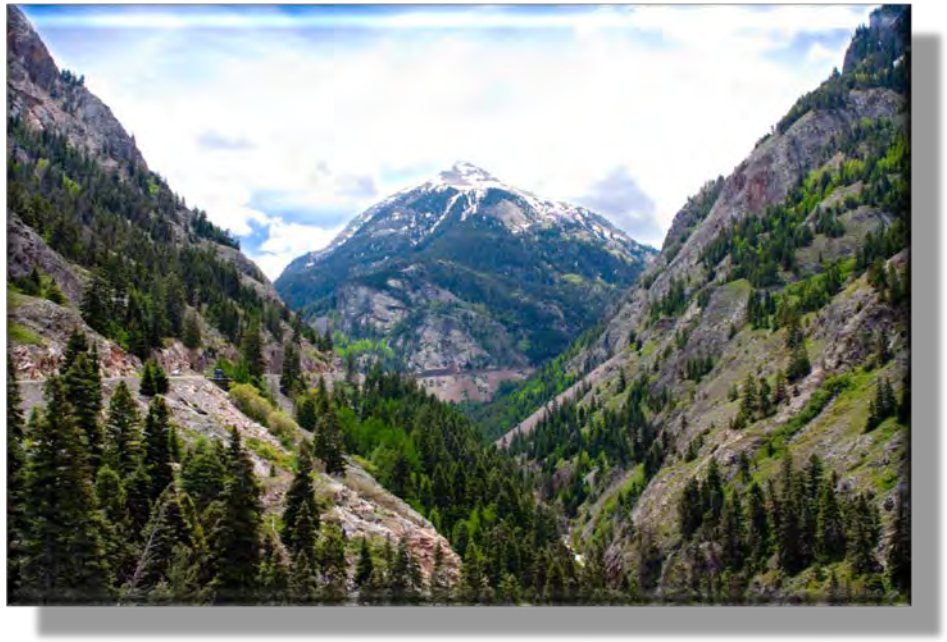
POLICY | WHAT CAN BE



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POLICY | WHAT CAN BE

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POLICY | WHAT CAN BE

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POLICY | ADVANCING AV

We are in the midst of a new wave of mobility technology evolution with even larger infrastructure considerations and more critical connectivity requirements; human safety implications by way of accident reduction will only be achieved with expert execution.

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WHO WE ARE

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ACS Delivers

Innovative and integrated **systems**, **equipment** and **facilities solutions** for clients who demand **high performance**

ACS Utilizes

Understanding of **Process Technology & Applications**

Expertise in **Industry Codes & Regulations**

Ability to **Fully Integrate** Building & Process Systems

Knowledge of **Building Design & Construction**

Flexible Project Delivery

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90 people with 650+ years of transportation test experience

400+ Test Facilities

$1.0 Billion Industry Investment

Engine & Vehicle Test Forum

60+ Clients in 35 States & 16 Countries

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AGCO BRP CNH Industrial EMD (Electro-Motive Diesel)

