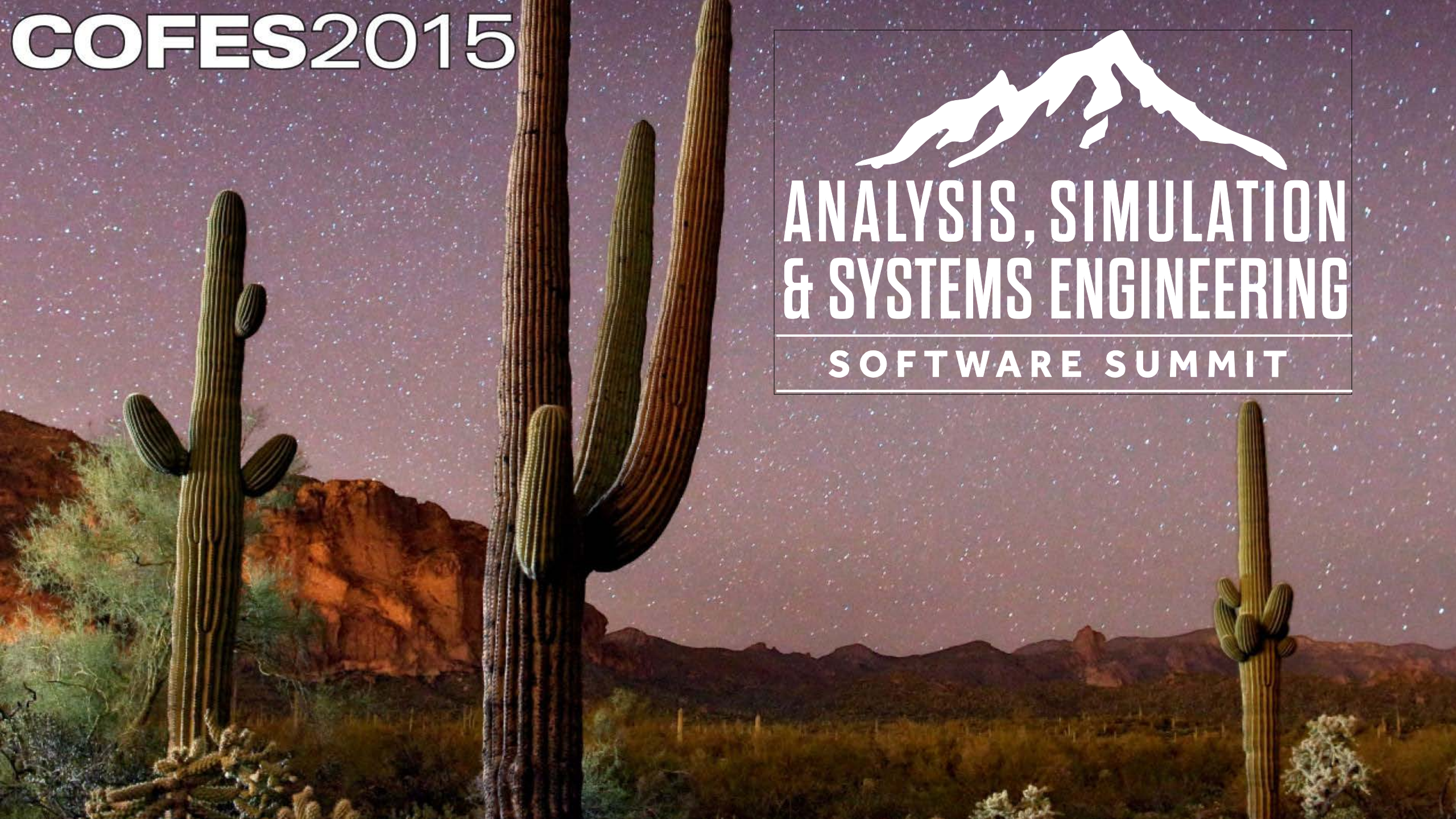
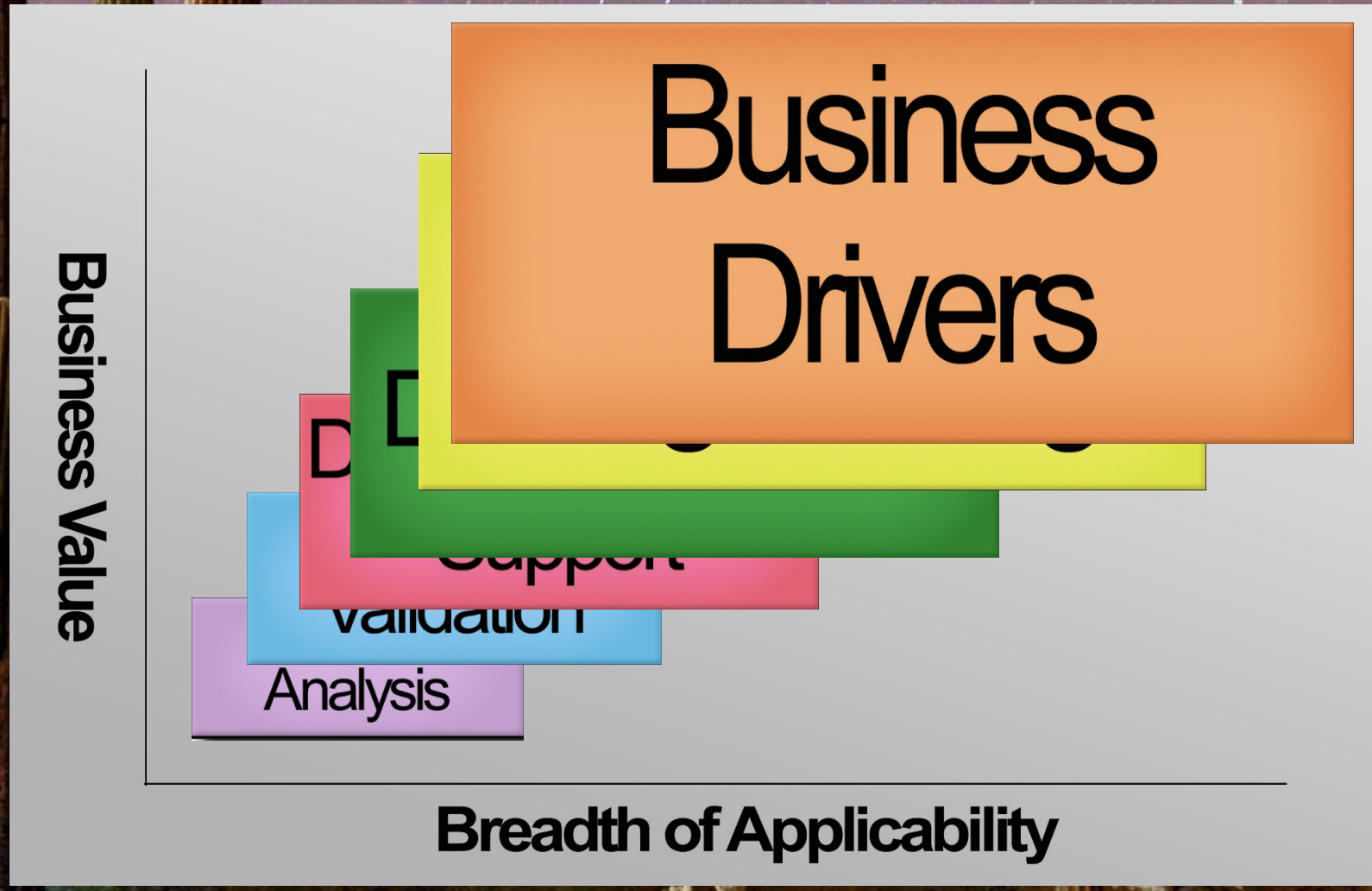

