Florida Polytechnic University

Board of Governors Meeting

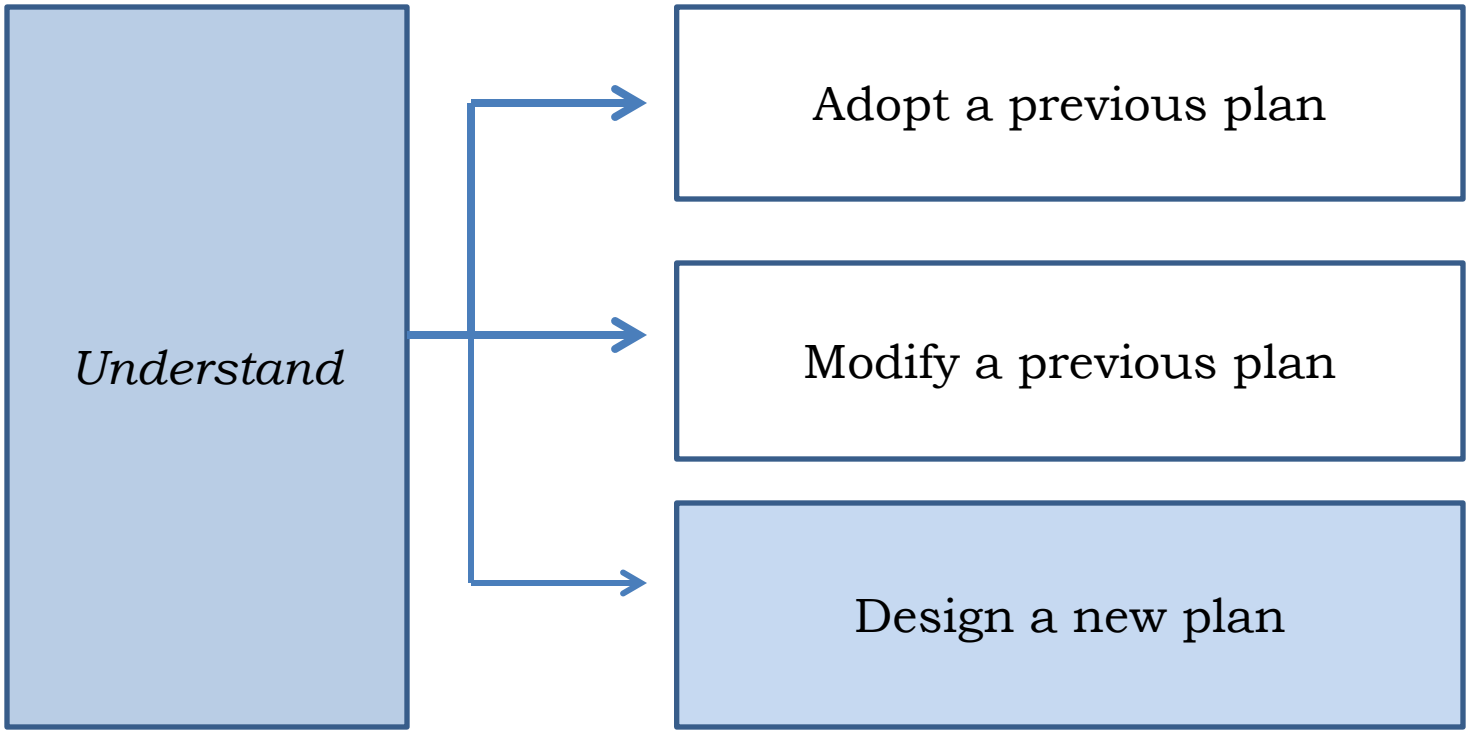
March 28, 2013

Board of Trustees

- Chairman Robert Gidel, Managing Partner of Liberty Capital Advisors
- Vice Chairman Mark Bostick, President of ComCar Industries, Inc.
- Bill Brown, President of Harris Corporation
- Joseph Caruncho, CEO of Preferred Care Partners
- Dr. Sandra Featherman, former President of the University of New England
- Dick Hallion, Research Associate in Aeronautics, National Air & Space Museum, Smithsonian Institute
- Scott Hammack, CEO of Prolexic
- Kevin Hyman, Executive VP of Bright House Networks
- Frank Martin, Senior VP of Atkins North America
- Bob Stork, CEO Communications International Inc.
- Don Wilson, Partner/Attorney with Boswell & Dunlap, LLP

Florida Polytechnic University

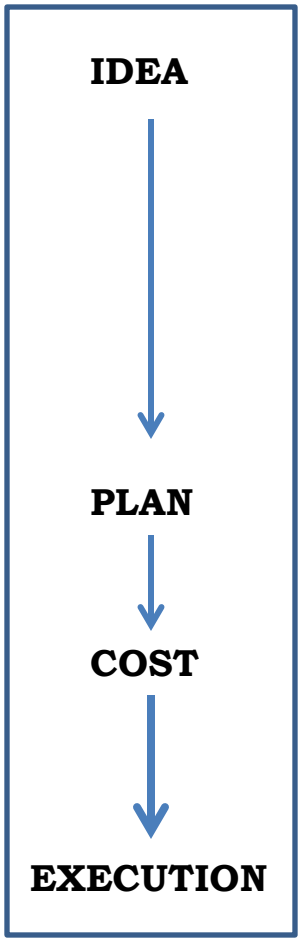
What the new Board of Trustees was asked to do…….



