



Annual Conference: Innovation Road Show

Cleveland, Sept. 28 | **Columbus, Oct. 28** | Cincinnati, Nov. 17

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City of Columbus



Pay them a visit at their booths



official media partner

Tony Dennis

President & CEO, BioOhio



Agenda

- 9:00 Registration/ Breakfast -- *sponsored by TechColumbus*
- 9:45 Welcome Remarks from BioOhio President & CEO Tony Dennis
- 10:15 Featured Speaker: **Christine Poon** -- *sponsored by Neace Lukens*
- 10:55 Clinical Innovation: Emerging Models in US Healthcare
- 12:00 Lunch & Legislator Award (State Rep. Jay Goyal) -- *sponsored by City of Columbus*
- 1:00 Innovation Open Mic
- 1:55 Innovating Education Panel -- *sponsored by Calfee*
break -- sponsored by CAS
- 2:55 Medical Innovation "Gone Tomorrow?" Panel -- *sponsored by Thomson Reuters*
- 4:00 U.S. Senator Sherrod Brown
- 4:15 Wrap up
- 4:25 Networking Reception -- *sponsored by TechColumbus*



Keynote Speaker

Christine Poon

Dean, Max M. Fisher College of Business at
The Ohio State University

sponsored by: Neace Lukens





BioOhio

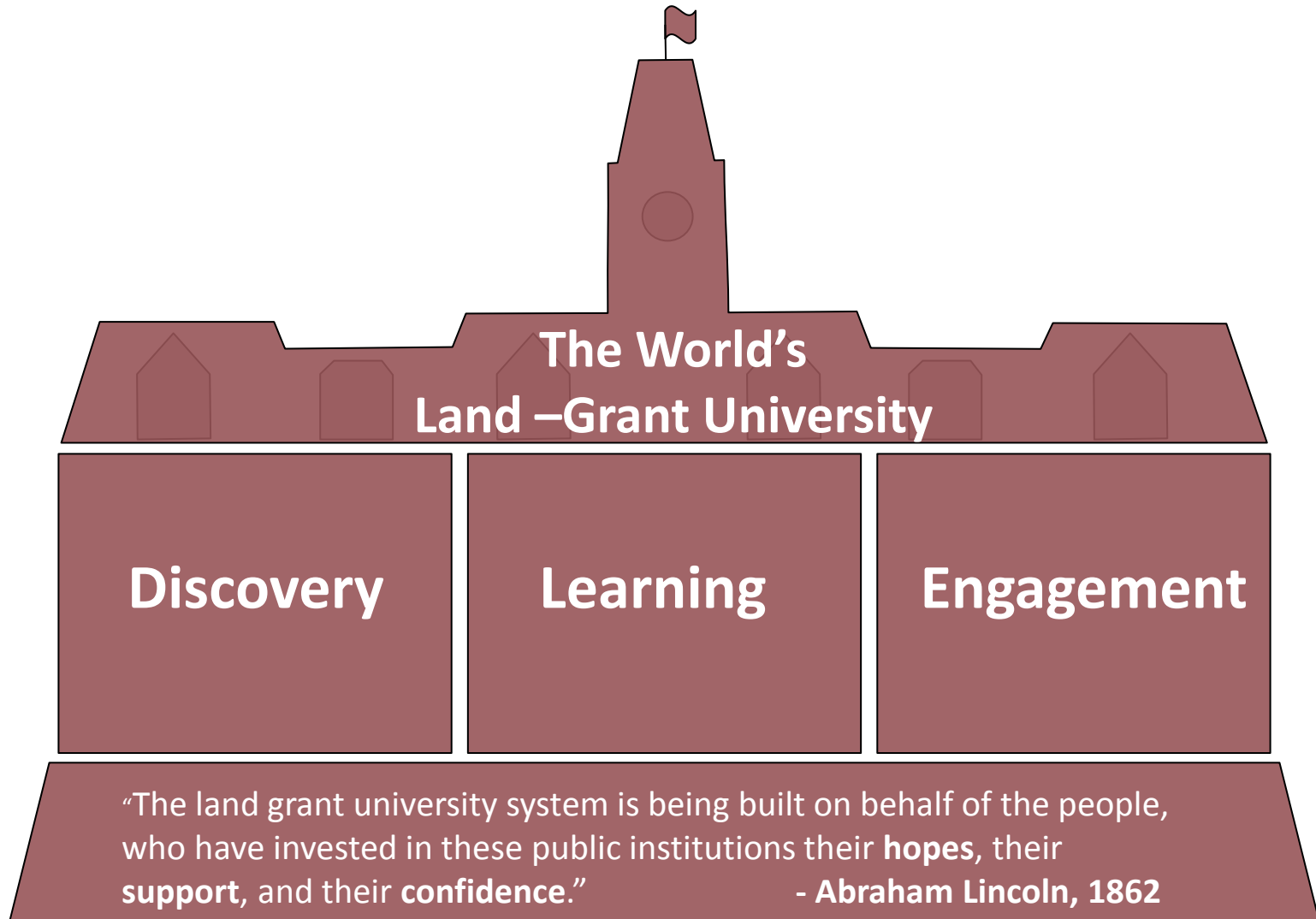
Innovation Road Show
October 28, 2010

Christine A. Poon
Dean and John W. Berry, Sr. Chair in Business
Fisher College of Business



The Land-Grant University

Still Defined by
Learning, Discovery and Engagement





Technology Commercialization at The Ohio State University

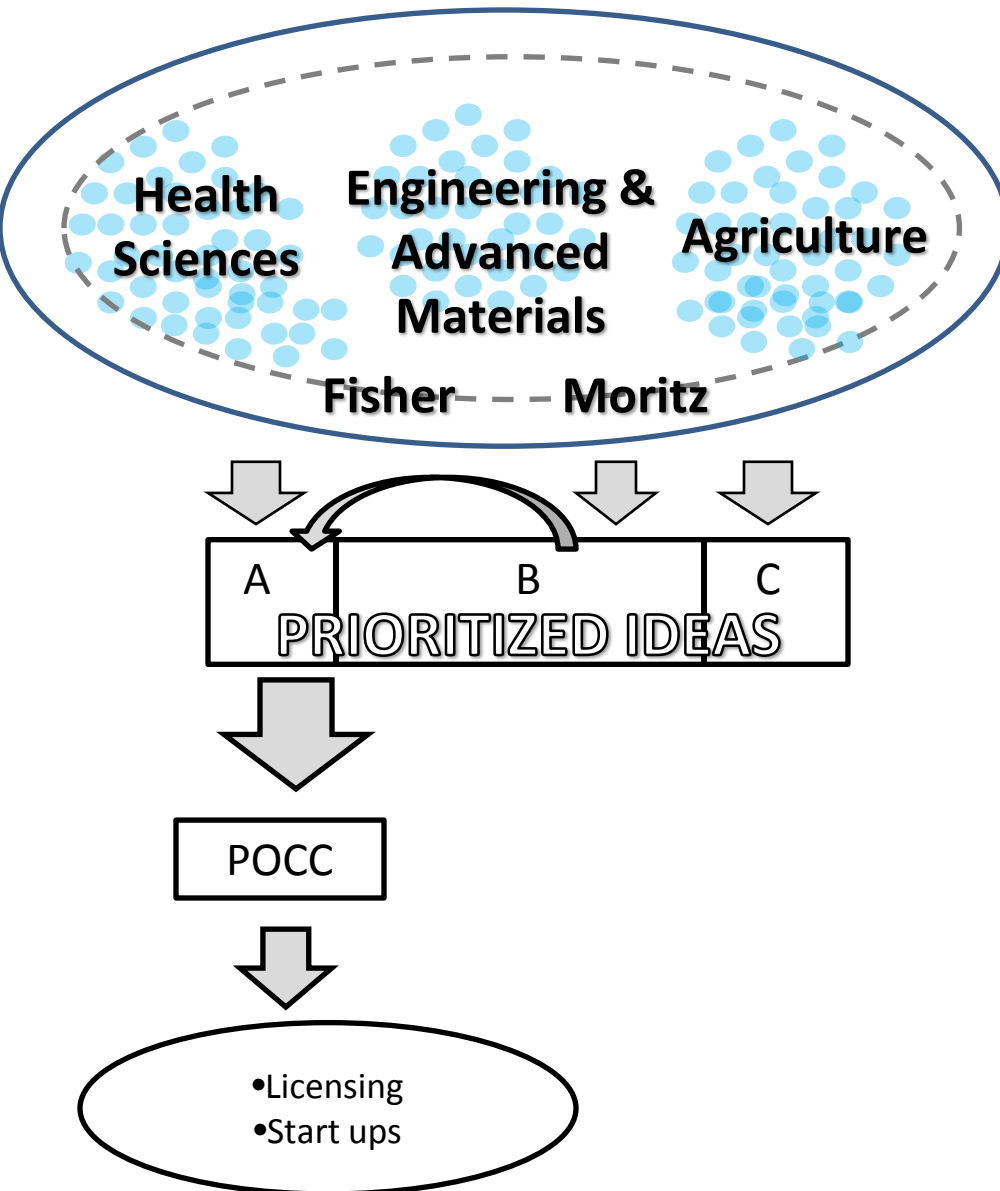
Although OSU ranks in the top tier among peer institutions in research spending.....