COFES2015
ANALYSIS, SIMULATION
& SYSTEMS ENGINEERING
SOFTWARE SUMMIT

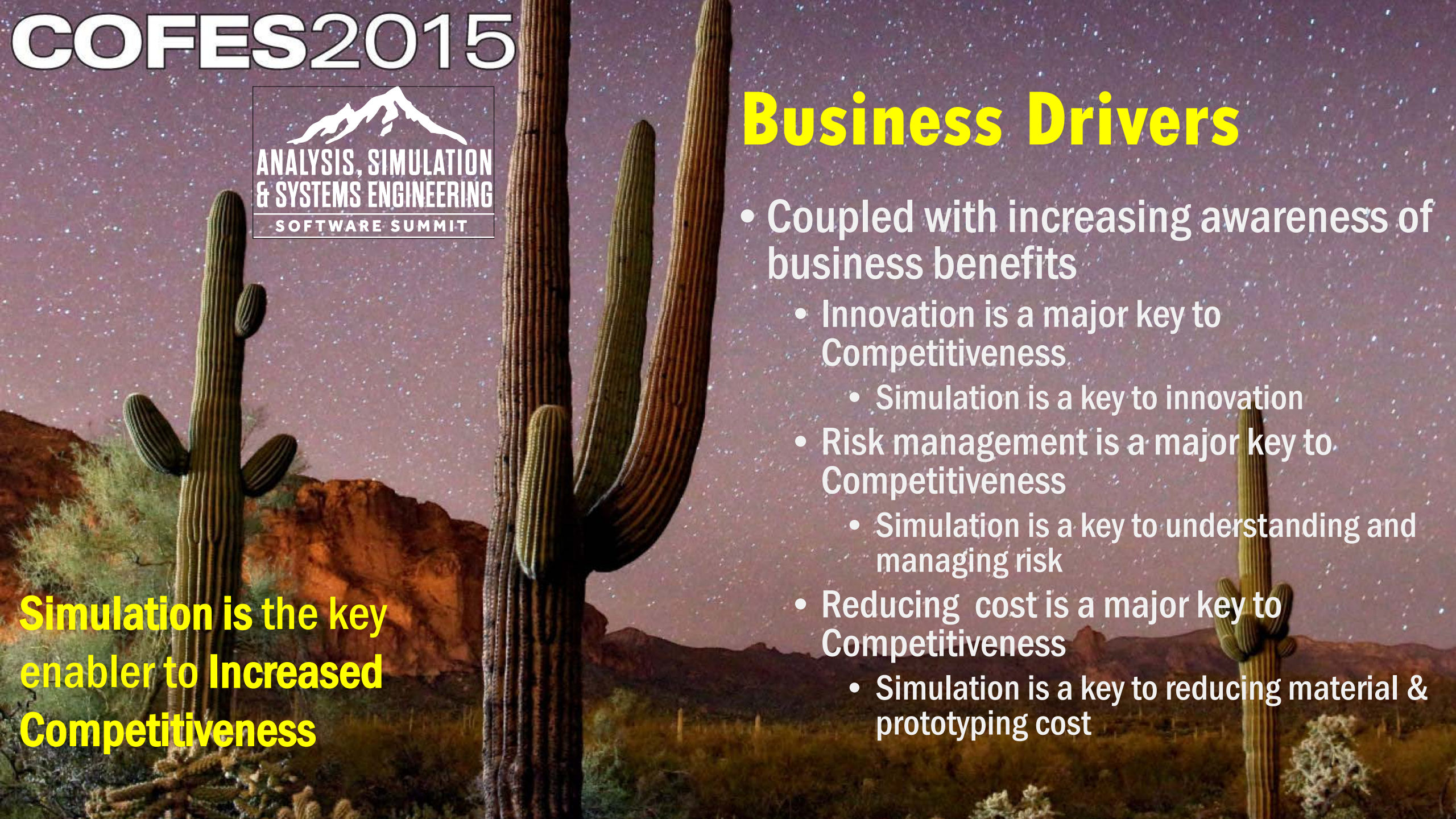
COFES2015
ANALYSIS, SIMULATION & SYSTEMS ENGINEERING
SOFTWARE SUMMIT
At 3DCICS/NAFEMS
Business Drivers are going to force a "revolution"

COFES2015

ANALYSIS, SIMULATION & SYSTEMS ENGINEERING
SOFTWARE SUMMIT

Business Drivers are going to force a "revolution"