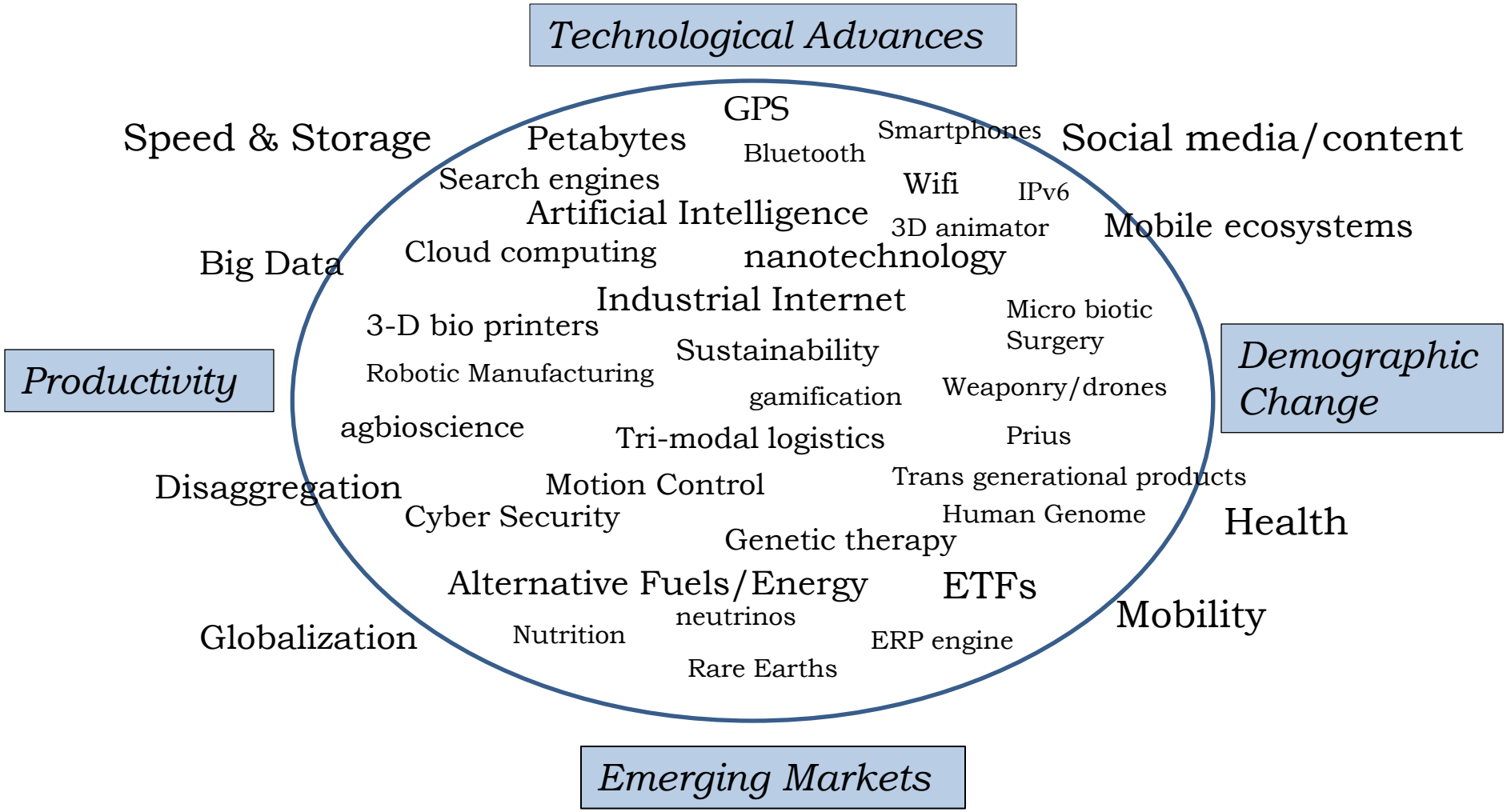
Florida Polytechnic University

After closing the transfer in October……we have been doing the following

- Agreeing on a definitive mission statement
- Creating a business plan that includes programmatic focus, an operating model, and organizational infrastructure
- Accumulating the requisite research and testing the veracity of the model assumptions and timelines against demand, Access & Attainment, peers
- Designing the execution of the academic, operations, facilities, marketing, and foundation objectives
- Costing and funding the model assumptions
- Defining and measuring success
- Making the final decisions and preparing for execution