by all measures of technology commercialization we rank at the bottom among peers



Technology Commercialization at The Ohio State University

- **History**
- **Process**
- **Financial and Human Capital**
- **Culture and Incentives**



Focus

Increased Accountability to the Colleges

Establish Proof of Concept Center (POCC)

Attract Investors



Organizational Alignment



The Center for Entrepreneurship



Technology Licensing & Commercialization

Fisher Center for Entrepreneurship

Students, Inventors and the Entrepreneurial Community



- ❑ >200 graduate business and STEMM students trained in entrepreneurship
- ❑ Strong connections with the angel and venture capital communities
- ❑ 11 new startup companies created
- ❑ 7 derived from OSU technologies
- ❑ >\$5mm raised in the last three years



Purpose

The Ohio State University Technology Commercialization

Advance Society
and
Economic Development
of the
State, the Nation and the World

Clinical Innovation: Emerging Models in US Healthcare

Patricia Eisenhardt

Manager, Commercialization, OhioHealth Research & Innovation Institute

with

Michael Bills, Executive in Residence, The Fisher College of Business,
The Ohio State University

Wayne Poll, MD, Medical Director, Clinical Innovation, OhioHealth





Clinical Innovation

Emerging Models in US Healthcare

BioOhio Innovation Roadshow 2010
Columbus, OH

Michael Bills
Wayne Poll, MD
Patricia Eisenhardt



Defining Innovation

what is *“innovation”* ?

“The most buzzed about,
talked about and highly
invested in new approach in
business today....

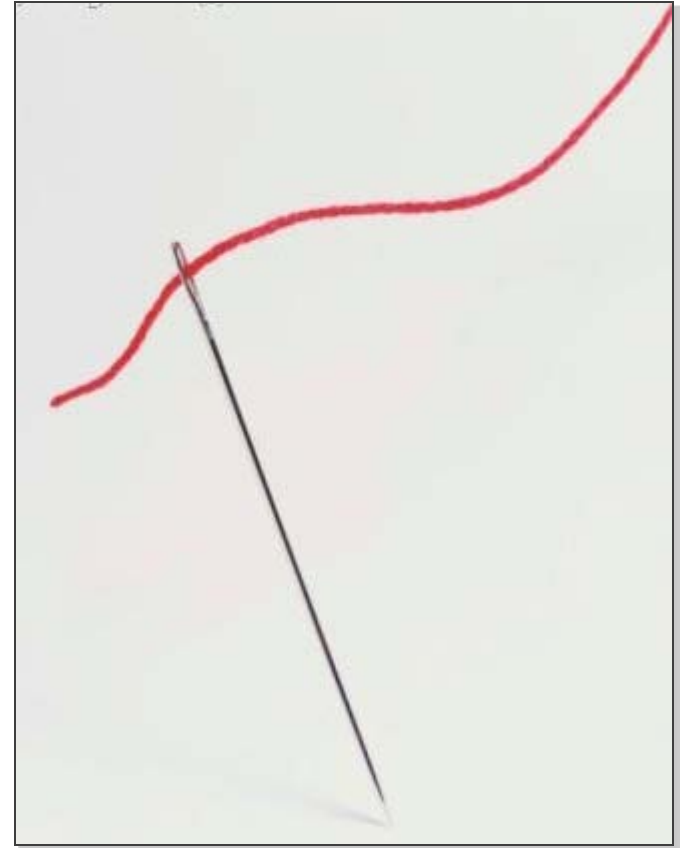
...and also the most ill-defined,
misunderstood and confusing
concept in business today.”



Defining Innovation

Corporate Innovation:

The practice of **top-line growth** and **value creation** by **corporations** through the development of new products and services (including new branded concepts, patents and IP)



Defining Innovation

WELCOME
TO THE AGE
OF THE
CONSUMER



Defining Innovation

THE AGE OF THE CONSUMER

- 1) DISRUPTIVE TECHNOLOGIES PROVIDE UNPRECEDENTED ACCESS
- 2) THE RISE OF INDIVIDUALITY
- 3) CONTROL VIA CHOICE
- 4) MAXIMIZATION OF THE VALUE CHAIN



Defining Innovation

THE AGE OF INNOVATION

- 1) **NON- PRESCRIPTIVE**
- 2) **CONSUMER – CENTERED**
- 3) **UNKNOWN/UNARTICULATED NEEDS**
- 4) **INTEGRATED, MULTI-DISCIPLINARY, COLLABORATIVE & CYCLICAL**
- 5) **INTUITIVE RIGOROUS**
- 6) **OPEN TO CHANGE**
- 7) **THRIVES IN MORE EXTREME CULTURES**
- 8) **INCLUSIVE, MORE DEMOCRATIC, BOTTOM - UP**



Defining Innovation

A CUMBERSOME ACADEMIC DEFINITION:

The solution to any **known, or unknown, articulated, or unarticulated** consumer need or desire wherein the solution is **not prescriptive** or presumed and which begins by assessing a specific consumer segment's needs and wants which are then overlaid on the organization's core competencies.

Integrates **intuition** and strategic **rigor** from multiple-disciplines through a **cyclical** and collaborative process within an environment, which is **open to change** and transformation.

Defining Innovation

OR, PUT MORE SIMPLY...

DISCOVERY BASED CHANGE
THAT IMPROVES PEOPLE'S
LIVES!



Defining Innovation

OR, PUT MORE SIMPLY...

DISCOVERY BASED CHANGE THAT
IMPROVES PEOPLE'S LIVES....

... & THAT PROVIDES MEANINGFUL
REVENUES & PROFITABILITY TO
THE INNOVATOR(S)

AND FIRST MOVER ADVANTAGE &
A SUSTAINABLE POINT OF
DIFFERENTIATION



Defining Innovation

OR, PUT MORE SIMPLY...

NOTE OF CAUTION:

A word of warning about including profitability in the core definition...



