



Research Development Demonstration & Deployment Paths to Adoption

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Drivers for IDSM R&D

Policy/Regulation

- AB 32 Green House Gas
- California Long Term Energy Efficiency Strategic Plan (September 2008)
 - California Big and Bold Initiatives
- California Solar Initiative
- Smart Meter
- Smart Grid
- Electric Vehicles
- Renewable Portfolio Standard
- Zero Net Energy

Market Differentiation

- Respond to Market needs (iPad)
- Increase Market share (better/cheaper LED)
- Disruptive Technologies (Smart Phone)

Public Interest

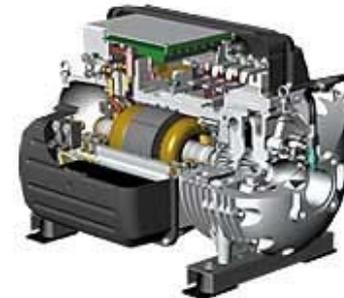
- Benefits Society
- Not Readily Addressed
- Responsive To Regulatory/Policy Issues

Regulated

- Utilities
- Telecom

Barriers

- Information/Search Costs (\$ for identifying technologies/strategies)
- Performance Uncertainties (are future benefit claims true)
- Organizational Practices (practices/culture with discourage decisions)
- Product/Service Unavailability (adequacy of supplies)
- Hidden Costs (unexpected costs)
- Asymmetric Info/Oppportunism (difficulty assessing reliability, product claims)
- Proactive Implementation (break down barriers through prolonged efforts)



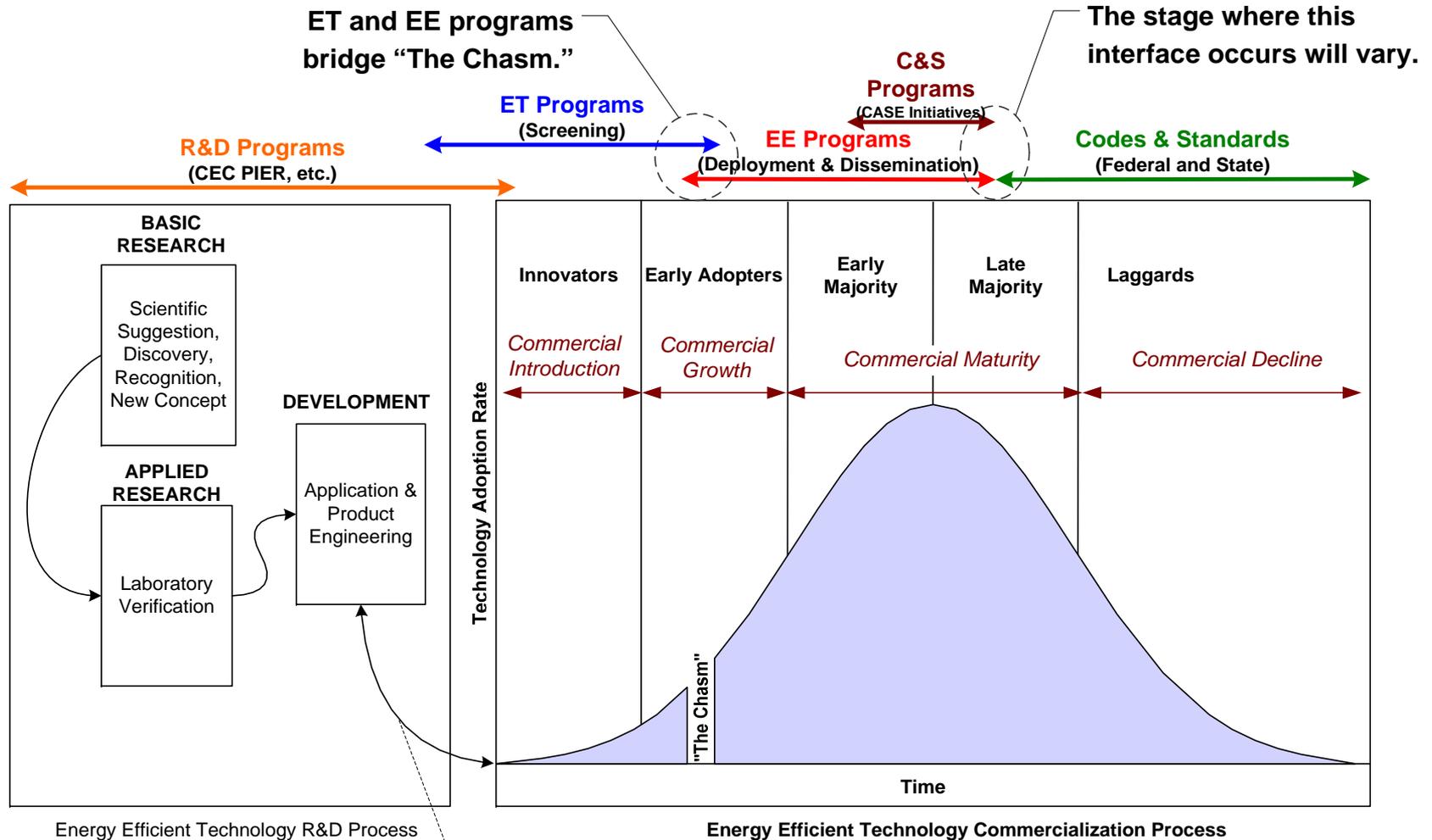
Actions Addressing Barriers

- Technology Assessments
- Scaled Field Placement
- Demonstration/Showcase
- Market and Behavioral Studies
- Technology Supply-Side Efforts
- Technology Test Centers
- Incubation TRIO