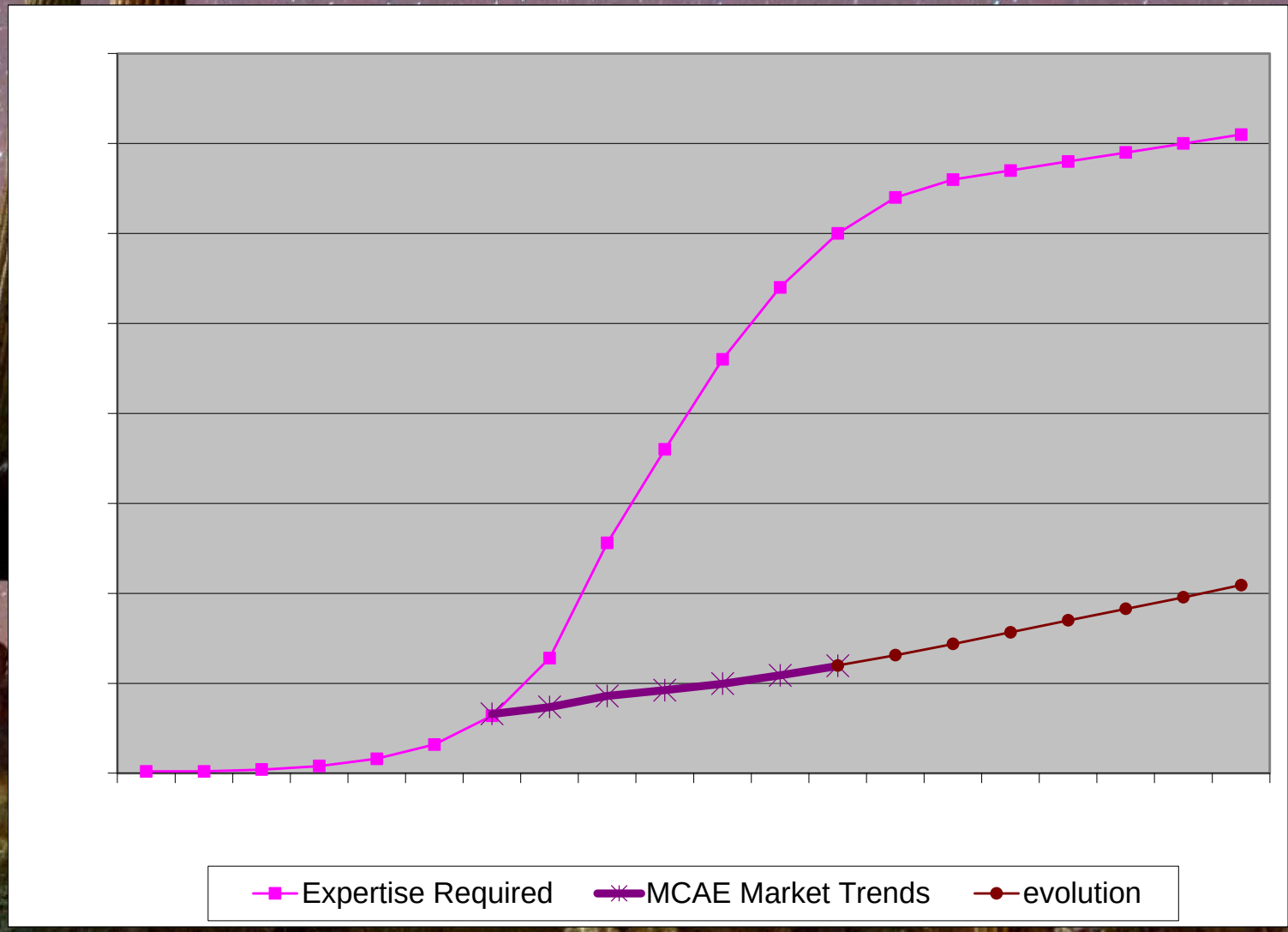



COFES2015
ANALYSIS, SIMULATION & SYSTEMS ENGINEERING
SOFTWARE SUMMIT
Simulation is the key enabler to Increased Competitiveness
Business Drivers
• Coupled with increasing awareness of business benefits
• Innovation is a major key to Competitiveness
• Simulation is a key to innovation
• Risk management is a major key to Competitiveness
• Simulation is a key to understanding and managing risk
• Reducing cost is a major key to Competitiveness
• Simulation is a key to reducing material & prototyping cost