Defining Innovation

Comparison/Contrast: Traditional and Emergent Approaches to Creation

TRADITIONAL R&D

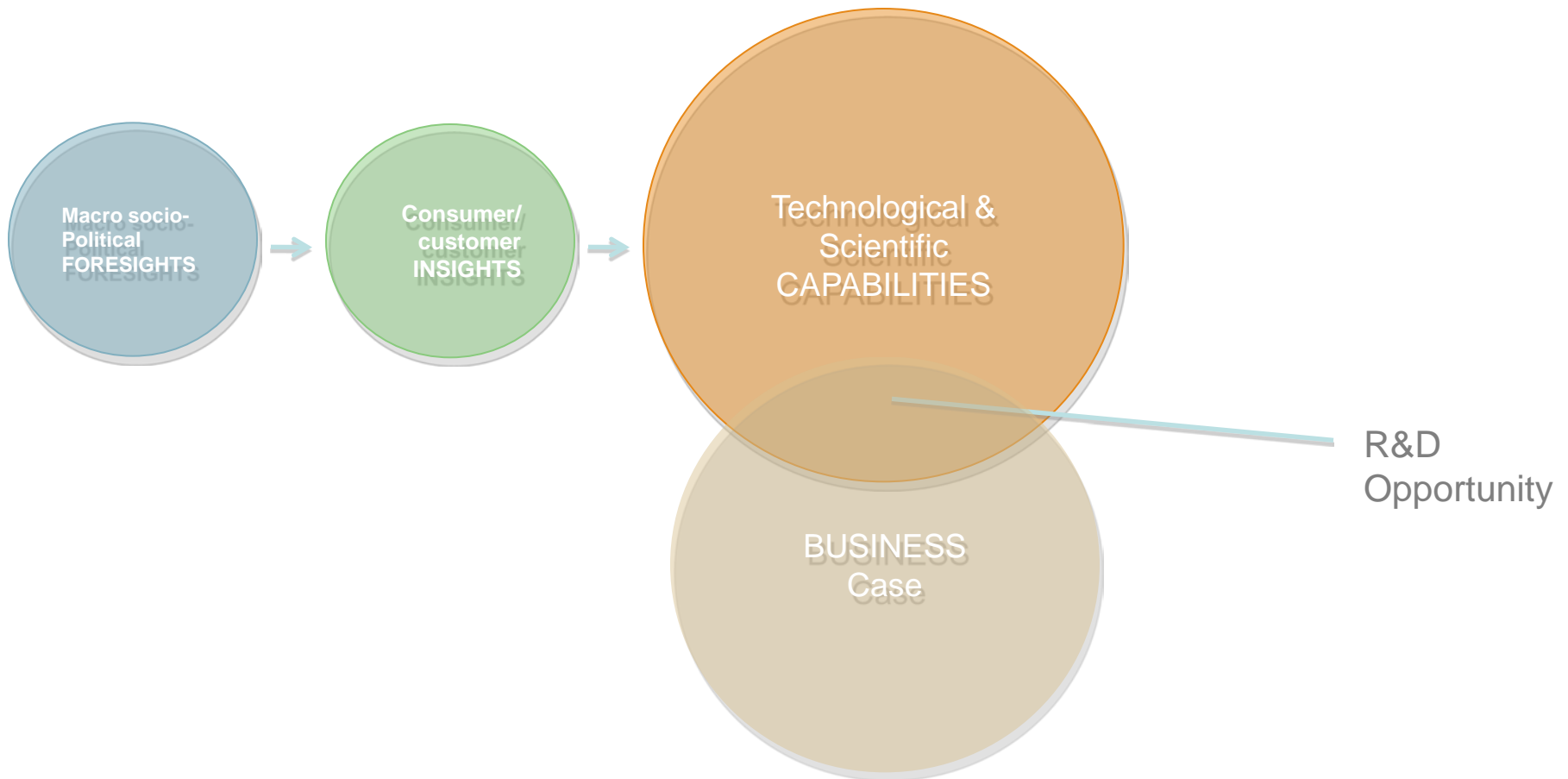
OPERATIONAL/PRODUCT CENTRIC
CLOSED
SILOED
LINEAR
SEQUENTIAL EXPERTISE
PRESCRIPTIVE
EXCLUSIVELY RATIONAL
FEATURE ORIENTED
STRATEGICALLY RIGOROUS
PRESUMES CONTROL OF PURCHASE PROCESS
HOMOGENEOUS
TOP – DOWN
CURRENT CONTEXT
BEGINS AT THE BEGINNING
MITIGATES RISK AT ALL COST

INNOVATION

CONSUMER – CENTRIC
OPEN
INTEGRATED
CYCLICAL
MULTI-DISCIPLINARY COLLABORATION
AGNOSTIC
RATIONAL & EMOTIONAL
FEATURES & BENEFITS ORIENTED
STRATEGICALLY RIGOROUS & INTUITIVE
ACKNOWLEDGES CONSUMER CONTROL
HETEROGENEOUS
BOTTOM – UP
FUTURE CONTEXT
BEGINS AT THE END
ENCOURAGES EXPERIMENTATION FAIL EARLY/OFTEN

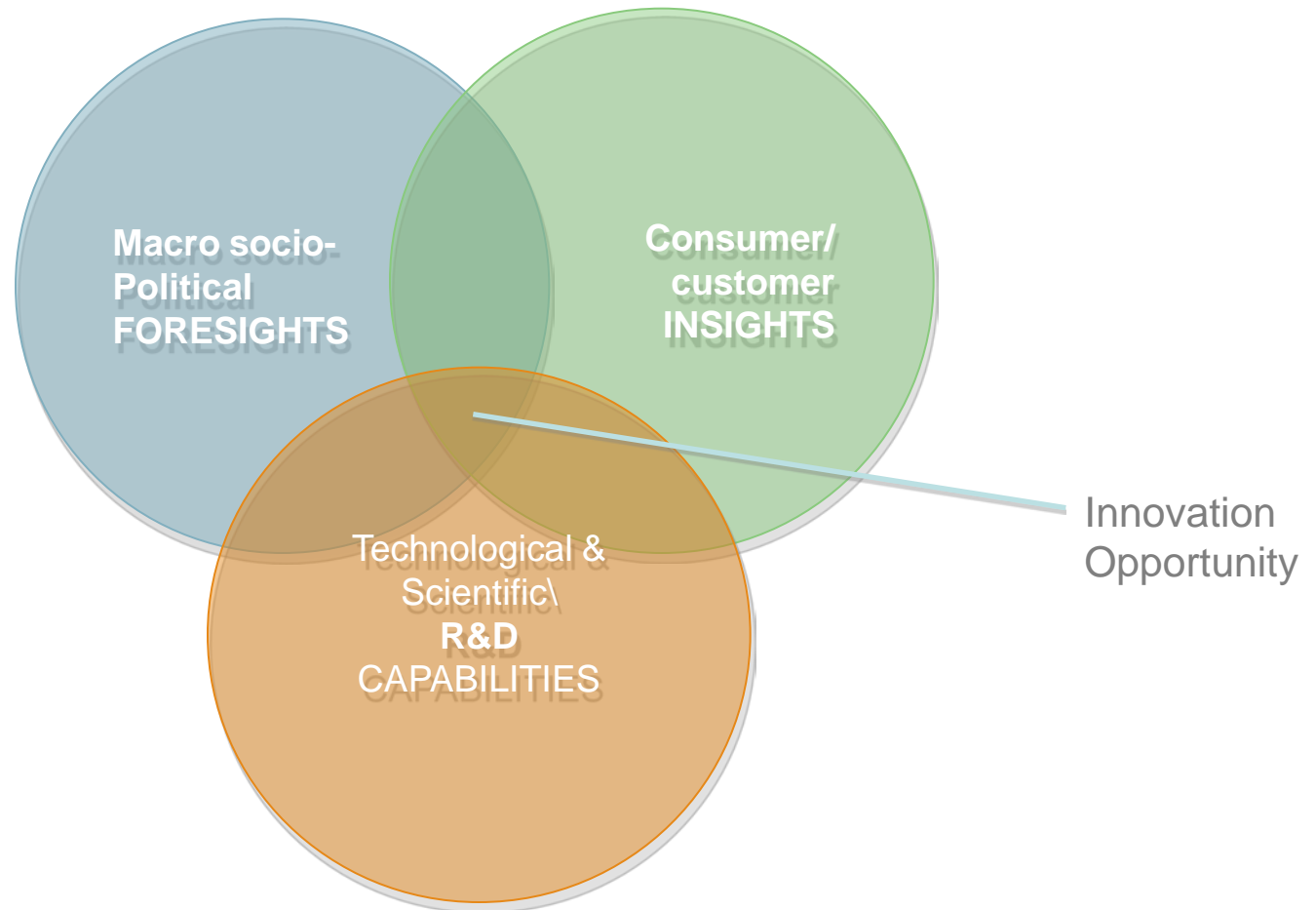
Defining Innovation

Standard and time tested approach to new product or service creation:



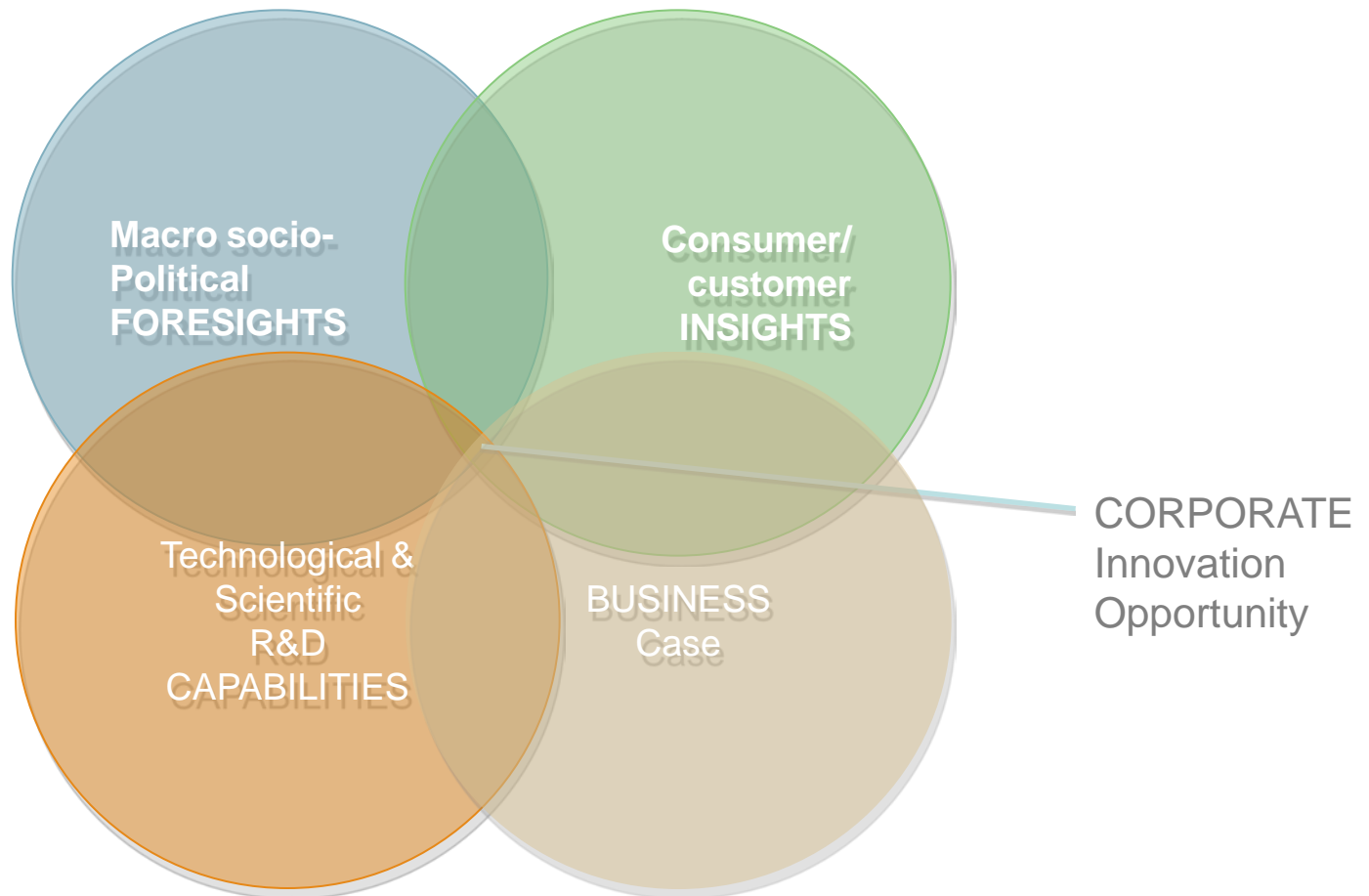
Defining Innovation

Instead, Innovation is focused on the **sweet-spot** among:

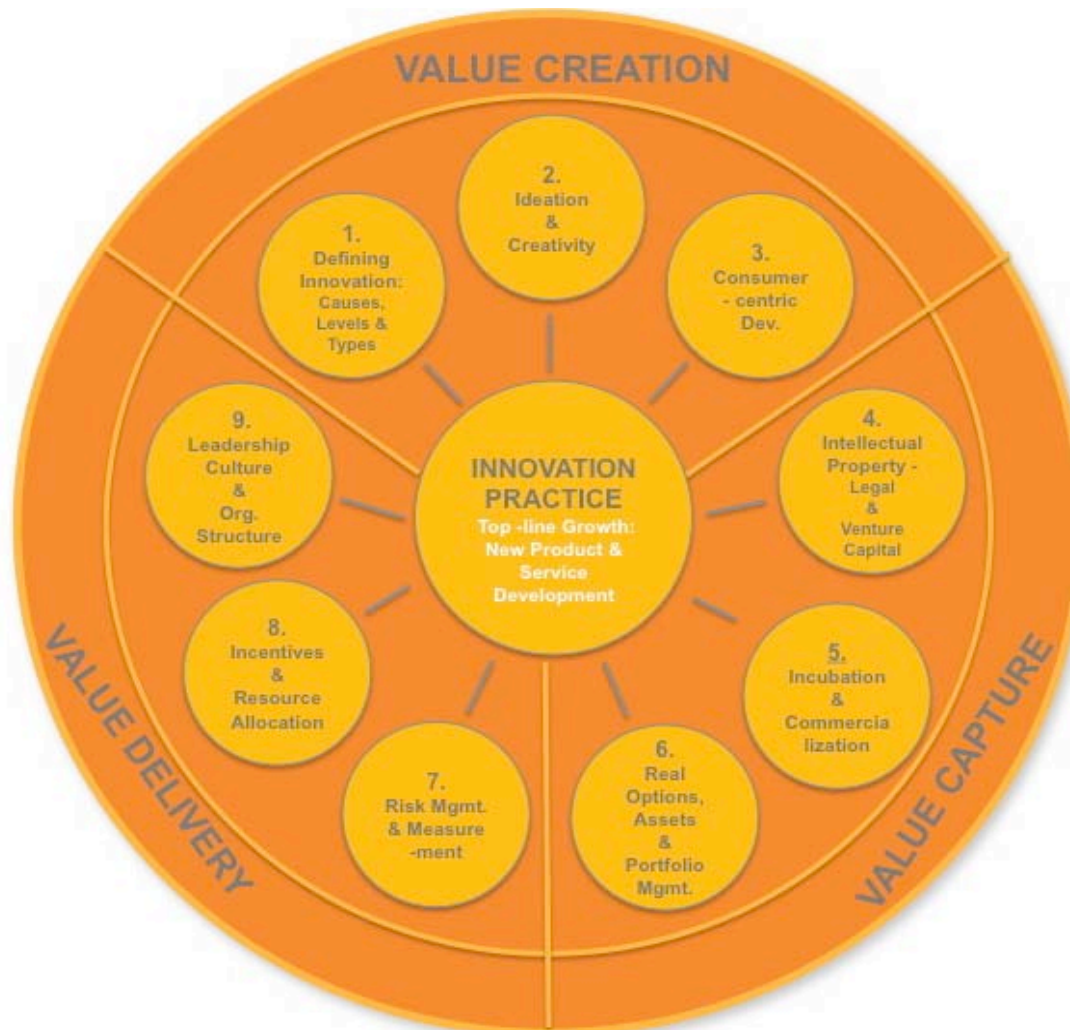


Defining Innovation

And business-based solutions require input from all impacting constituencies and competencies:



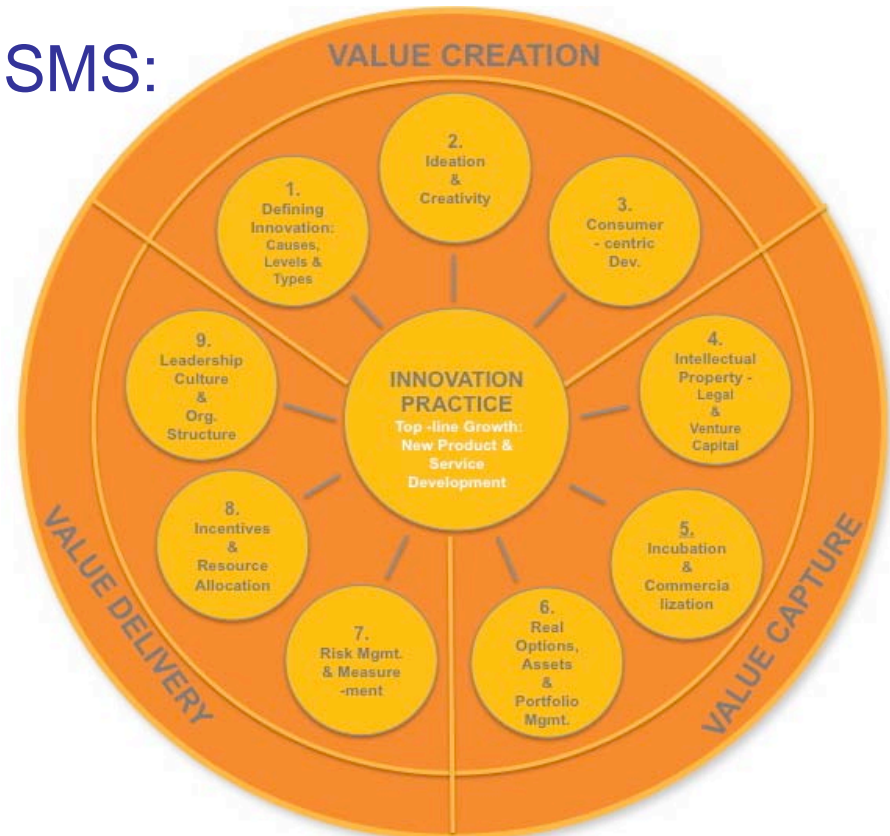
Defining Innovation



Defining Innovation

INGREDIENTS - VALUE CAPTURE MECHANISMS:

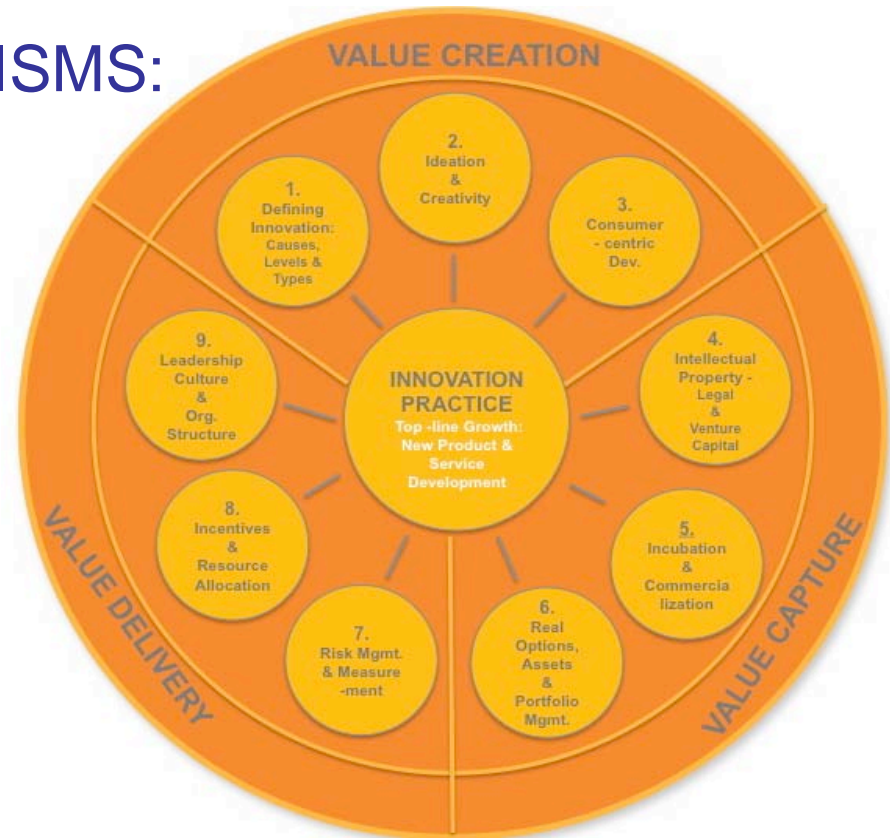
- “Design Thinking”
- Ambidexterity
- Consumer – centric rather than merely customer focused
- Collaborative & Heterogeneous



Defining Innovation

INGREDIENTS - VALUE CAPTURE MECHANISMS:

- IP oriented
- Technologically Transferrable
- Primed for Venture Capital infusion

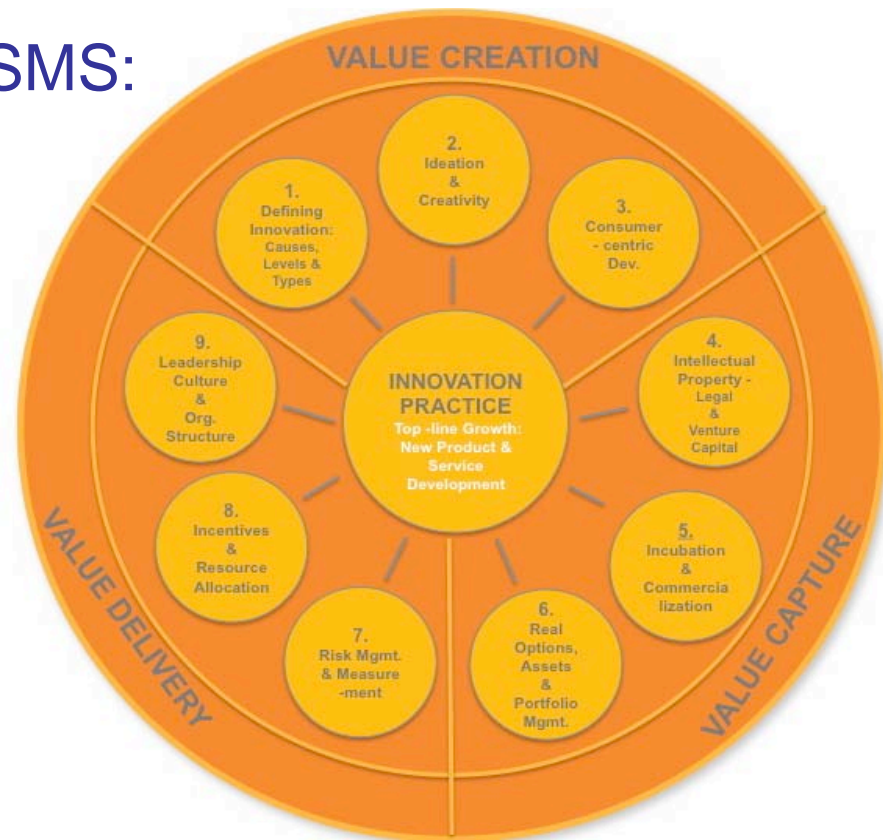


Defining Innovation

INGREDIENTS -

VALUE CAPTURE MECHANISMS:

- Executed through visionary leadership
- Culturally aligned through consistent values
- Features incentives for desired behavior & performance
- Organized for growth



Defining Innovation

The Difference Between an Invention & an Innovation: Consumer Resonance

“SUBSTANTIAL CUSTOMER VALUE ESTABLISHED BY CREATIVELY CHANGING ONE OR MORE DIMENSIONS OF THE BUSINESS SYSTEM (implied dynamism)”

“Invention” \neq “Innovation”



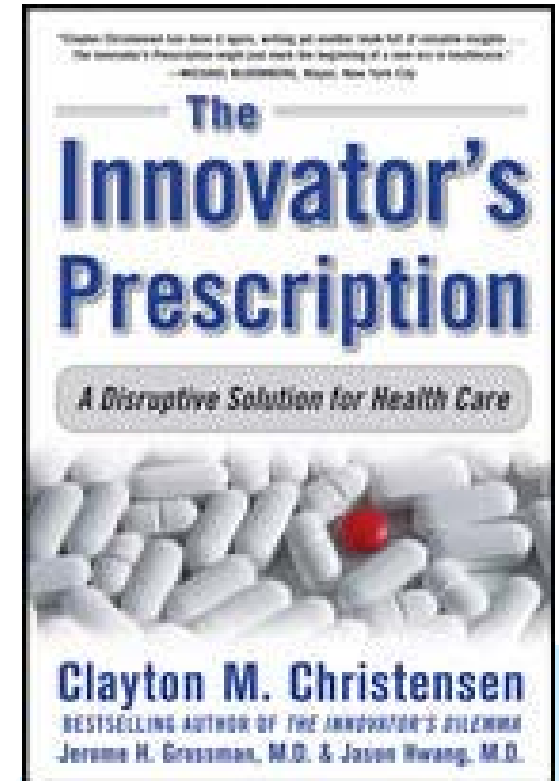
SONY



Defining Innovation

- “A contact sport”
- A journey
- Impacts every aspect of your business

So what are the implications for healthcare?



Culture of Innovation

By embracing innovation
and building **partnerships**, we can create an
energizing environment that stimulates **creativity**
and **rewards** clinicians for trying new
approaches to **improving care**.