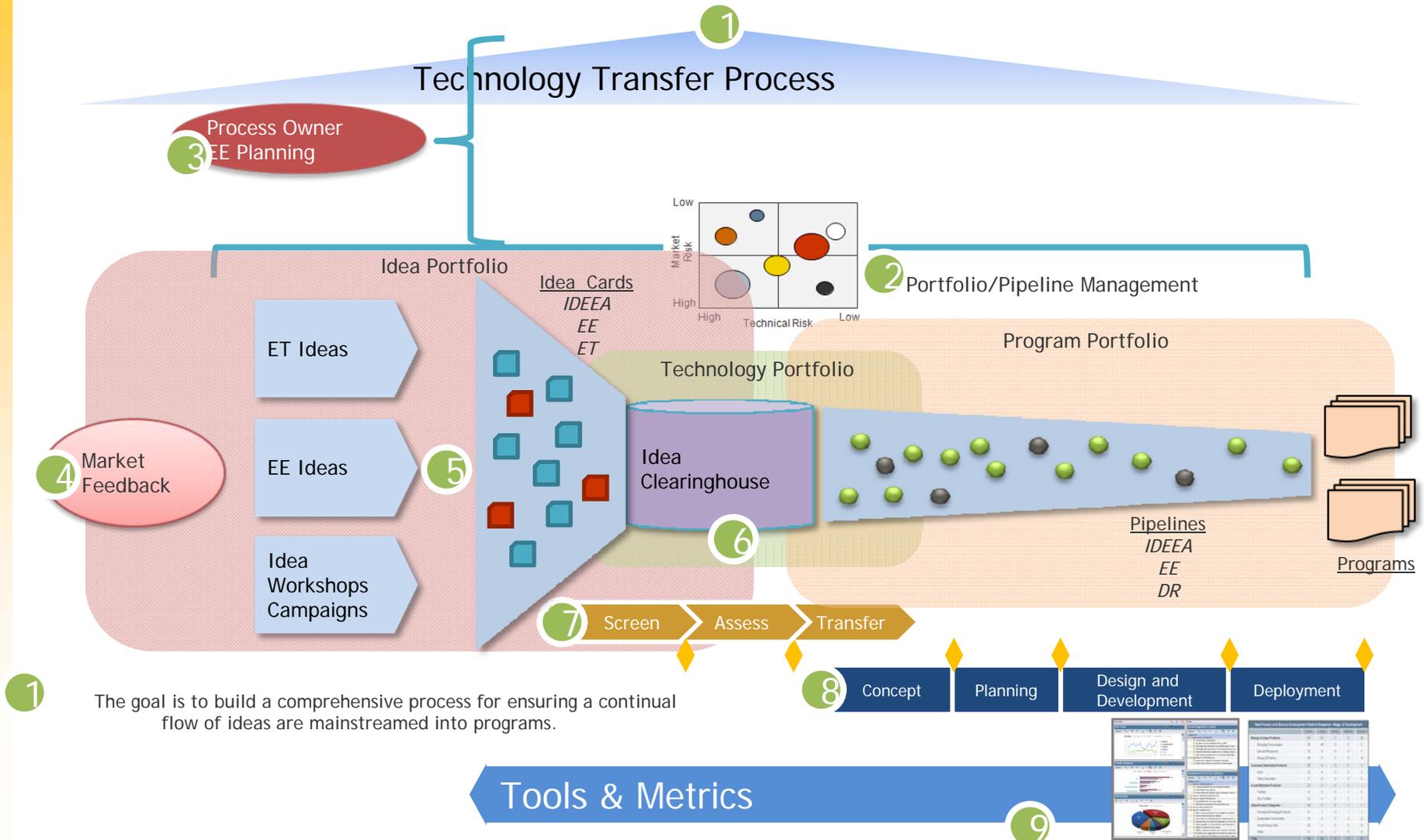
Barriers	Technology Assessment	Scaled Field Placement	Demonstration Showcase	Market & Behavioral Studies	Technology Development & Support	TRIO	Technology Test Centers
Information and Search Costs (the costs of identifying energy-efficient products or services or of learning about energy-efficient practices)	X	X	X	X		X	
Performance Uncertainties (the difficulties consumers face in evaluating claims about future benefits, which are made for many energy-efficiency investments and activities)	X	X	X	X			X
Organizational Practices or Customs (the practices that discourage or inhibit cost-effective energy-efficiency decisions)	X	X	X	X	X	X	
Product or Service Unavailability (the adequacy of supply of EE technologies)					X	X	
Hidden Costs (unexpected costs associated with reliance on or operation of energy-efficient products or services)	X	X	X	X	X		
Asymmetric Information and Opportunism (the difficulties consumers face in evaluating the veracity, reliability, and applicability of claims made by sales personnel for a particular energy-efficient product or service)	X	X	X	X			
Proactive Implementation (by breaking down barriers through gauging performance through on-going efforts)			X				

Energy Efficiency Framework



New technologies and applications may cycle between Product Engineering and Commercial Introduction several times until the correct mix of features, performance, price, availability, etc. are reached. Degree of failures and risk are high.

Technology Transfer Process



Opportunities

- Broader Partnerships/Collaboration/Joint Ventures
(ETCC, Technical Advisory Groups, Trade Associations, etc.)
- Cross Cutting
 - Public Interest
 - Regulated
 - Shareholder
 - VC/Angel Funds/Search Funds
- High Fidelity Market Intelligence
- Behavioral Science
- Accountability, Transparency
 - S-specific Goals
 - M-easurable
 - A-chievable and Reasonable
 - R-ealistic Goals
 - 8 T-ime Certain

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