COFES2015

ANALYSIS, SIMULATION & SYSTEMS ENGINEERING
SOFTWARE SUMMIT

Business value drives broader demand



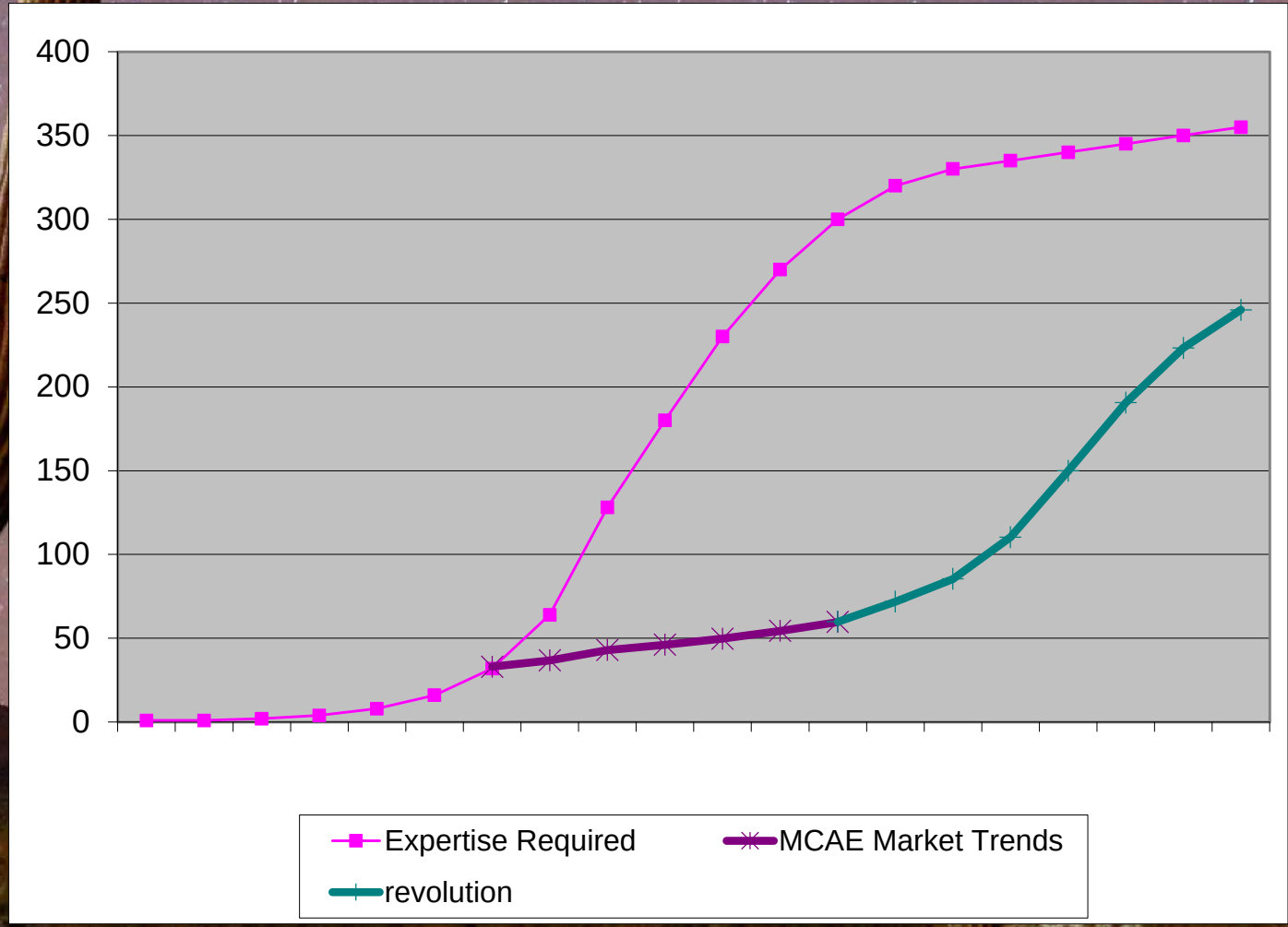
Inserted MCAE growth data from Cambashi and evolution based outlook