Culture of Innovation: Tactics

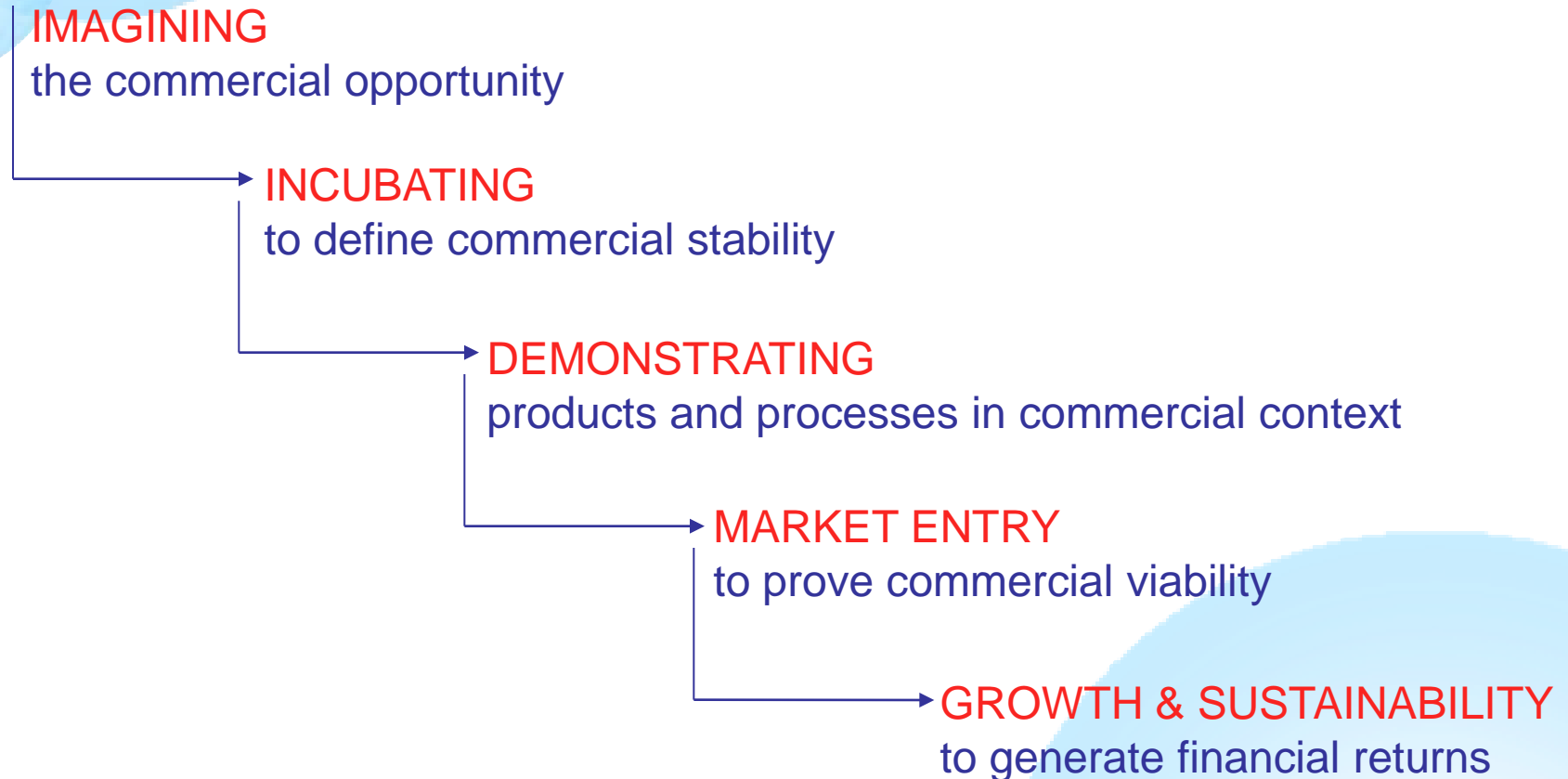
Industry Partnership

- β -Launch & Training
- Early Reiteration
- No IP Confusion
- Simplified Process
- Clinical Trials

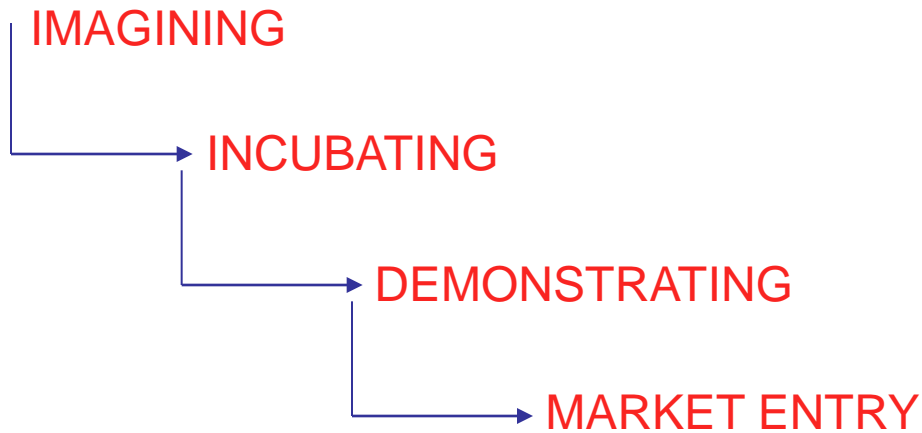
Commercialization

- Industry/Physician
- Untapped Ideas
- Need Safe Incubator
- Opportunity to Express Ideas & be Creative

Path to Market: Innovative Medical Products



Clinical Innovation



- Emerging Models
- Complement to Technology Transfer
 - Innovation vs Traditional R&D

Imagining

- Origin in Clinic
End-user experience





Imagining

- Origin in Clinic

 - End-user experience

 - Empathic process

- Validation of Need

 - Invent to meet need?

- R&D Partnership

 - Work-for-hire

 - Academic collaboration

 - Open innovation with industry



Incubating

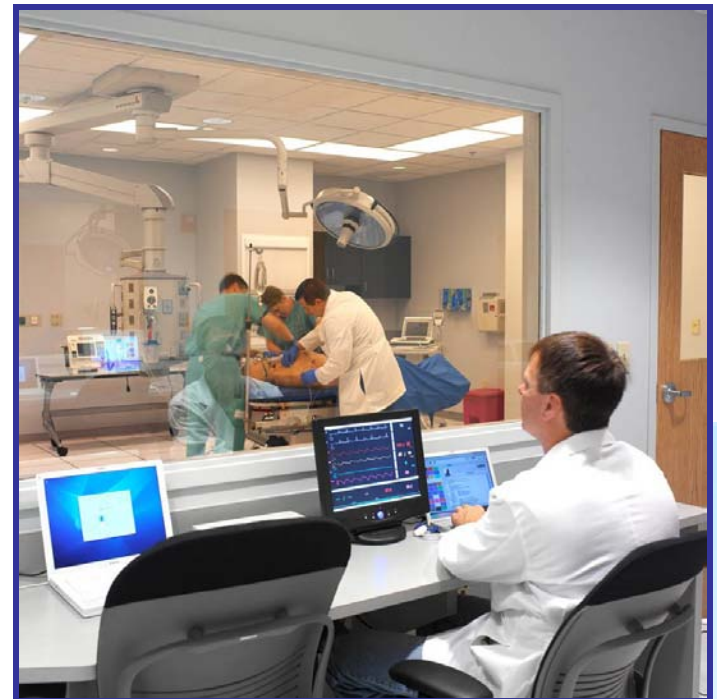
Verify a sustainable value proposition.

- Intellectual Property Development
 - Industrial Design
 - Concept visualization & modeling
 - Engineering
 - Prototyping & design for manufacturing
- Iteration in Clinical Environment
 - Simulation
 - Focus Groups

Demonstrating

Demonstrate the product in the intended clinical context.

- Simulation
 - Clinical trial protocols
 - Training & launch activities
- Clinical Trials
 - Safety & efficacy
 - Fit within standard of care



Market Entry

The ultimate test of commercial viability.

- Essential to Exit
 - Competitive distribution & marketing
 - Sales drive acquisition
- Friendly First Customer
 - Build it and they will come.
Not really. Sorry.



