EPICENTER

research summit

AUGUST 4-5, 2014 • STANFORD UNIVERSITY

Session C: Student-Centric Entrepreneurial Mindset

Doug Melton

Kern Family Foundation

epicenter National Center for Engineering Pathways to Innovation

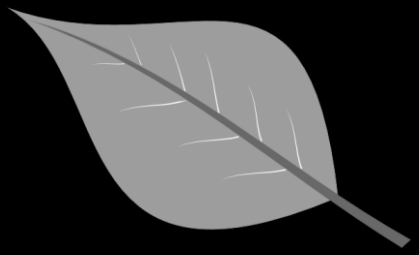
NSF

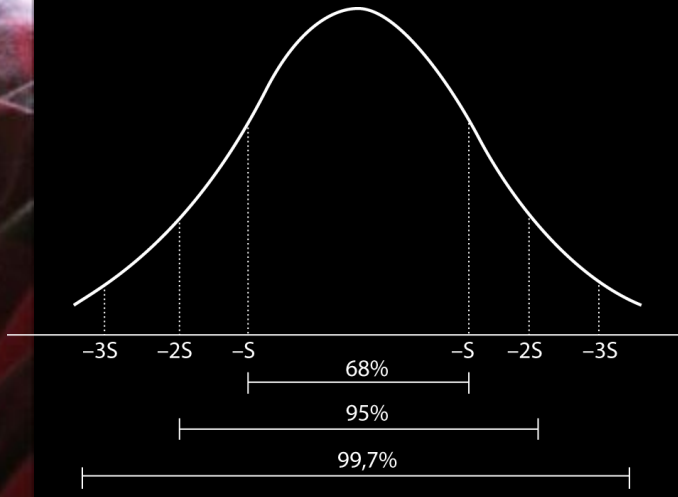
Stanford University

NCIIA

1

To Create Transformative Educational Experiences, Connect To Passions




–3S
–2S
–S
–S
–2S
–3S
68%
95%
99,7%

2009

2004

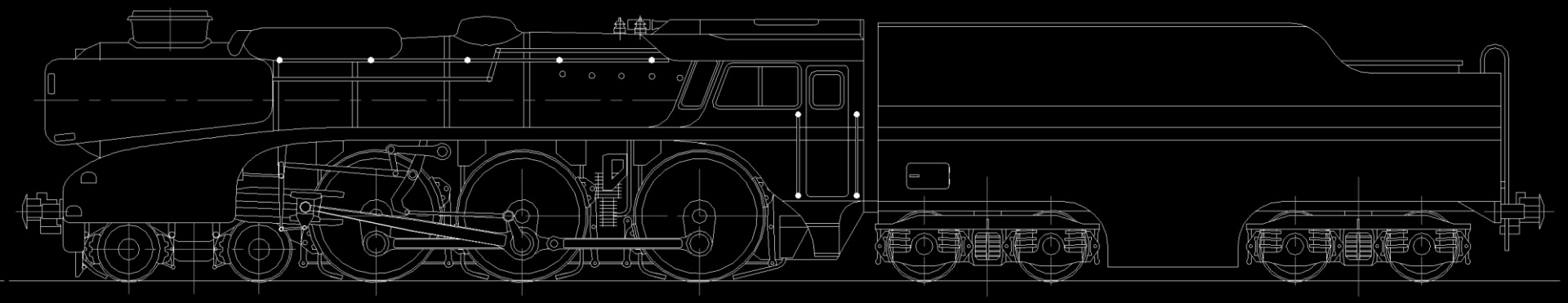
2011

Swedish Biogas INTERNATIONAL

Nov 2010

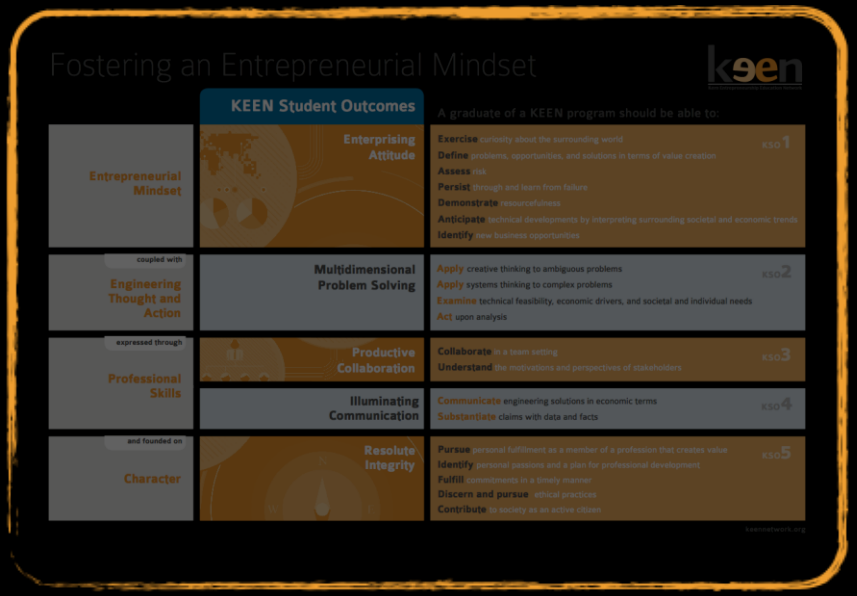
2

Entrepreneurial Mindset Is The Engine Of Value Creation



KEEN Framework For Engineering Education

Mindset



Customized To Engineering

Skills

Engineering and Business skills

Entrepreneurial Mindset

Curiosity

Constant curiosity about our changing world

Connections

Habitually integrating information from many sources to gain insights

Creating Value

Identifying unexpected opportunities to create value — and learning through actions and experiences

3

An Entrepreneurial Mindset Can Be Applied To Any Situation

KEEN is not aimed at:

- new ventures,
- commercialization, or
- invention.

Most graduates will become **intrapreneurs**, creating value through existing organizations.


DESIGN AND SYSTEM ENGINEERING
Determine Design Requirements
Perform Technical Design
Analyze Solutions
Develop New Technology (Optional)
Create a Model or Prototype
Validate Function


PROBLEM DEFINITION
Identify a Problem
Formulate Solutions
Evaluate:
Technical Feasibility
Customer Value
Societal Benefits
Economic Viability
Select and Quickly Test via Customer Engagement
Protect Intellectual Property
Evaluate Regulatory Issues
DESIGN AND SYSTEM ENGINEERING
Determine Design Requirements
Perform Technical Design
Analyze Solutions
Develop New Technology (Optional)
Create a Model or Prototype
Validate Function

OPPORTUNITY

- Identify an Opportunity
- Investigate the Market
- Create a Preliminary Model

PROBLEM DEFINITION

- Identify a Problem
- Formulate Solutions
- Evaluate:
  Technical Feasibility
  Customer Value
  Societal Benefits
  Economic Viability
- Select and Quickly Test via Customer Engagement
- Protect Intellectual Property
- Evaluate Regulatory Issues