Briggs & Stratton Cummins DMAX EPA Argonne Nat. Lab GE Kawasaki

Honda Hyundai-Kia Jaguar Land Rover MTU America Navistar International

Caterpillar Daimler Trucks SwRI John Deere Harley Davidson Kohler

Kubota Fairbanks-Morse Textron Ford Motor Company Hendrickson International

PACCAR Polaris S&S Cycle Club Car Toyota Weichai America Corning

Delphi Ricardo Lubrizol Volvo Aero Technologies (3M) Tesla Woodward

Modine Umicore United Technologies Corporation MAHLE

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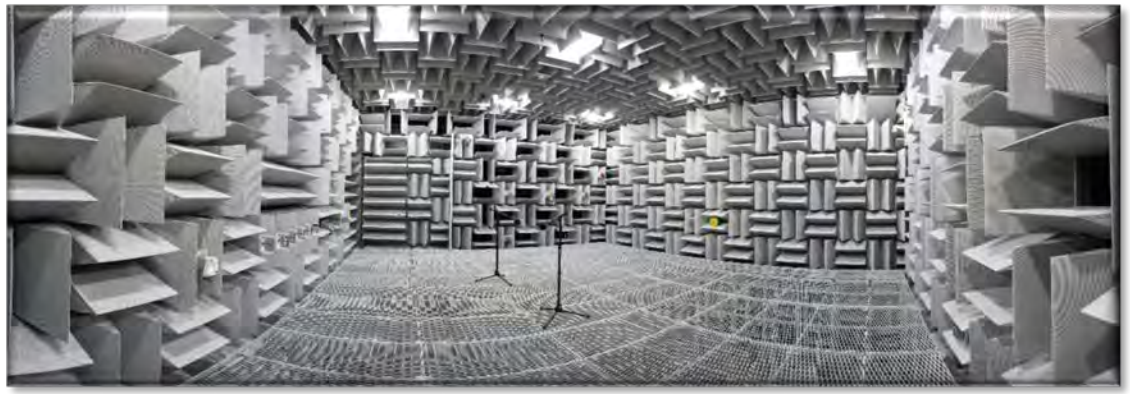
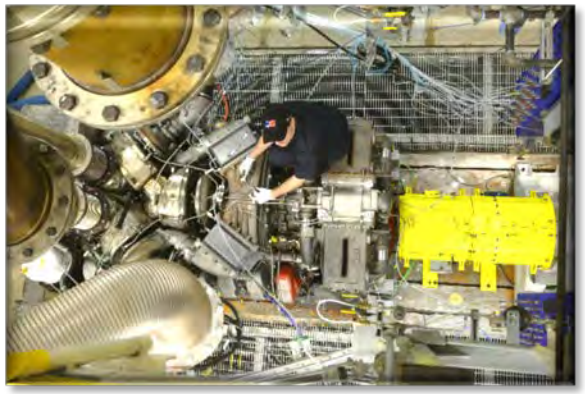
ACS | WHAT WE DO