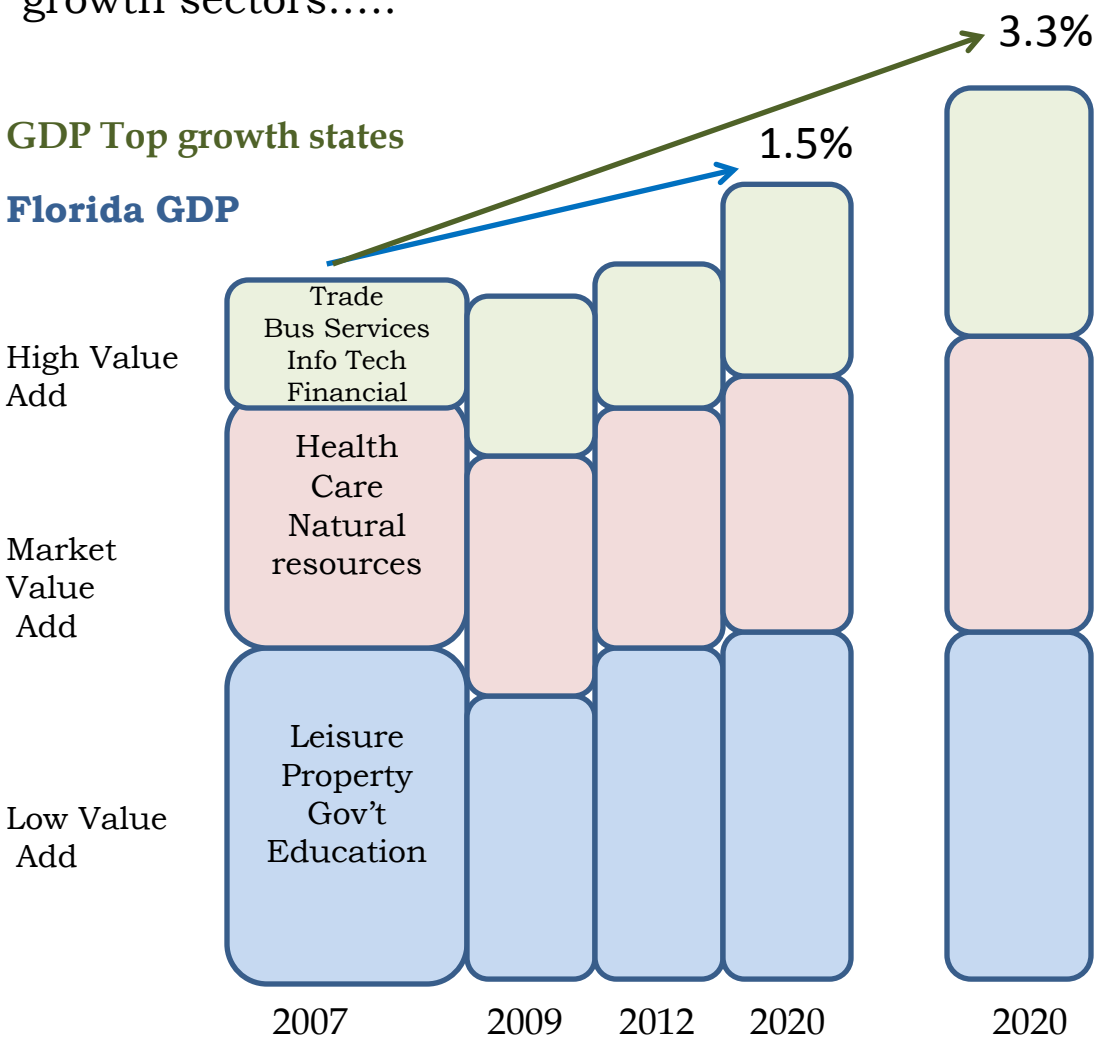


Trends affecting industries and workforces are creating products, services, and careers that did not exist a decade ago…..



In order for Florida to compete in a globally connected market we must "future proof" our economy

Florida needs more industries focused in the growth sectors…..



High growth industries are innovative

Clean Tech
Life Sciences
Info Tech
Aerospace
Global Logistics
Defense
Professional Services
Emerging Tech
Advanced Manufacturing
Cyber Security
Control Systems
Alternative Energy