First Customer Program

Missing in Development

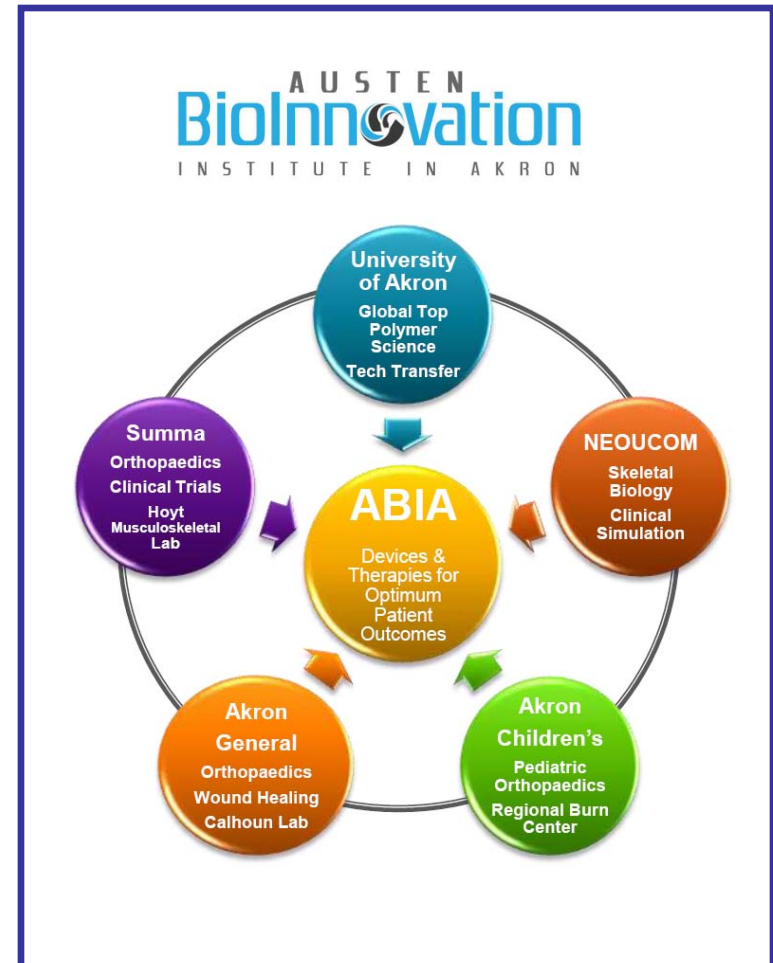
- “Friendly” Reiteration
- Watch Customer Use Product
- Rapid Approval Process
- No IP Confusion

Clinicians & Patients

- Diversion from Routine
- Influence the Future
- Deploy Newest Technology
- Interact with Creative People
- Fuel Imagination

Clinical Innovation Models

- Structure & Resources
 - Institutional
 - Industrial
- IP Management
 - Blanket Agreement
 - Case-by-case
 - “Hands off”



Clinical Innovation Models



University of Michigan **Medical Innovation Center**

What We Do...



Assist Medical Inventors

Inventor Assistance Program
Pediatric Device Forum



Educate Innovators

Fellowship Program
Resources



Create Prototypes

Design and Prototype Lab

MIC is a collaboration between:



Michigan Engineering



University of Michigan
School of Dentistry



A&D



“...our goal is to improve patient care by producing the innovators who invent life-enhancing and potentially life-saving medical devices, techniques and related technology.”

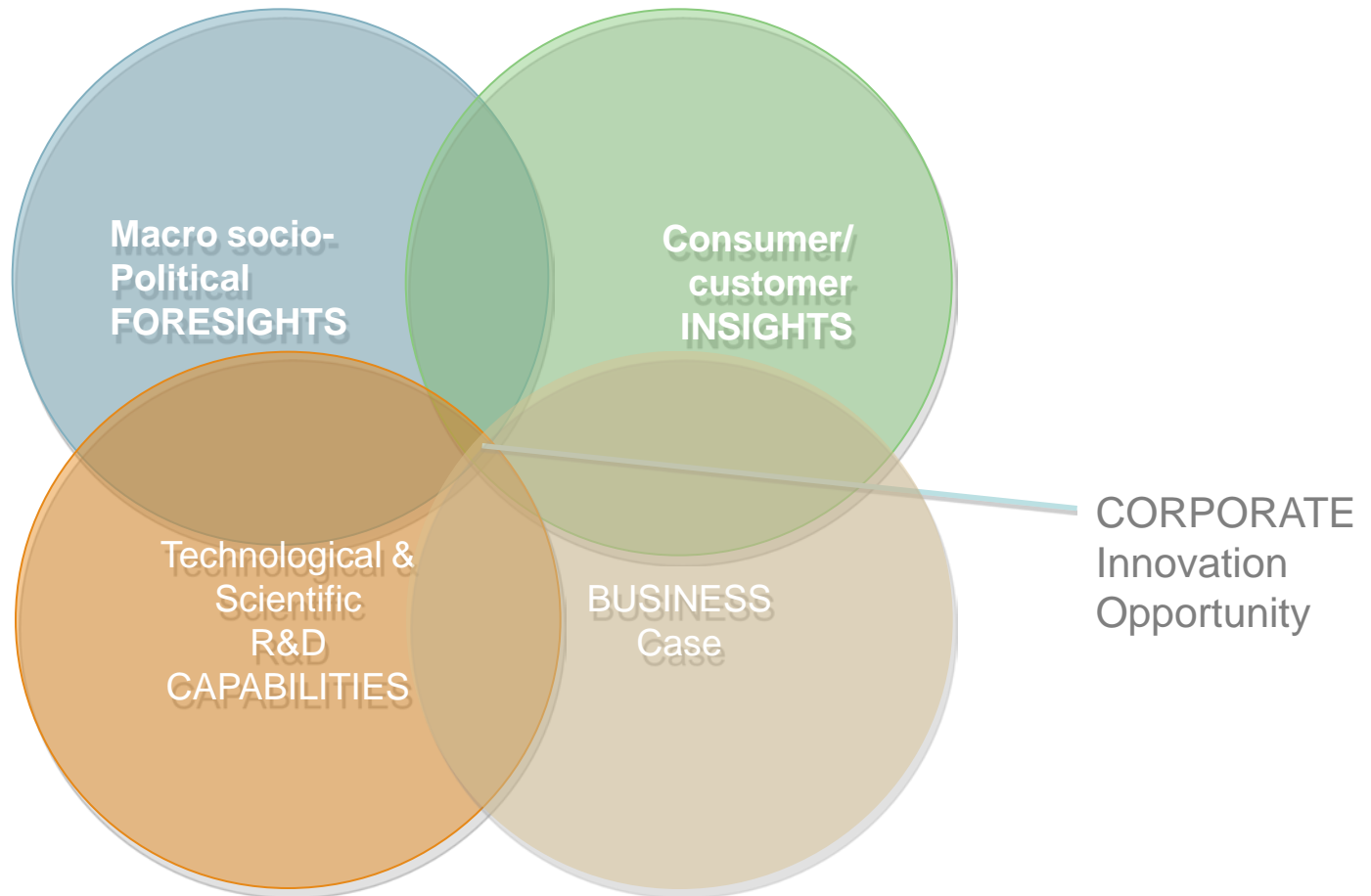
Schools of Business,
Engineering, Humanities &
Sciences, Law and Medicine.

