



Excellence in **the New Normal**

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**From Student to CEO:**  
*Entrepreneurial Opportunities for You*

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The Sustainability Consortium at  
Arizona State University

Best Practices for Global Supply Chain  
and Operations Management



# Introduction

Global **economic** challenges and pressing issues of **sustainability** define the competitive space navigated by organizations looking for individuals equipped with an ever-changing **skill set** able to transform these challenges into opportunities. **Young minds** around the country and across the world are in a unique position to garner these emerging opportunities through **Entrepreneurial thinking**.



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# Session Learning Objectives

1. Develop a strategic awareness about entrepreneurial opportunities
2. Transform their current or prospective degrees into successful platforms
3. Identify how APICS certification programs can help you out



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# Entrepreneurial Thinking

The discipline of creating new organizations based on the anticipation of product and service needs that will improve the economic, environmental, and social performance of the intended market.

## *About entrepreneurs:*

- Productive resource organizers willing to bear the risk of a venture.
- Uncertainty managers driven by perception of opportunity, rather than resources currently controlled.
- Integrators of: change management, innovation, technological & environmental turbulence, small business management, and industry evolution.



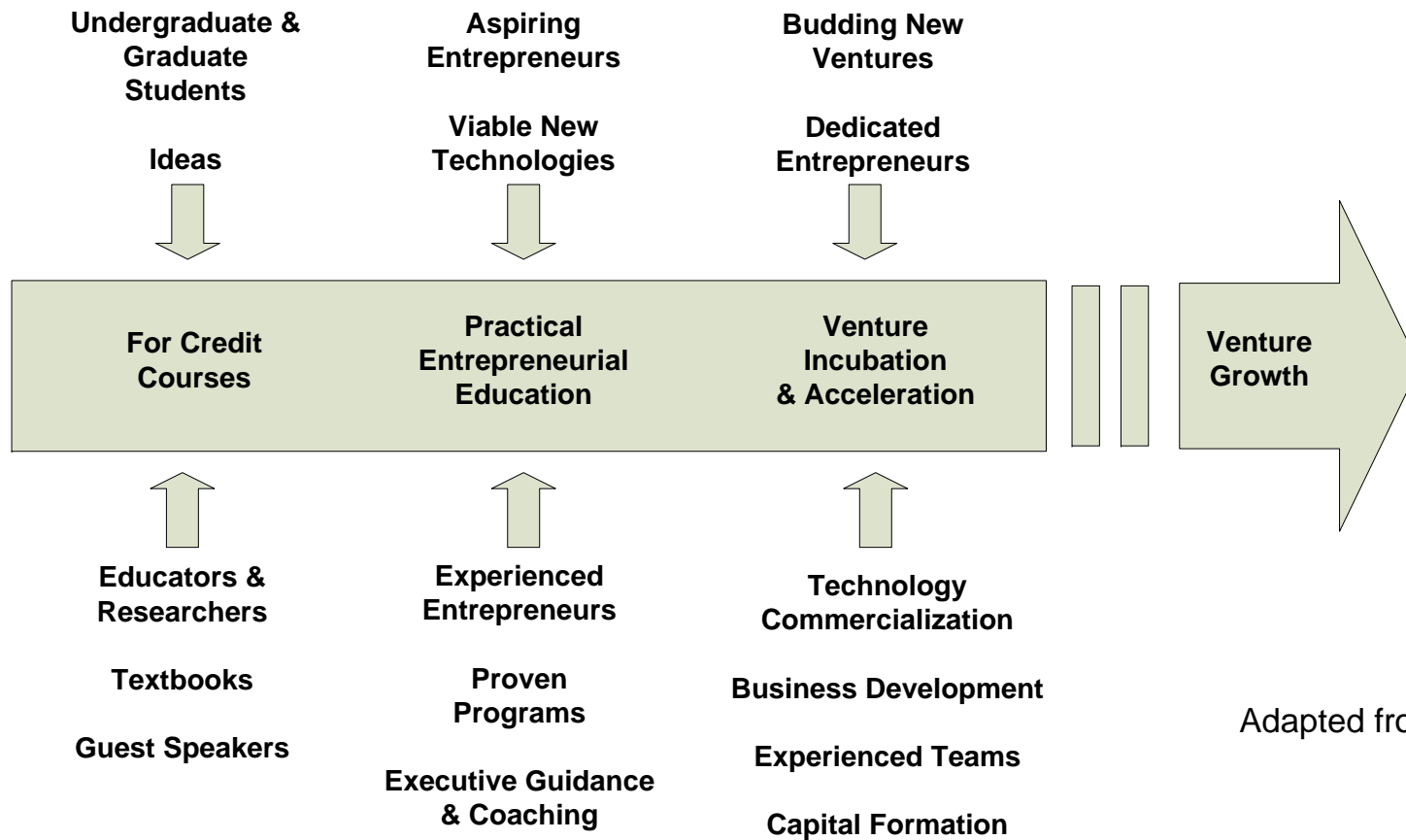
# Small & Medium Size Enterprises

- Approximately **29.5 million** in the U.S.
- Pay **45%** of total U.S. private payroll.
- Have generated **64%** of net new jobs over the past **15 years**.
- In 2007, small businesses obtained **\$83 billion** in federal funding.
- **66%** of new employer firms in the U.S. survive at least two years, **50%** survive at least four years.