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ACS | PRODUCT INTEGRATION

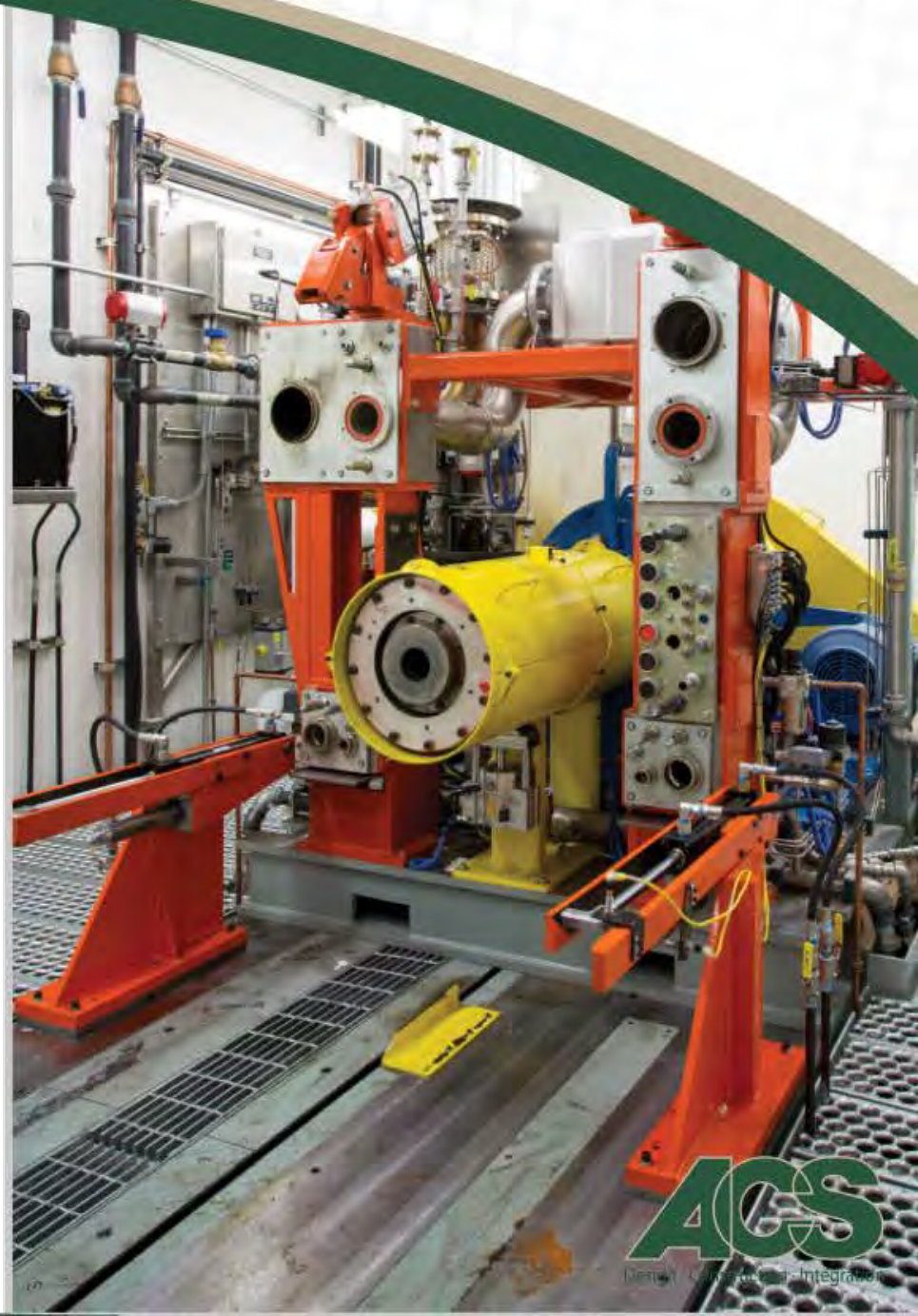
Measuring the Systems as a Whole

- Components
- Systems
- Vehicle
- **Neighborhood**
- **City**
- **Highway**
- **State**
- **Country**

ACS| PRODUCT VALIDATION

Proves functionality

- Definition of “what is”?
- Defines measurement
- Develop Acceptance Criteria
- Confirmation
  - Conditions
  - Time