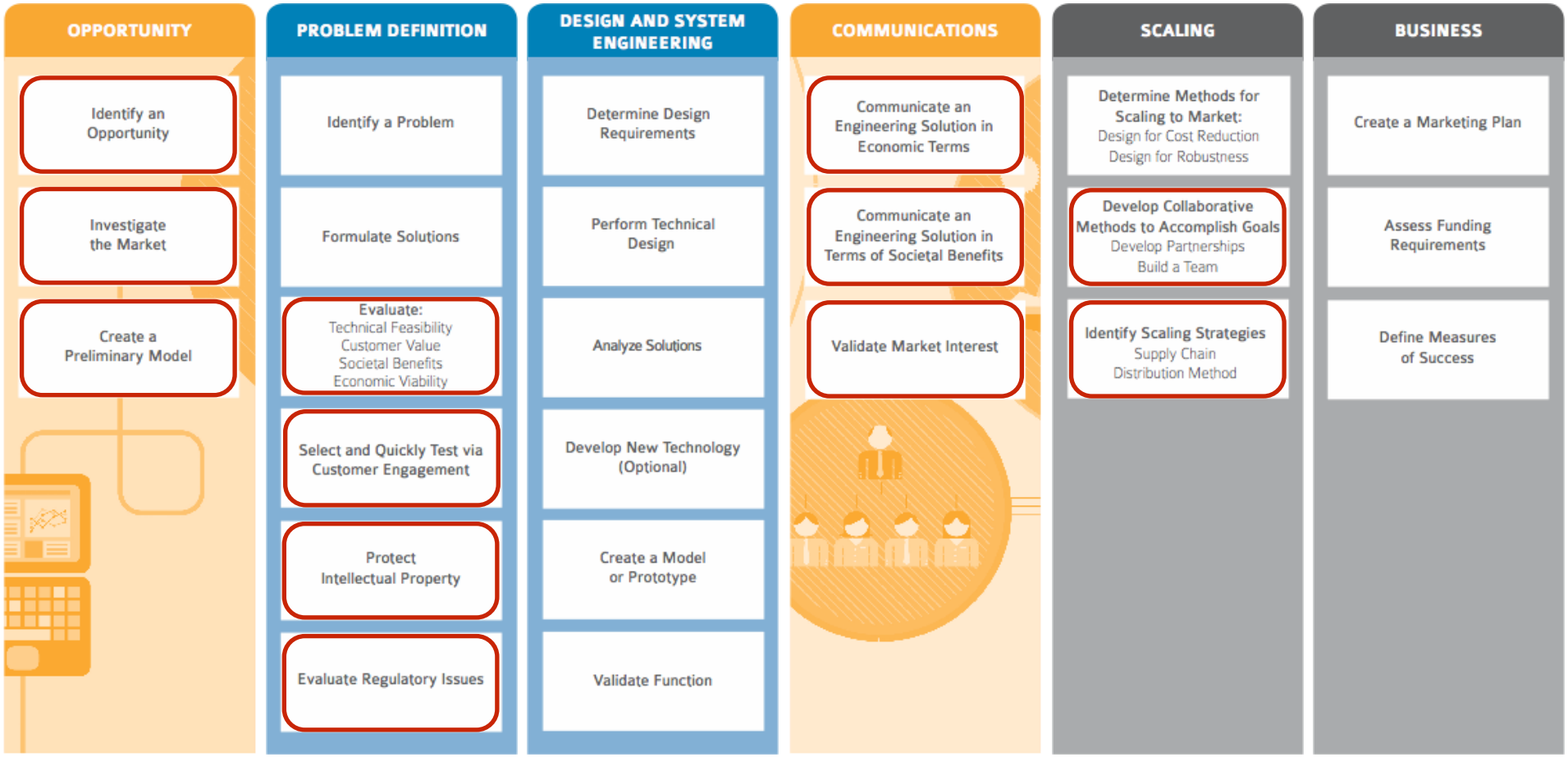
DESIGN AND SYSTEM ENGINEERING

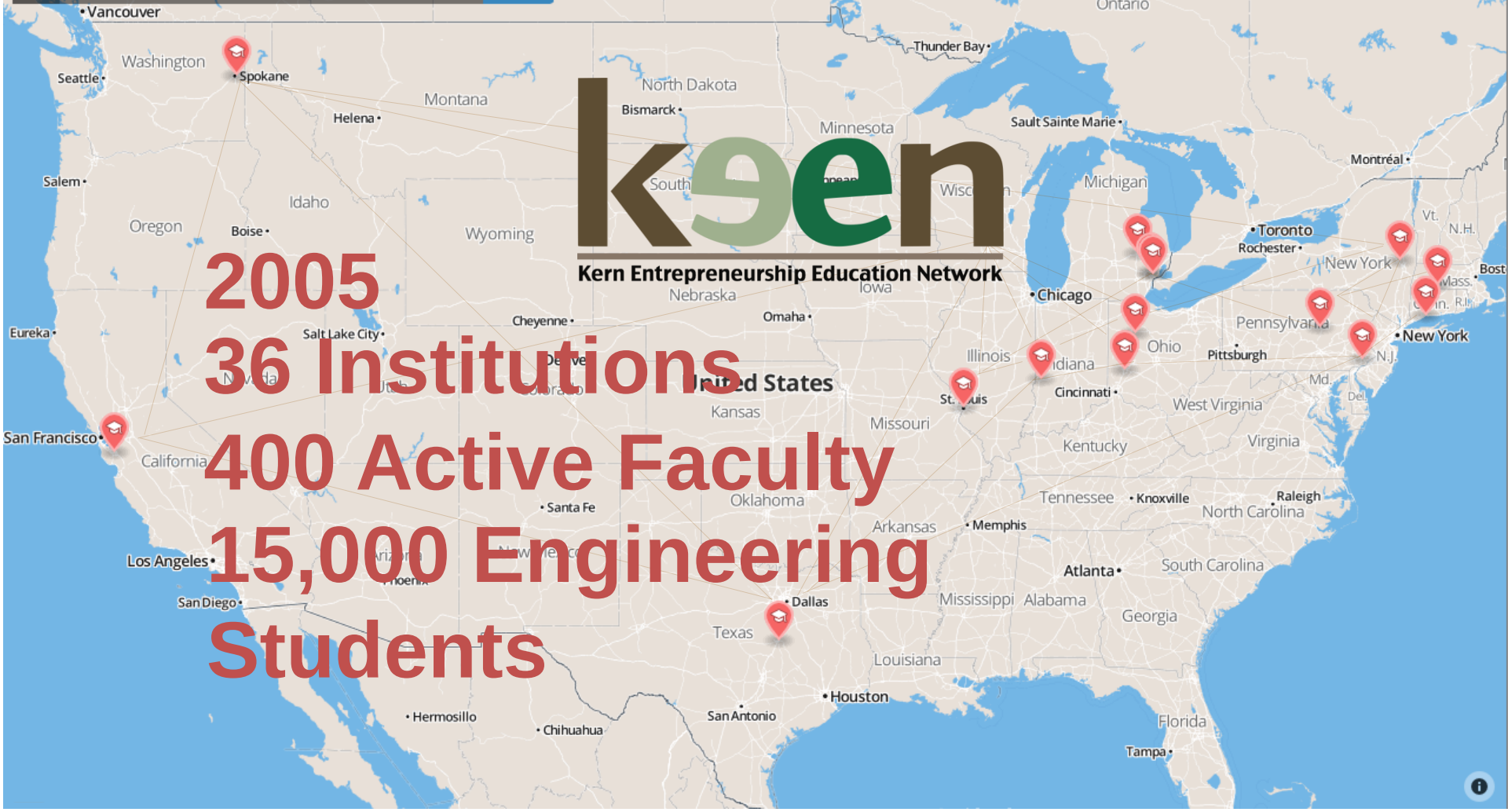
- Determine Design Requirements
- Perform Technical Design
- Analyze Solutions
- Develop New Technology (Optional)
- Create a Model or Prototype
- Validate Function

COMMUNICATIONS

- Communicate an Engineering Solution in Economic Terms
- Communicate an Engineering Solution in Terms of Societal Benefits
- Validate Market Interest

Redefining Engineering as Creating Value





Santa Clara University School of Engineering

ROSE-HULMAN INSTITUTE OF TECHNOLOGY

Lawrence Tech — Theory and Practice 1932

Kettering University

VILLANOVA

UNIVERSITY OF NEW HAVEN

NORTHERN — OHIO NORTHERN UNIVERSITY

UNIVERSITY of DAYTON

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UNIVERSITY OF DETROIT MERCY

GONZAGA UNIVERSITY

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WESTERN NEW ENGLAND UNIVERSITY — WNE

4

Audience-Aware Assessments Reduce Pain and Inflammation

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Thank you!

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