Clinical Innovation Models

- Portfolio Focus
 - Foresight
 - Capability
 - Insight
 - Economic Reality



Clinical Innovation: Sweet Spot

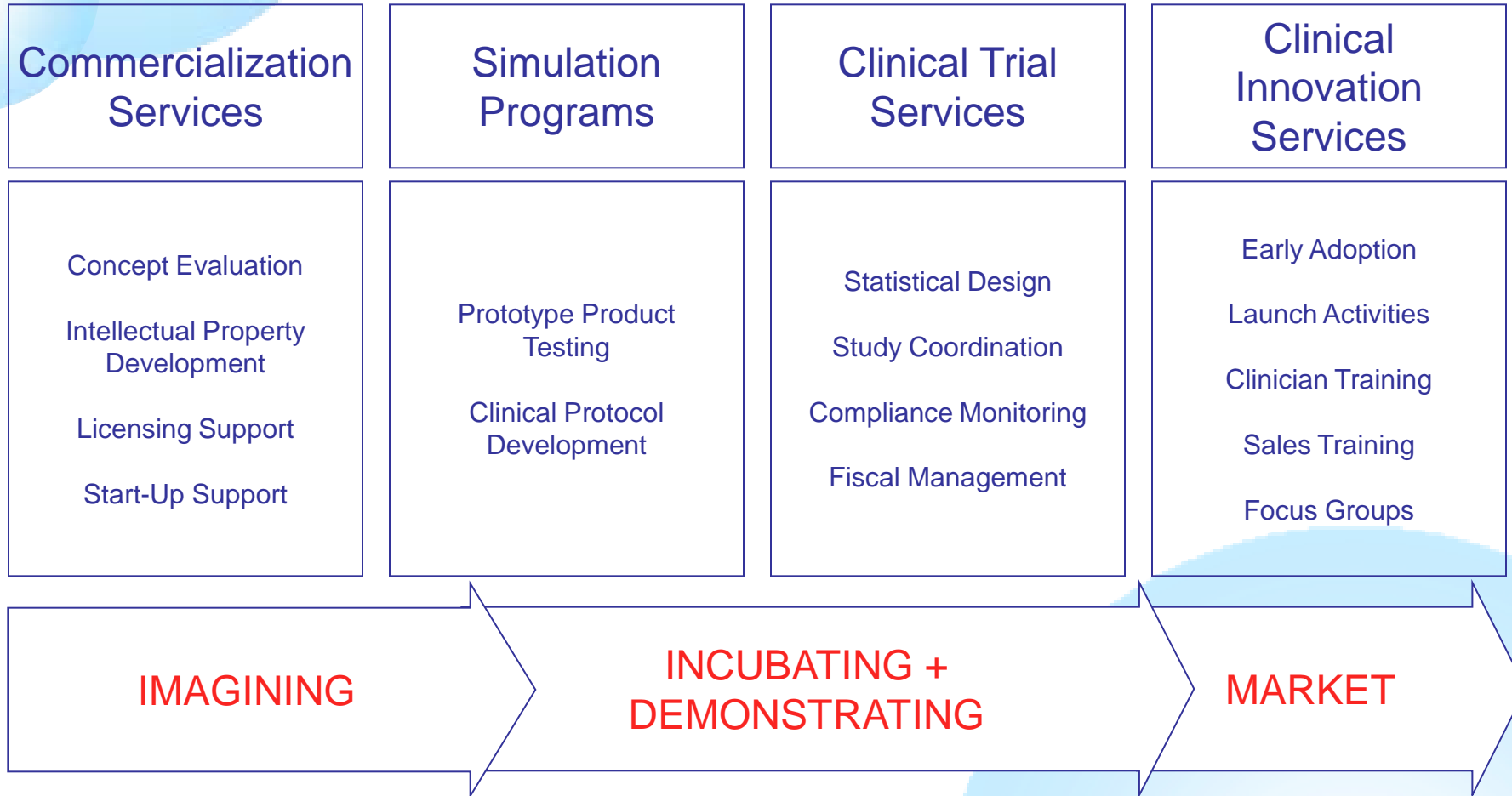


Clinical Innovation Models

- Portfolio Focus
 - Foresight
 - Capability
 - Insight
 - Economic Reality
- Longitudinal Support
 - Demonstration-oriented
 - Varied levels of integration



OhioHealth Continuum of Support



Innovation Success at OhioHealth

- Patient Care
 - 3 projects: simulation, trials & adoption
 - 2 projects: entering clinic
- Project Pipeline
 - \$265,000+ grants
 - 100 concepts & 10 new companies
- Continuous positive feedback from clinicians.
- National media recognition.



Comparison: Clinical Innovation Models

	Clinical Focus	R&D Resources	IP Management	Longitudinal Support
NYP MINT	Well-Defined	Institutional Grants, endowment & partner facilities.	Formal TTO Relationship	Moderate
U of M MIC	Broadly Defined	Institutional Grants & in-house facilities.	Informal TTO Relationship	Light
OhioHealth	Open	Work-for-Hire TechColumbus & personal funds.	Innovator	Well-Defined

References

Austen BioInnovation Institute in Akron
www.bioinnovation.org

Douglas, F. Austen BioInnovation Institute in Akron. *BioOhio Innovation Roadshow*. Cleveland, OH. 2010.

Hammermesh, RG, Kiron, D. MINTing Innovation at NewYork-Presbyterian. (Harvard Business School) N9-810-004. 2009.

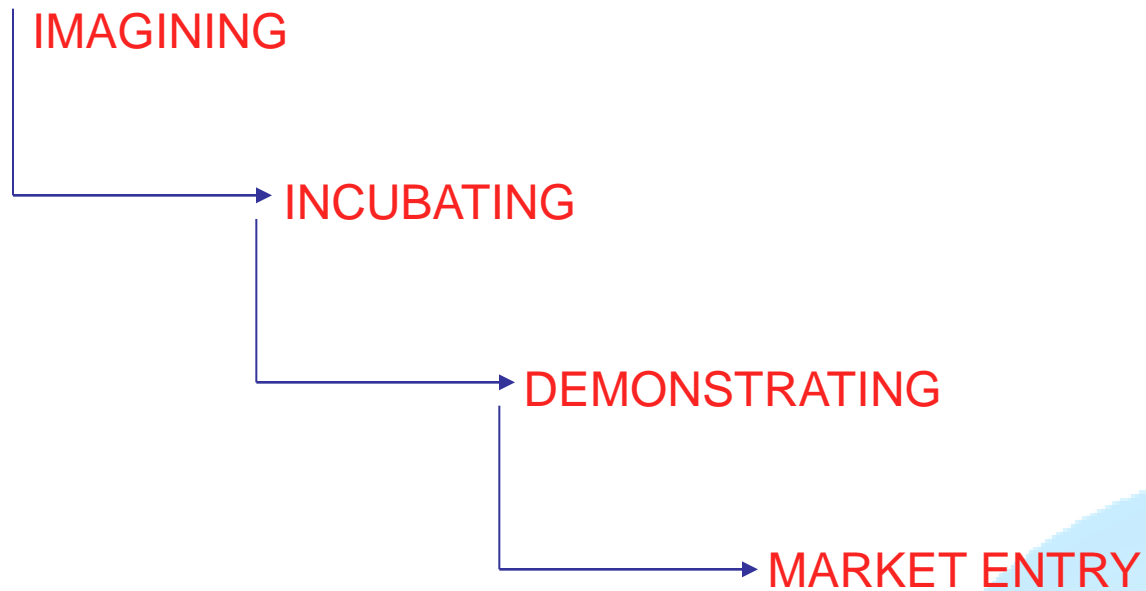
Stanford Biodesign
innovation.stanford.edu/bdn

University of Michigan Medical Innovation Center
www.med.umich.edu/ummic

Thank You!

- Michael Bills
Executive in Residence
The Fisher College of Business, The Ohio State University
bills_36@fisher.osu.edu
- Wayne Poll, MD
Medical Director, Clinical Innovation
OhioHealth
- Patricia Eisenhardt
Manager, Commercialization
OhioHealth Research & Innovation Institute
innovation@ohiohealth.com

Discussion



Lunch Upstairs

12:00pm – 12:55pm

Sponsored by: City of Columbus



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Innovation Open Mic

BioOhio Member Company (speaker)

Alkermes (Glenn Wheeler)

EXCMR (Gary Smith)

InVasc Therapeutics (Raju Desikan)

MediaSource (Joshua Platt)

Nanofiber Solutions (Jed Johnson)

OhioHealth (Michelle Mandy and Dr. Shawn Kerger)

OmniTek (Susan George)

Prologue/Novella Clinical (Andrew Zupnick)



Innovating Education

High School Bioscience and STEM approaches

- **Steve Krak, Ohio Stem Learning Network**
- **Jamie Allison, Loveland High School**
- **Peter DeWitt, Metro Early College High School**
- **Lynn Elfner, Ohio Academy of Science**
- **moderated by BioOhio's Bill Tacon**

sponsored by Calfee



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Medical Innovation

“Gone Tomorrow?” Panel

- George Proicou (TechColumbus)
- Sudip Parikh (Battelle)
- Chris Willson (Nationwide Children’s)
- Matthew Roberts (Abbott Nutrition)
- moderated by BioOhio’s Tony Dennis

www.americanmedicalinnovation.org/

sponsored by Thomson Reuters



National Strategy for Medical Innovation “Gone Tomorrow?”

- White House-Level Leadership
- Unique Public-Private Partnerships
- Strengthening Investment in R&D and Manufacturing
- Enhance Regulatory Sciences at FDA
- Increasing the U.S. Bioscience Talent Pool

www.americanmedicalinnovation.org/
press release in conference booklet

Special Guest Speaker

U.S. Senator Sherrod Brown



Stick around for the Networking Reception

sponsored by TechColumbus

Featuring great food and drink and **door prizes:**

- Kodak ZxD Pocket Video Camera
- 3 Cheryl's Cookies Buckeye Gift Tins

*We'll be collecting business cards during the reception;
winners posted by 5:00pm*



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