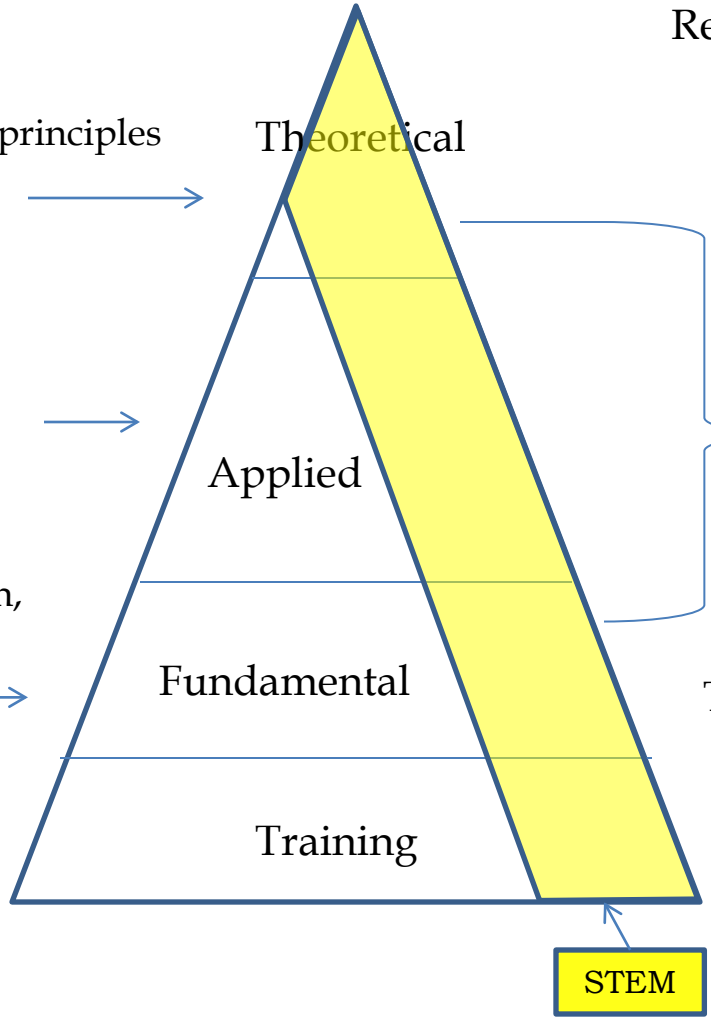
…and they need labor, capital, and infrastructure to stay, come, or start in Florida

So Why does a Polytechnic focused in applied STEM meet the challenge

Uses cognitive thinking to develop new principles and recognize new relationships

Uses STEM theories and techniques (modeling and computational) to form and solve practical problems

Understanding STEM principles of math, life and physical sciences, engineering, and technologies.