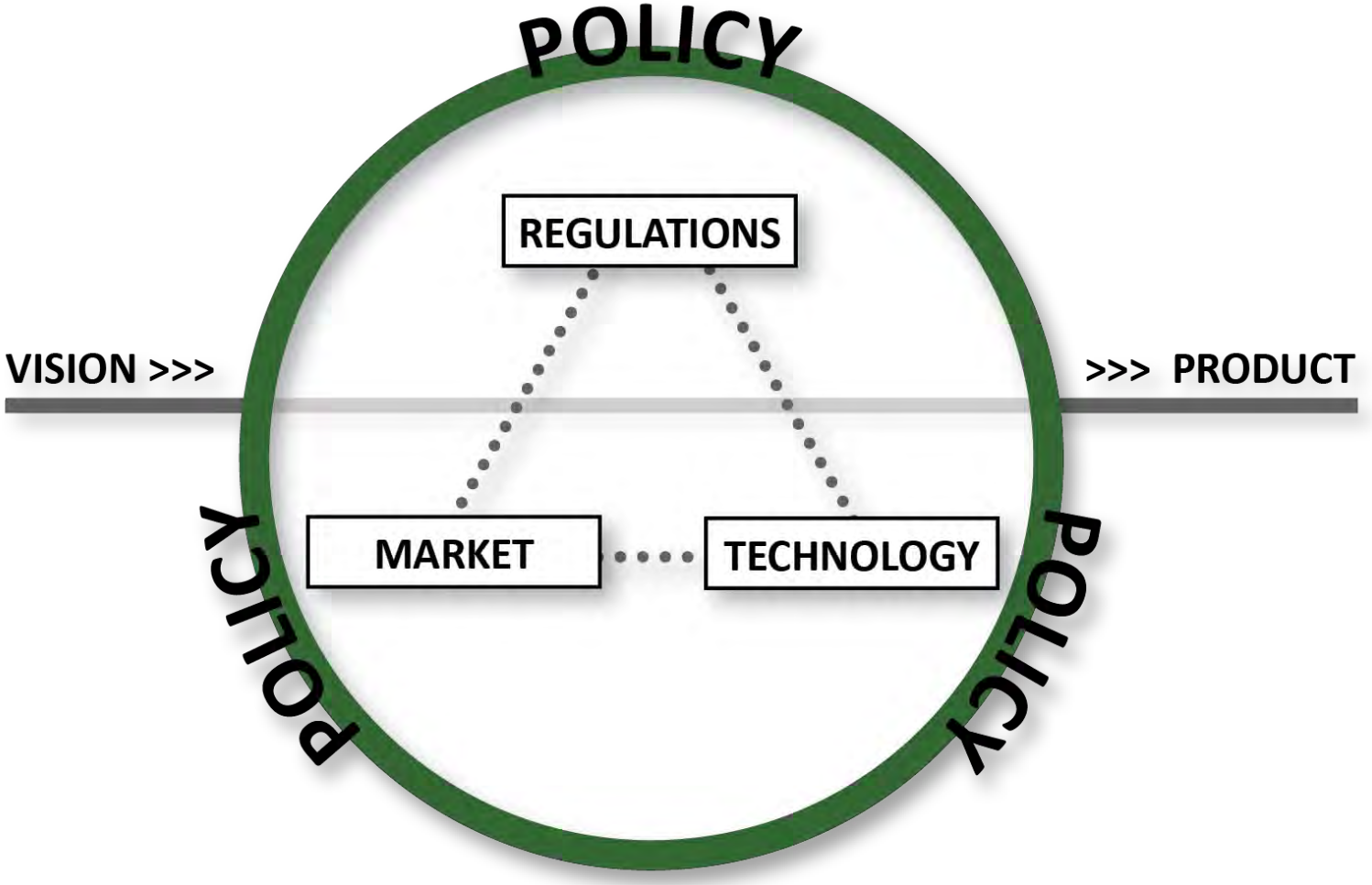


AV POLICY | HOW WE FIT

Translating Between Objectives, Standards & Technology

- Objective = Safety
- Standards = “What is Necessary”
- Technology = “What is Possible”

AV POLICY | INPUTS



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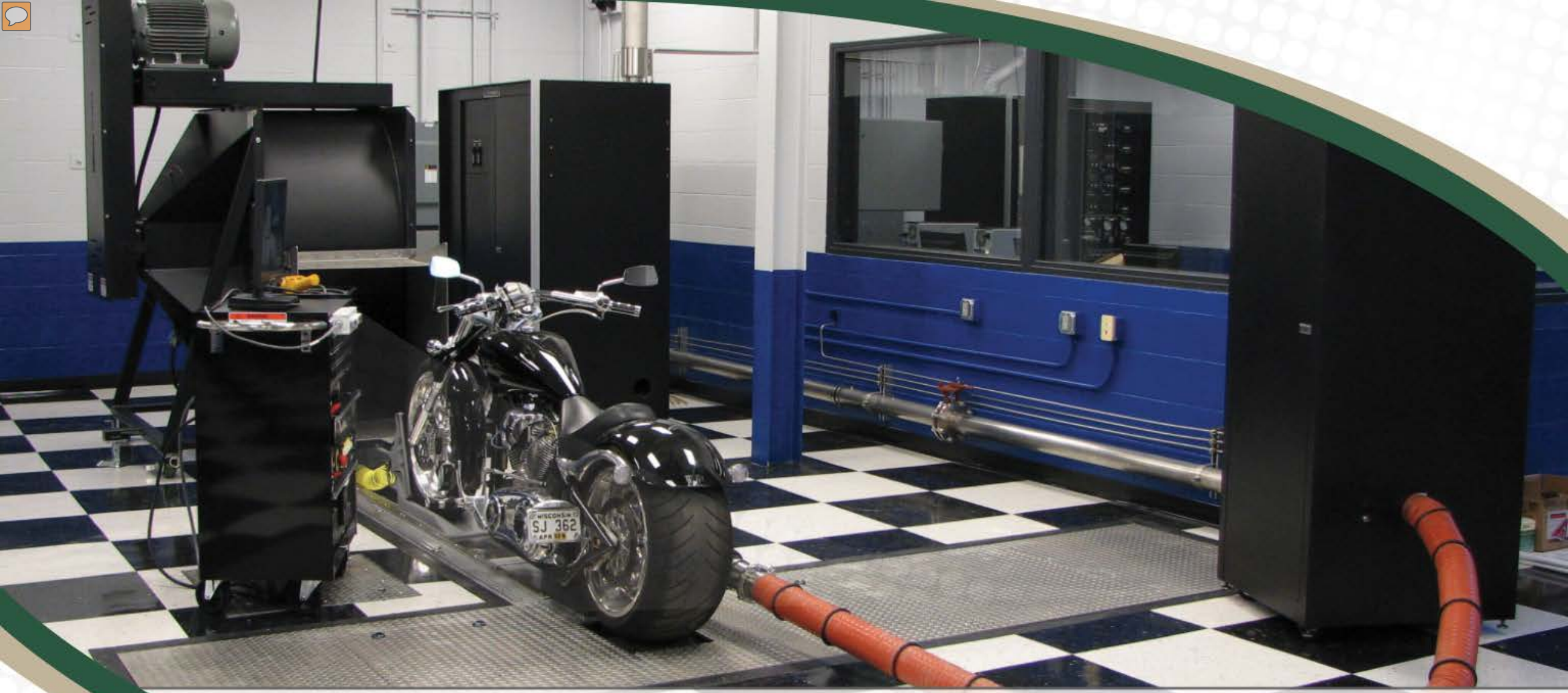