This does not look like an inflection point

COFES2015

ANALYSIS, SIMULATION & SYSTEMS ENGINEERING
SOFTWARE SUMMIT

The demand is not going away



A Simulation revolution needs to occur:

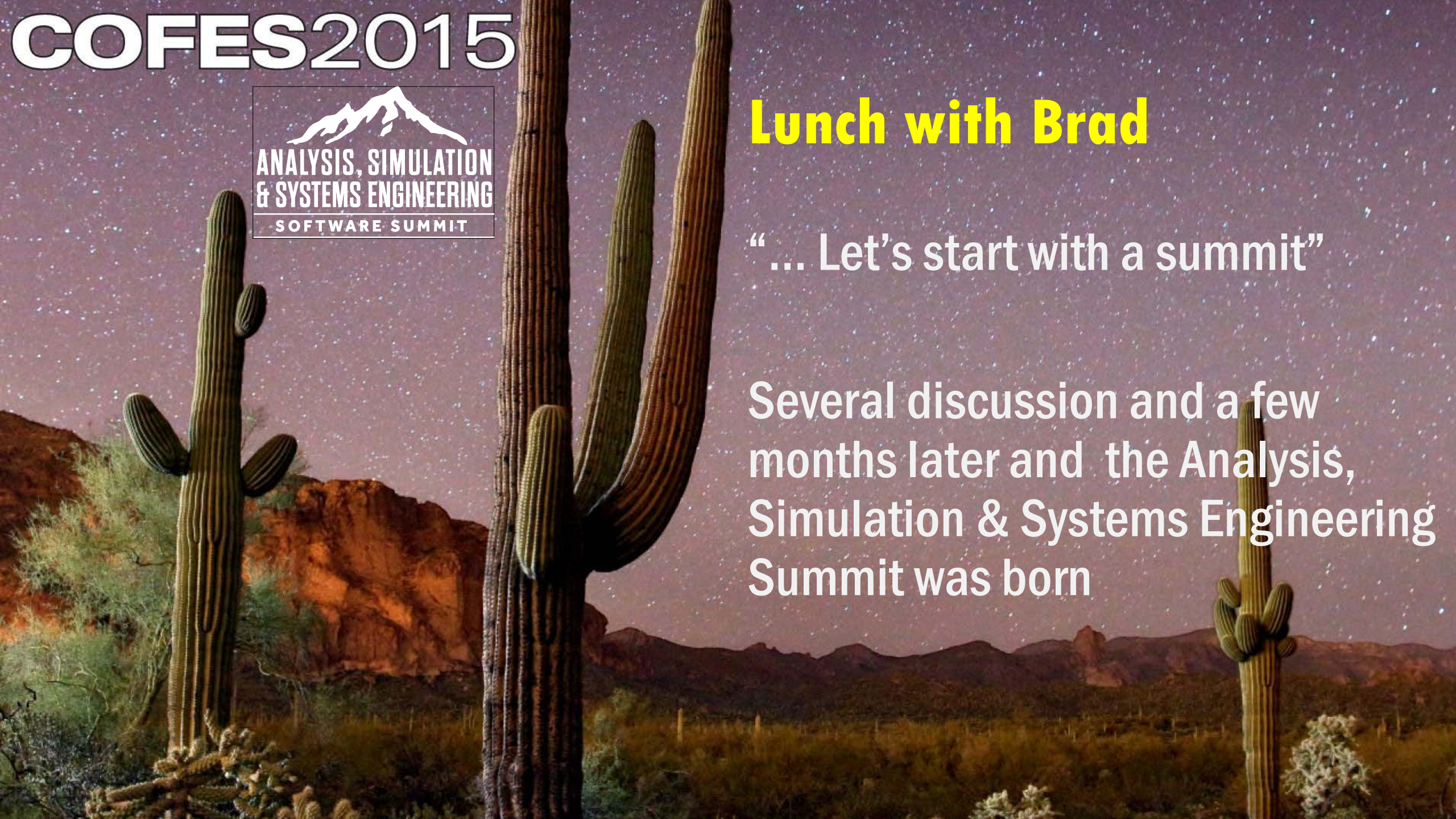
"Fit for purpose"

