Building Effective Private and Public Collaborations

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Oregon Food Industries

Food processing: 3rd largest manufacturing sector, ~640 companies, $6.1B economic impact

Diverse agricultural products, over 200 crops

- Dairy
- Wine, beer, distilled spirits
- Cereal grains
- Fruits—orchard and berries
- Hazelnuts
- Vegetables--potatoes, onions
- Meat
- Seafood
- Nursery products
- Grass seed
- Forest products

Challenges to establishing U-I partnerships

- Differing "business" objectives
  - Research v. product development
  - Publication v. proprietary information
  - Incentives and rewards
- Differing workforce
  - Students v. full-time employees
- Differing environments
  - Teaching v. manufacturing
  - Knowledge v. intellectual property v. trade secret
  - Organizational structure
  - Universities are hard to navigate

How to align these to create a "win-win"?

Value of Partnerships

- Access to talent and expertise
- Extend R (&d) capabilities
- Universities as neutral parties
- Access facilities, equipment, infrastructure
- Work on “real-world” problems
- Understand market issues, economic drivers
- Leverage funding or investment
- Competitive advantage

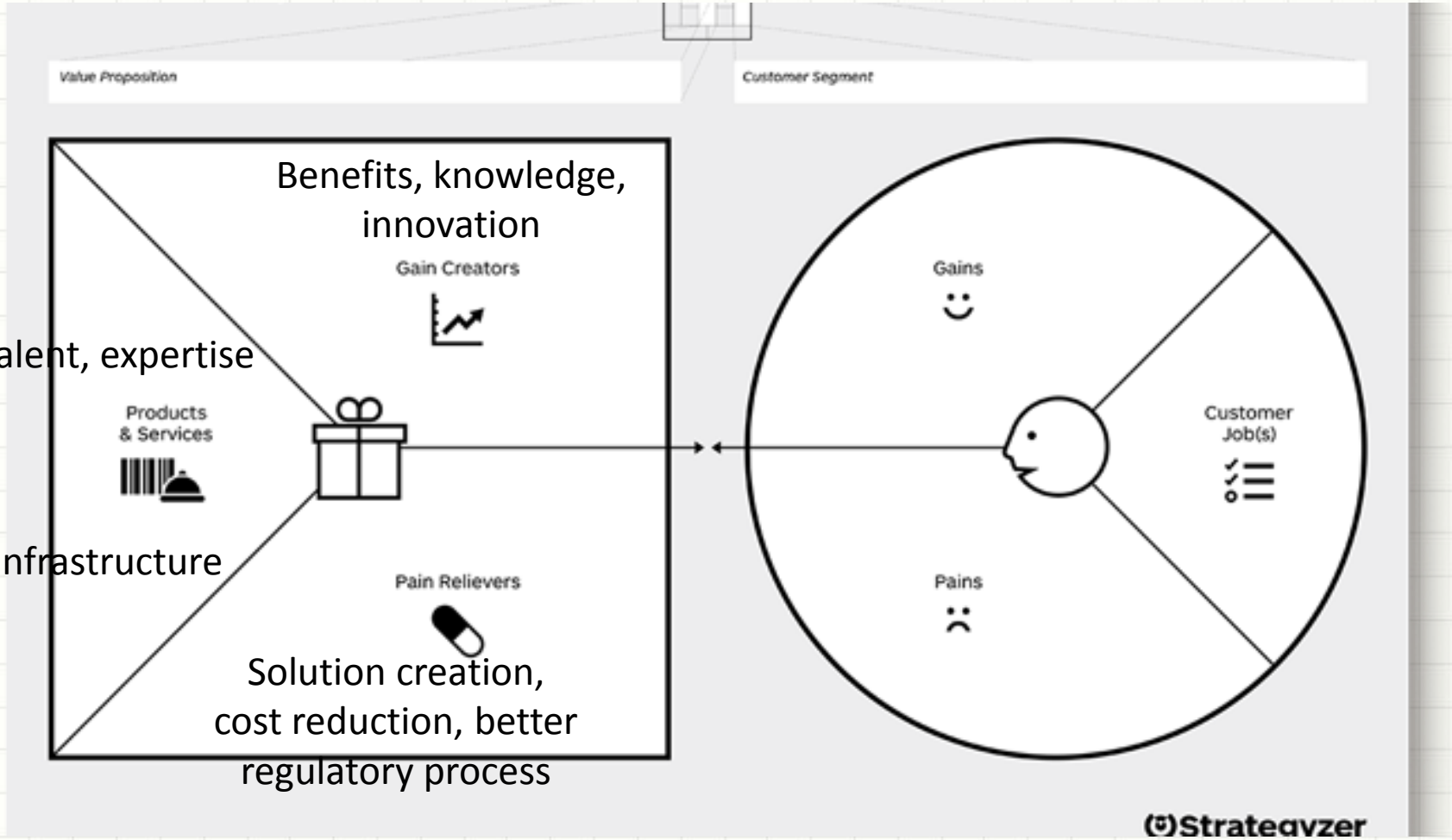
Strategies

- Address industry “pain points”
- Create collaborative work places
- Develop collaborations difficult to replicate in industry
- Working across organizations
- Cultivate next generation of talent

Value Proposition for Industry

University Solutions & "Products"

Company profile



Address industry “pain points”

What are the barriers, gaps, problems?

Are there novel solutions to try?

What is the end state to drive towards?

- Define problem statement(s)
- Map areas of expertise needed
- Find appropriate research focus
- Scope of work, phased approach
- Budget matches scope and phases
- Contracting methodology

Fundamental Research Examples

Science-based regulation

Coatings

- Nanocellulose
- Chitosan/lysozyme

Pressure-assisted thermal processing

Water contamination and irrigated crops

Create collaborative work places

- Pilot plants, testing facilities at universities
- SOTA research space in companies
- Models/tests used in both environments
- Embedded labs at university: collaborative space, separate private area
- Facilitates internships and on-going collaborations

Value-added facilities