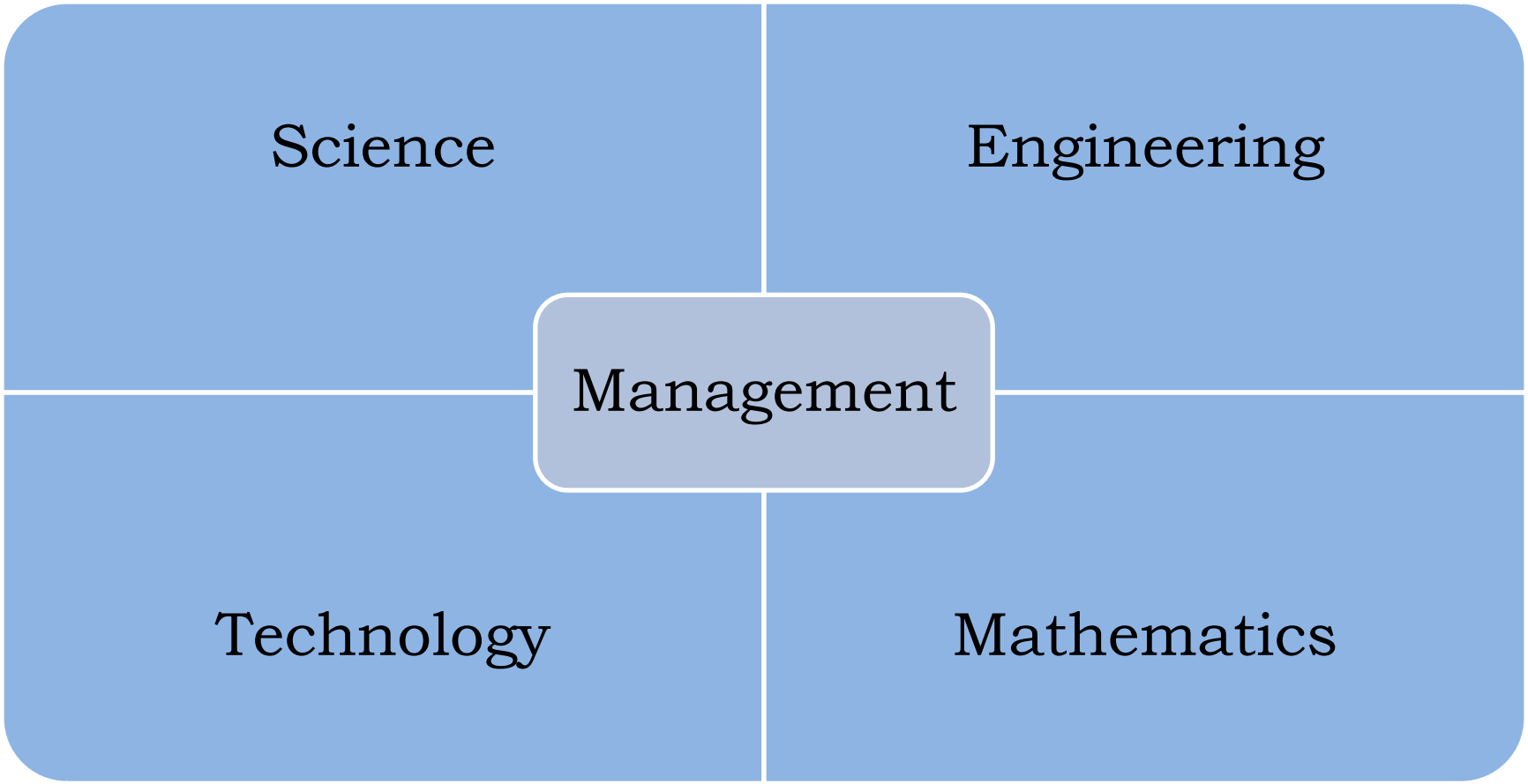
Research University

Polytechnic

Teaching College

Technical High School

STEM can't be just a program…….. it must be a philosophy in order to produce innovation



STEM Models – Introduction

Globally, STEM-focused institutions fall into three broad groupings based on their mission and focus

	1 Global Research Institution	2 Elite Undergraduate Institution	3 Industry-Engaged Institution
Primary Customer	**Faculty / Academia**	**Students**	**Employers and Economy**
Description	• Known for high research funding and high quality faculty • Receive high rankings on research dimensions • Typically focused on Doctoral degrees	• Very selective (high admission requirements) • Produce graduates who are hired into top firms • Typically focused on Bachelor's and Master's degrees	• Closely aligned to industry • Higher proportion of faculty come from industry • Emphasis on applied, hands-on learning and co-ops / apprenticeships for students

STEM Models – Methodology

We used the following criteria to determine the primary focus of STEM institutions

Initial Filter: Degree of STEM Focus

- "STEM-Focused Schools": 50% or more of graduates complete degrees in STEM
- "STEM Production Schools": Have more than 2,500 students complete STEM field degrees each year

	1 Global Research Institution	2 Elite Undergraduate Institution	3 Industry-Engaged Institution
Inputs	• **US:** Lombardi rankings (top 25) • **International**: Times Higher Education rankings (top 100 under 50)	• Median SAT scores (in the top 25 on the Lombardi measure) • US News & World Report rankings (in the top 25)	• Qualitative assessment of ties to industry (mission of institution, student experience, faculty background and focus)
National Examples	CALTECH • MIT, Stanford, Georgia Institute of Technology, University of Michigan	Olin College • Harvey Mudd, Carnegie Mellon, Rensselaer Polytechnic Institute	ASU's Polytechnic campus • Virginia Tech, Colorado School of Mines, Univ. of Maryland – Baltimore County
International Examples	POSTECH Pohang University of Science and Technology • ETH Zurich (Switzerland), Korea Advanced Institute of Science & Technology (Korea), Cranfield University (UK)	**IIT (India)** *Note: awards masters/doctorates as well* • Bandung Institute of Technology (Indonesia). Model not typically found in Western Europe	**TTI (Japan)** • Polytechnics Canada, Duale Hochschule Baden-Wurttem-berg (German), Aston Univ. & Derby/ Rolls Royce (UK)