"Smart"

"Integrated"

"Transparent"

COFES2015
ANALYSIS, SIMULATION & SYSTEMS ENGINEERING
SOFTWARE SUMMIT
Rod Driesbach of Boeing
"... we should have a separate conference just on this topic."


COFES2015
ANALYSIS, SIMULATION & SYSTEMS ENGINEERING
SOFTWARE SUMMIT
Lunch with Brad
"... Let's start with a summit"
Several discussion and a few months later and the Analysis, Simulation & Systems Engineering Summit was born

Planning the Summit

- Key was getting the right attendees and venue
- Initial list of who should attend was about 200
- Santa Fe Institute as a host
- 40 people was right for a summit
  - Many qualified but few fit

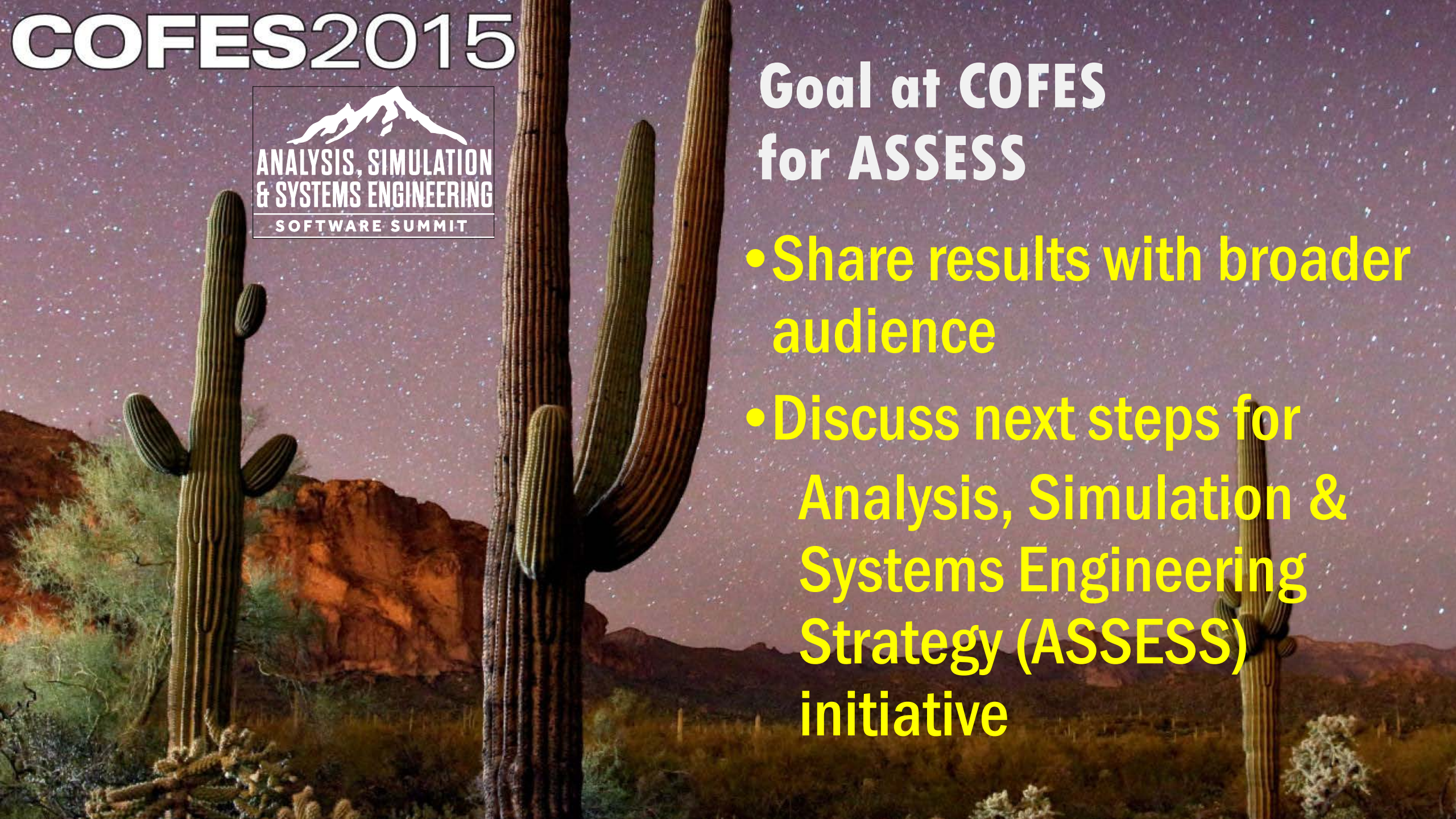
COFES2015

ANALYSIS, SIMULATION & SYSTEMS ENGINEERING SOFTWARE SUMMIT

- Andreas Vlahinos, *Principal*, **Advanced Engineering Solutions**
- Barry Menich, *Systems Engineer*, **Nokia Networks**
- Bob Deragisch, *Director, Engineering Services*, **Parker Hannifin**
- Brad Holtz, *President & CEO*, **Cyon Research**
- Chris Randles, *Venture Partner*, **Borealis Ventures**
- Chris Wood, *Vice-President, Administration*, **Santa Fe Institute**
- David Knezevic, *CTO*, **Akeselos**
- David Vaughn, *Vice-President, Worldwide Marketing*, **CD-adapco Group**
- Dipankar Choudhury, *Vice-President, Research*, **ANSYS**
- Dmitri Mavris, *Regents Professors*, **Georgia Institute of Technology**
- Fred Streitz, *Chief Computational Scientist & Director of HPC Innovation Center*, **Lawrence Livermore National Laboratory**
- Greg Gorman, *Director, Continuous Engineering Product Management*, **IBM Internet of Things**
- Hubertus Tummescheit, *CEO*, **Modelon**
- Jack Ring, *Senior Analyst*, **Cyon Research**
- Jay Vleeschhouwer, *Research Analyst*, **Griffin Securities**