- Food Innovation Center, Portland
  - Entrepreneur support
  - Sensory Lab
  - “Recipe to Market” curriculum
  - University-based innovation
- Seafood Lab, Astoria
  - Ocean acidification kills oyster larvae
  - Ocean warming—*Vibrio parahaemolyticus,* Domoic acid

Develop collaborations difficult to replicate in industry

- Creative solutions, new approach
- Consortia to tackle fundamental problems
  - Science, technology, regulation
- Modeling and simulation, analytics
- IP translation to innovation
- Expansion to new applications or markets
- Cross-disciplinary collaborations
  - APC Microbiome Institute, U. College Cork
  - Broader impacts, lowered costs, Myers Container
  - Food/Energy/Water Nexus—Waste2Watergy

Working across organizations

Universities (& companies) are hard to navigate!

- Centralized/Coordinated v. Individual/Decentralized
- Matchmaking to expertise
- Project management
- Centralized services
- “Virtual” organizational structure to match company divisions or sectors
- Personnel dedicated to collaboration, managing for solutions and innovation

Cultivating the next generation of talent

- "Refresh" curriculum
- Professor of the Practice positions
- Internships in companies
- Entrepreneurship training
- Sponsored research
- Embedded labs and pilot plants
- Exchanges—faculty or company employees
- Consortia participation
- Scholarships

"The best form of technology transfer is a student's brain."

Contracting suggestions

- Relationships built on trust—start small, build
- Don’t start with contracting terms
- Goal-oriented partnership framework
- Be cognizant of constraints, mitigate
- University contracting is different: NOT B2B, supplier or procurement relationships
- University-Industry Demonstration Partnership Contract Accords
  - https://www.uidp.org/publication/contract-accords/

Public-Private Partnerships

- University as an extension of research capabilities
- “Informed”, market-driven innovation
- Cutting-edge (futuristic) innovations
- Partner for science-based regulation
- Diverse backgrounds yield novel approaches
- Professors of Practice for research & teaching
- Valuable part of Open Innovation strategy
- Next generation of industry leaders

Help each other create

- *solutions to problems*
- *incredible, new products!*

Thank you!

Questions?

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