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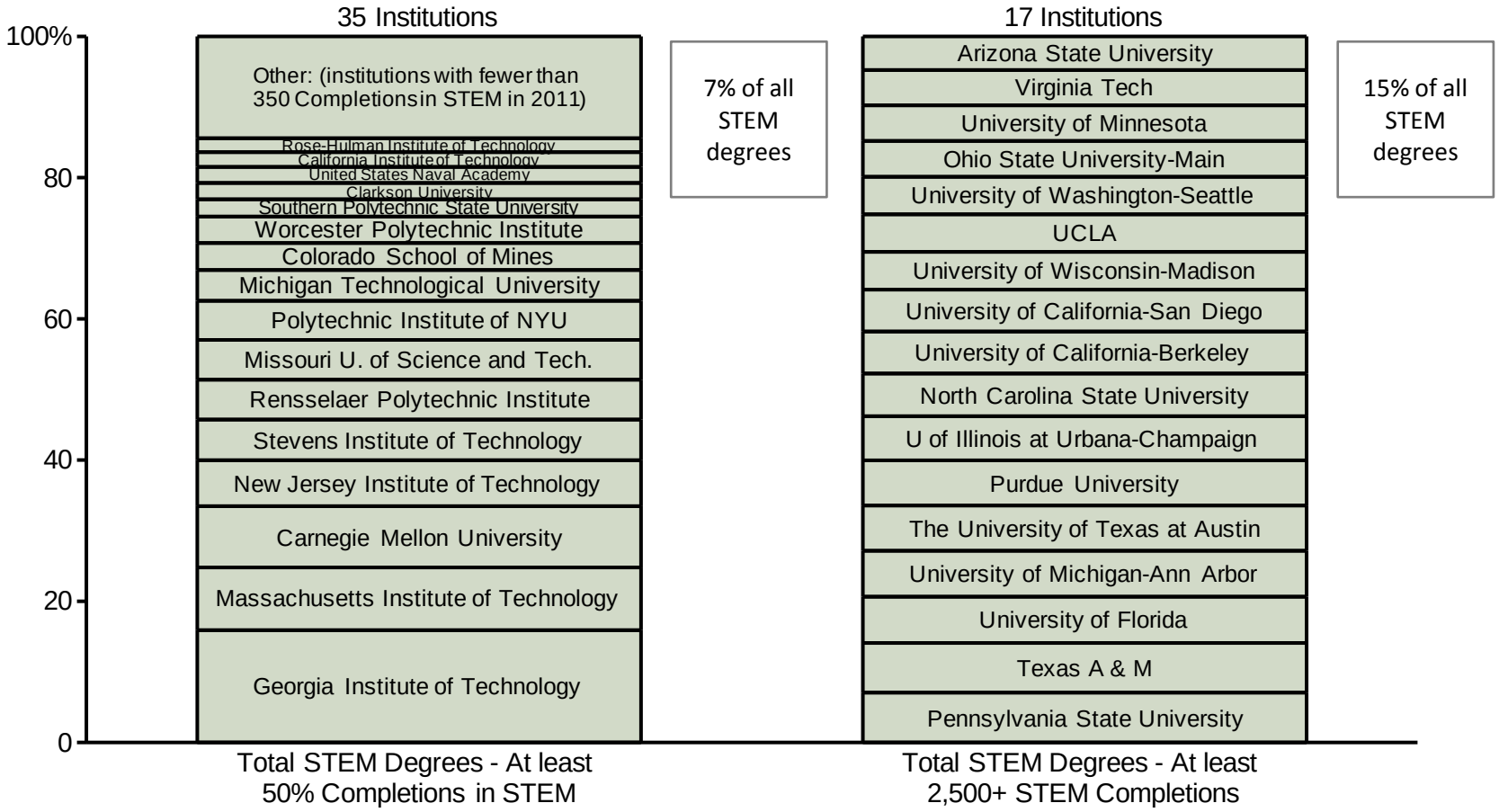
STEM Models – Methodology

We used the following criteria / metrics to identify STEM-focused institutions

Initial Filter: Degree of STEM Focus

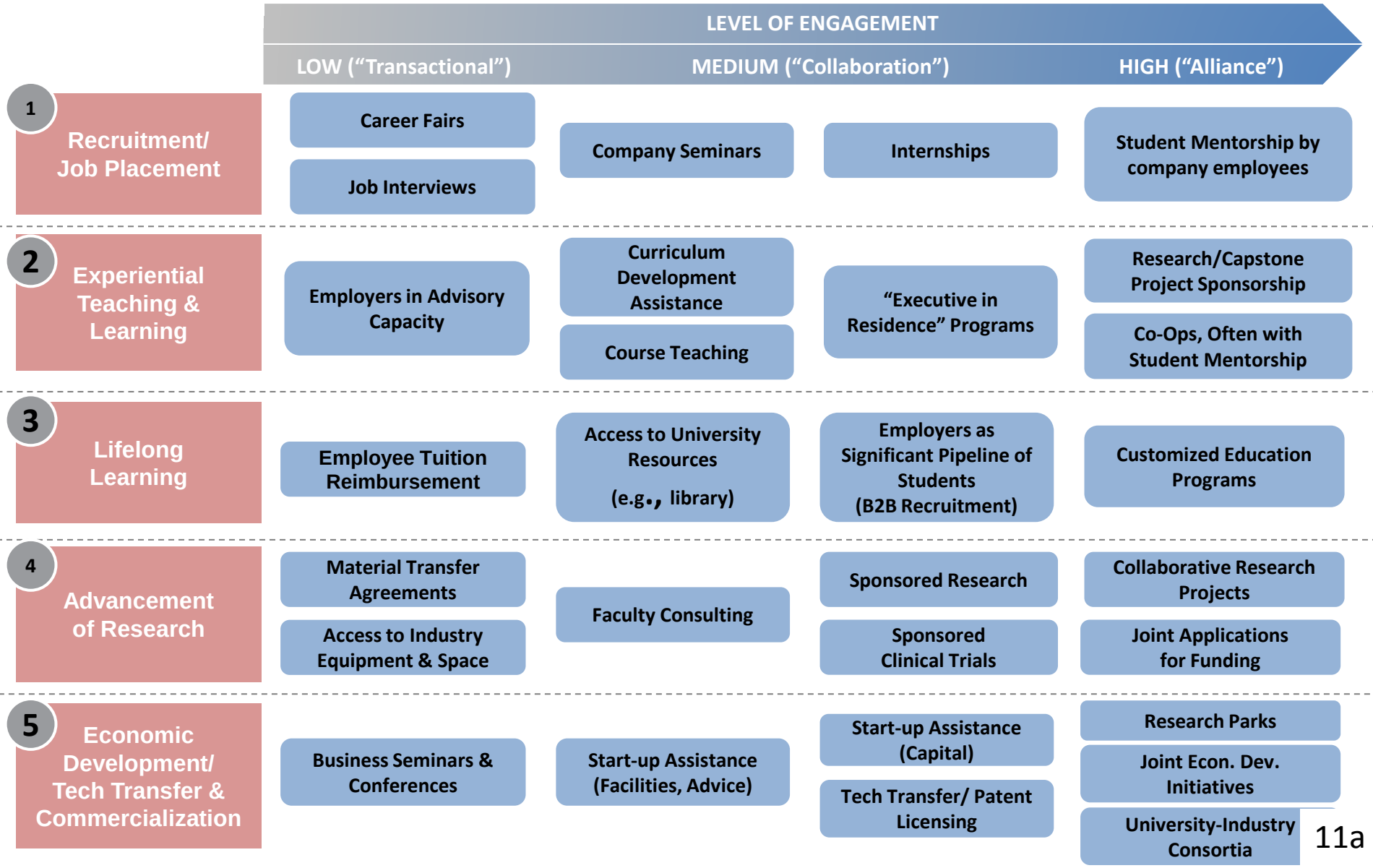
"STEM-Focused Schools": 50% or more of graduates complete degrees in STEM