- Joe Walsh, *CEO & Founder*, **IntrinSIM**
- Jon Hirschtick, *Founder & Chairman*, **Onshape**
- Keith Meintjes, *Practice Manager, Simulation and Analysis*, **CIMdata**
- Ken Welch, *Former COO*, **Moldflow**
- Kevin Bowcutt, *Senior Technical Fellow and Chief Scientist of Hypersonics*, **The Boeing Company**
- Laura Michalske, *Section Head*, **Procter & Gamble**
- Leonid Korelshteyn, *Deputy Director, Science*, **NTP Truboprovod**
- Malcolm Panthaki, *CTO & Founder*, **Comet Solutions**
- Marc Halpern, *Vice-President of Research, Industry Advisory Services, Manufacturing*, **Gartner**
- Mary Fortier, *Robust Synthesis & Analysis*, **General Motors**
- Matt Ladzinski, *Vice-President, North American Operations*, **NAFEMS North America**
- Mike Barkhudarov, *Vice-President for Research and Development*, **Flow Science**
- Nanda Santhanam, *Senior Software Architect, Simulation and Material Science*, **Autodesk**
- Phil Christensen, *Vice President, Offshore & Marine*, **Bentley Systems**
- Pieter Mosterman, *Senior Research Scientist*, **MathWorks**
- Ravi Shankar, *Director, Simulation Product Marketing*, **Siemens PLM Software**
- Richard Bush, *Global NX Business Development*, **Siemens PLM Software**
- Richard Riff, *President*, **Executive Consulting**
- Rod Dreisbach, *Senior Technical Fellow, Computational Structures Technology*, **The Boeing Company**
- Roger Burkhart, , **Deere & Company**
- Steve Coy, *President*, **TimeLike Systems**
- Steve Levine, *Chief Strategy Officer*, **Dassault Systemes SIMULIA**
- Suchit Jain, *Vice-President, Strategy & Community*, **Dassault Systemes SolidWorks**
- Ted Blacker, *Department Manager*, **Sandia National Laboratories**
- Victor Gonzalez, *Co-Founder & CEO*, **Next Limit Technologies**