THE EMISSIONS PARALLEL

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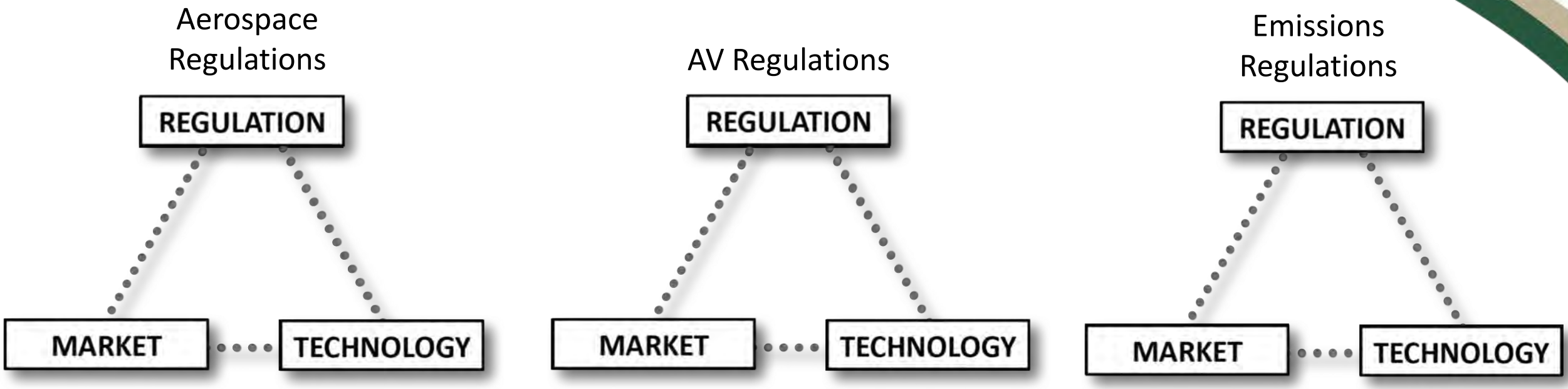
EMISSIONS | THE PARALLEL

- Adoption and implementation of standards and regulations
- Government / Industry cooperation
  - Setting standards
  - Defining test processes and procedures
- Key Concerns
  - Difficulty / effort involved to develop the technology
  - Constraints of the regulated timelines and market competition
  - Investments in product development for adoption by consumers

POLICY | WHERE DOES AV FALL?



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AV POLICY | CONSIDERATIONS

- **Readiness:** Infrastructure
- **Tolerance:** Tools must be tried, tested, and in place
- **Access:** Marketplace engagement

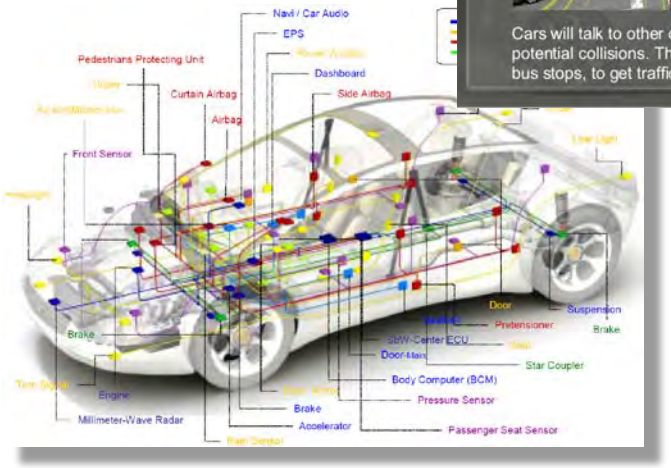
ADVANCING AV | READINESS

Development and Validation of the Testing Chain

- Math to Lab to Road
  - Developing & Applying current methods and equipment (testing infrastructure)
  - Validating the vehicle (vehicle infrastructure)
  - Validating the environment (roadway infrastructure)

ADVANCING AV | TOLERANCE

- Durability & Robustness Validation
- V2X Communication
- The ECU (Electronic Control Units)