"STEM Production Schools": More than 2,500 students complete STEM field degrees each year



University-Industry Partnership Continuum

Levels of involvement can vary significantly from employer to employer, and range from “transactional relationships” to “strategic alliances”



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Program Decision Matrix – Interdisciplinary and Other Programs

		Architecture (04.0201)	Computer Programming, Specific Applications (11.0202)	Digital Communication & Media/Multimedia (09.0702)	Information Technology (11.0101)	Logistics, Materials, and Supply Chain Management (52.0203)	Nanotechnology (15.1601)	Accounting (52.0301)	Applied Mathematics (27.0301)	Chemistry (40.0501)	Entrepreneurship (52.0701)	Physics (40.0801)	Science Education (13.1316)
Student Demand	Statewide		None offered			None offered	None offered						
	National						None offered						
Employer Demand	Statewide												*FLDOE Crit Tchr Shortage
	Enterprise Florida Industry Cluster; Strategic Area of Interest												
	National												
Costs	Operating												*Assumes science core
	Capital / Start-Up												
Competition	Polytechnics Outside of Florida												
Potential for Online Instruction	Green = High Potential Yellow = Need for Hybrid (labs)												
Consultant Comments													
Availability to Recruit	Green = Achieveable Red = More Challenging												
Board of Governors	Access & Attainment Commission		*	*		*							
	Program Recommendation Memo				BS	BS		*	*				

Florida Polytechnic University

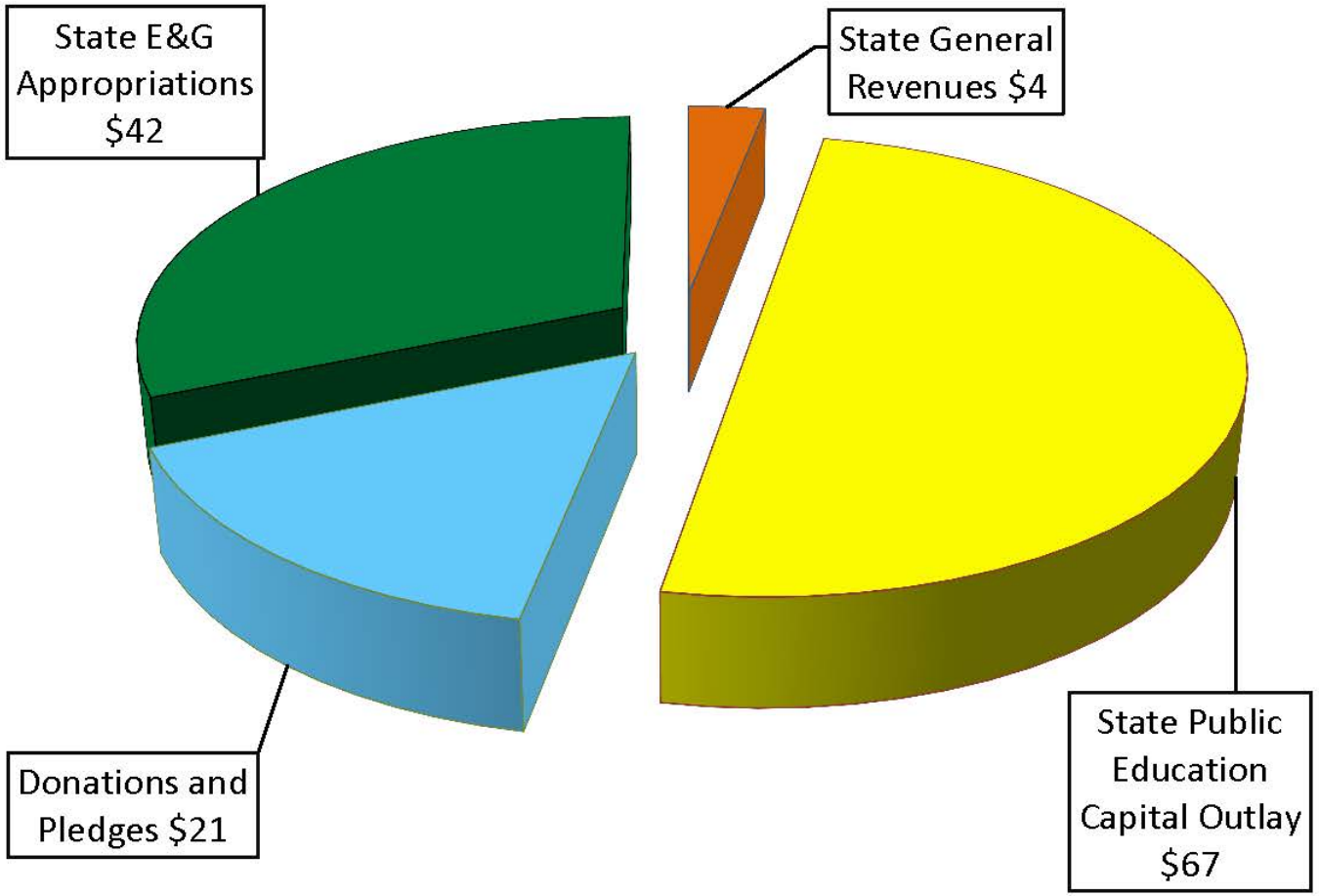
We believe, that with a little more work, our plan…..