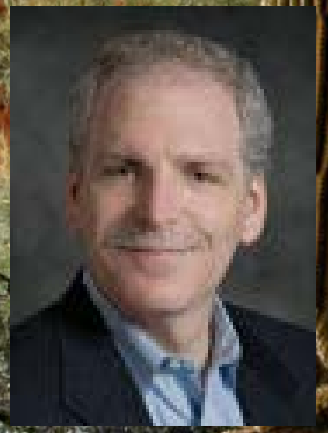
COFES2015
ANALYSIS, SIMULATION & SYSTEMS ENGINEERING
SOFTWARE SUMMIT
A broad mixture covering the entire worldwide market
Analysis & Simulation focus
System Engineering focus
Design focus
Industry Analysts
Financial Analysts
End users
Software Vendors
International representatives

COFES2015
ANALYSIS, SIMULATION & SYSTEMS ENGINEERING
SOFTWARE SUMMIT
Santa Fe Institute
January 8-9, 2015
• Thursday, January 8, 2015
• Registration, Cocktails, and Dinner Reception
• Friday, January 9, 2015
• Opening Ceremony and Call To Order
• Kickoff Address (Dr. Richard Riff)
• An Open Discussion of the Issues Before Us
• Breakout into Workgroups
• Plenary Session
• Closing


COFES2015
ANALYSIS, SIMULATION & SYSTEMS ENGINEERING
SOFTWARE SUMMIT
Goal at COFES for ASSESS
• Share results with broader audience
• Discuss next steps for Analysis, Simulation & Systems Engineering Strategy (ASSESS) initiative

COFES2015

ANALYSIS, SIMULATION & SYSTEMS ENGINEERING
SOFTWARE SUMMIT

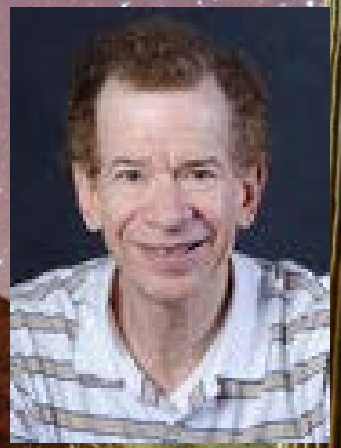
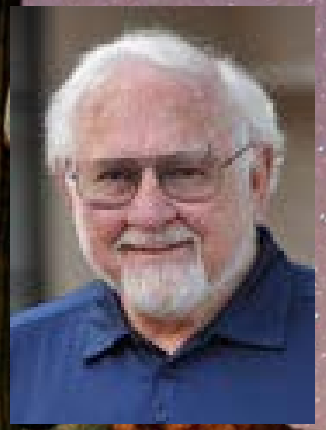
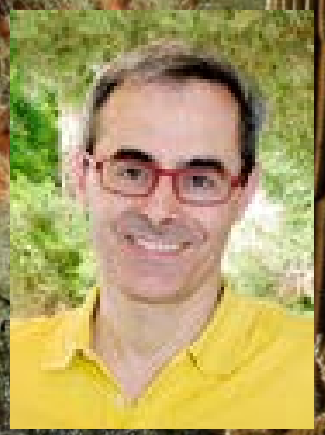
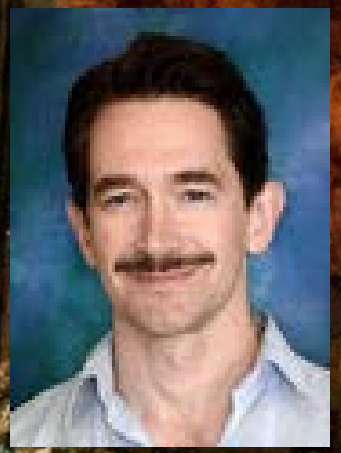


Key Issues from Summit

- **Design-centered Workflow**
  Keith Meintjes
- **Ease of use & usability**
  Malcolm Panthaki
- **Pre-CAD analysis and optimization**
  Steve Levine on behalf of Dipankar Choudhury
- **Impact of web/cloud/mobile**
  Jon Hirschtick

COFES2015

ANALYSIS, SIMULATION & SYSTEMS ENGINEERING
SOFTWARE SUMMIT

Key Issues from Summit

- Knowledge capture & reuse
  Marc Halpern
- Ability to combine heterogeneous models in a systems approach
  Steve Coy & Hubertus Tummescheit
- Appropriate model fidelity & role of **unsexy** stuff
  Jack Ring on behalf of Mary Fortier
- Licensing models need to be revisited