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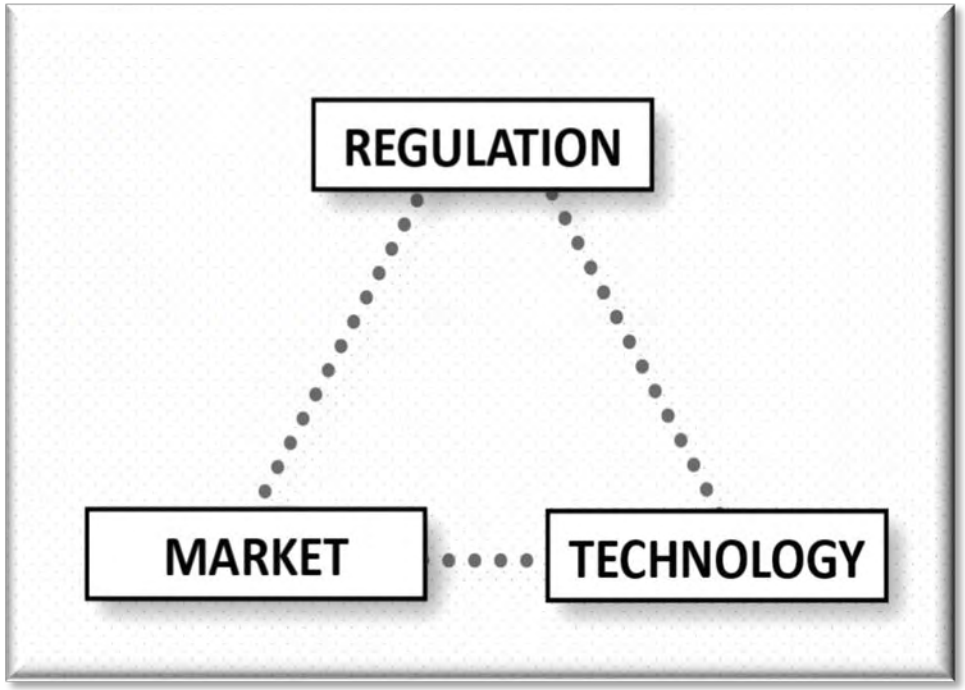
ADVANCING AV | ACCESS

- Regulation Interpretation & Translation
- Testing Facilities Integration
- Testing Equipment Integration
- Testing Research and Development



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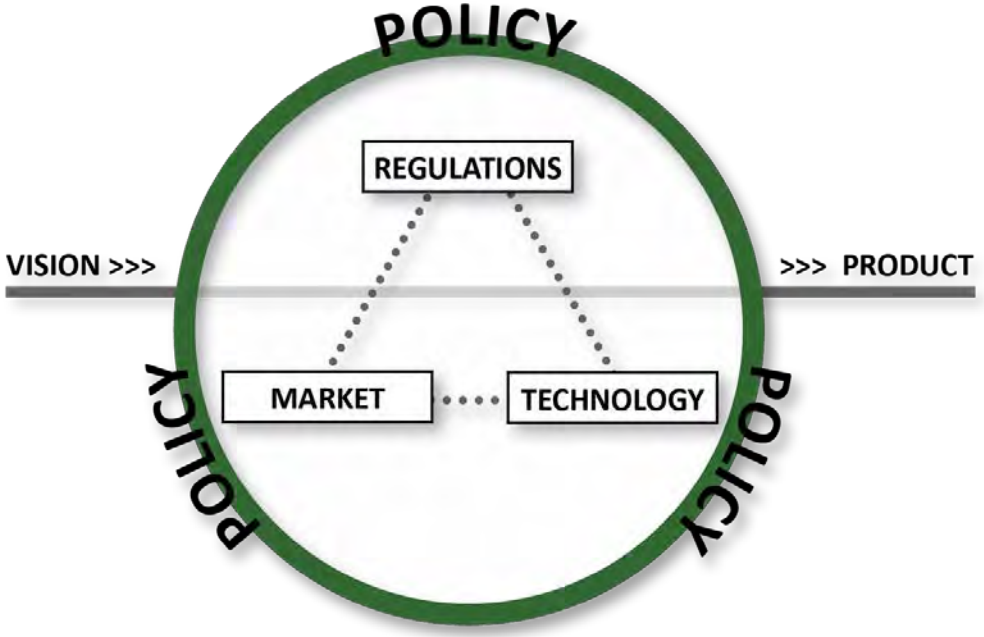
ACS | ADVANCING AV

AV technology will reach
market acceptance when policy
requires test and validation of the newly designed
integrated systems to a **common standard.**

These regulations are able to be executed, from a vision to a product, when they are able to be executed within a **financially stable business model.**



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Thank You

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