- *Provides an educational response* to the challenges Florida industries are facing in the globally competitive marketplace…with a substantially applied STEM focus in an industry engaged model.

- *Can be executed, funded, and monitored in phases*, in order to assure all stakeholders that a justifiable result on investment is being achieved before commencing the subsequent phases.

- *Makes a definable statement* that Florida intends to be competitive in designing, facilitating, and managing innovation as derived from STEM.

Funding Sources For New Lakeland Campus and IST Building Construction (In Millions)



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Florida Polytechnic University

Lakeland FL New Campus - View Looking South

Funding The Polytechnic University Through Start Up

(In Millions)

Fiscal Year	Activity	Annual	Cum.	What This Money Bought / Will Buy
2006	Closing costs were funded from General Revenues when private firm donated land	$4	$4	3 tracts of land, comprising a total of 531 acres. Tract for main campus is 171 acres.
2007	PECO funding	2	6	Started engineering and design
2007	Campus' main road funds pledged	10	16	Perimeter road cost reimbursements will arrive from Polk County in 3 annual installments, starting in the future once the road construction begins
2009	PECO funding	15	31	Land clearing, almost all of the engineering and design of the IST building and campus infrastructure funded
2009	County agencies donated funds for future construction of IST building and campus	11	42	Contribution for IST building and campus infrastructure
2010	Excess E&G funds reserved by USFP	3	45	Final engineering/design costs now funded for IST building
2011	PECO funding	11	56	Continue funding for construction of IST building
2011	Excess E&G funds reserved by USFP	8	64	Continue funding for construction of IST building
2012 and 2011	PECO funding put in place for final funding of IST building and utility plant construction	35	99	IST building construction, parking lot; chilled water system, communications hub; buildings to be completed by May 2014
2012	Excess E&G funds reserved by USFP	10	109	Stormwater control system, utilities in ground, begin perimeter road construction

WE ARE HERE NOW in March 2013

2014 and 2013	Future E&G funds need to be pledged as construction funds NOW in order to outfit the IST building and complete the campus infrastructure construction as mandated by Legislature	$25	$134	Purchase for the IST building the laboratory and classroom technology, plus F,F&E Complete the perimeter road, infrastructure, student pathways, install landscaping and add parking lots Fund the construction contingency

May 2014 IST building construction complete
and
August 2014 Campus infrastructure construction complete

2014 and 2013	E&G funds needed to establish and build the curriculum, hire permanent staff and faculty, prepare for first enrollment	Permanent staff, interim staff, and start up consultants and operating costs
2014 and 2013	Source of funds needed to develop student center / dining hall on campus	Place for students, faculty and staff to eat
	Source of funds needed to develop residential housing on campus	Place for students to live on campus

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SACS Accreditation

Timeline

February 2013: Florida Polytechnic University representatives initiated the accreditation process by attending the required Pre-Applicant workshop. The University and SACS established proper contacts.

March 2013: Commence preparation of the initial application to SACS.

August 2014: Enroll first class of students.

September 2014: Submit application to SACS.

December 2014: Achieve SACS candidacy status.

Spring 2016: Graduate first class of students.

December 2016: Achieve initial grant of accreditation.