# Where You at Right Now?

## Continuum of Entrepreneurial Programs



Adapted from O'Neill, 2008



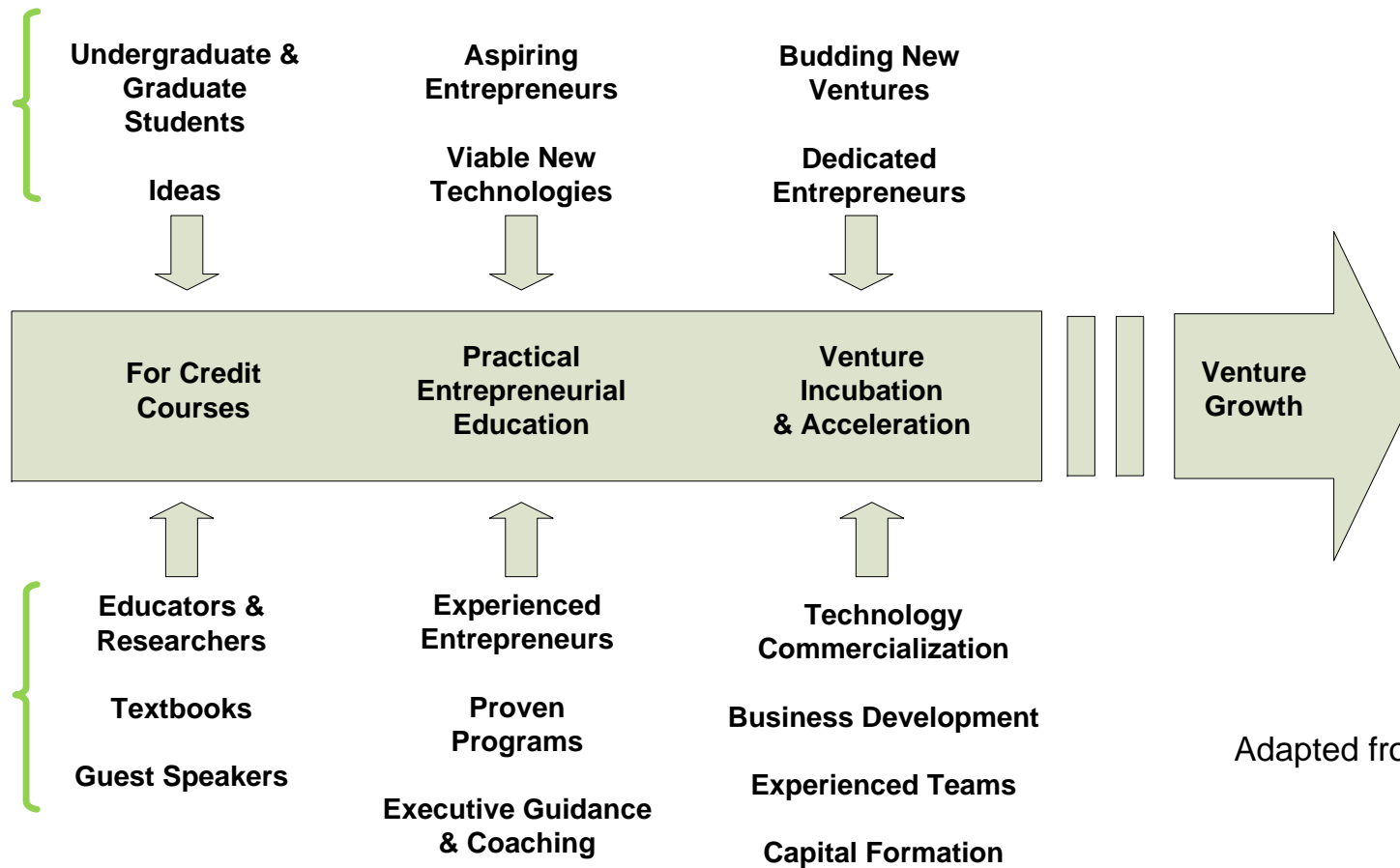
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# Where You at Right Now?

## Continuum of Entrepreneurial Programs

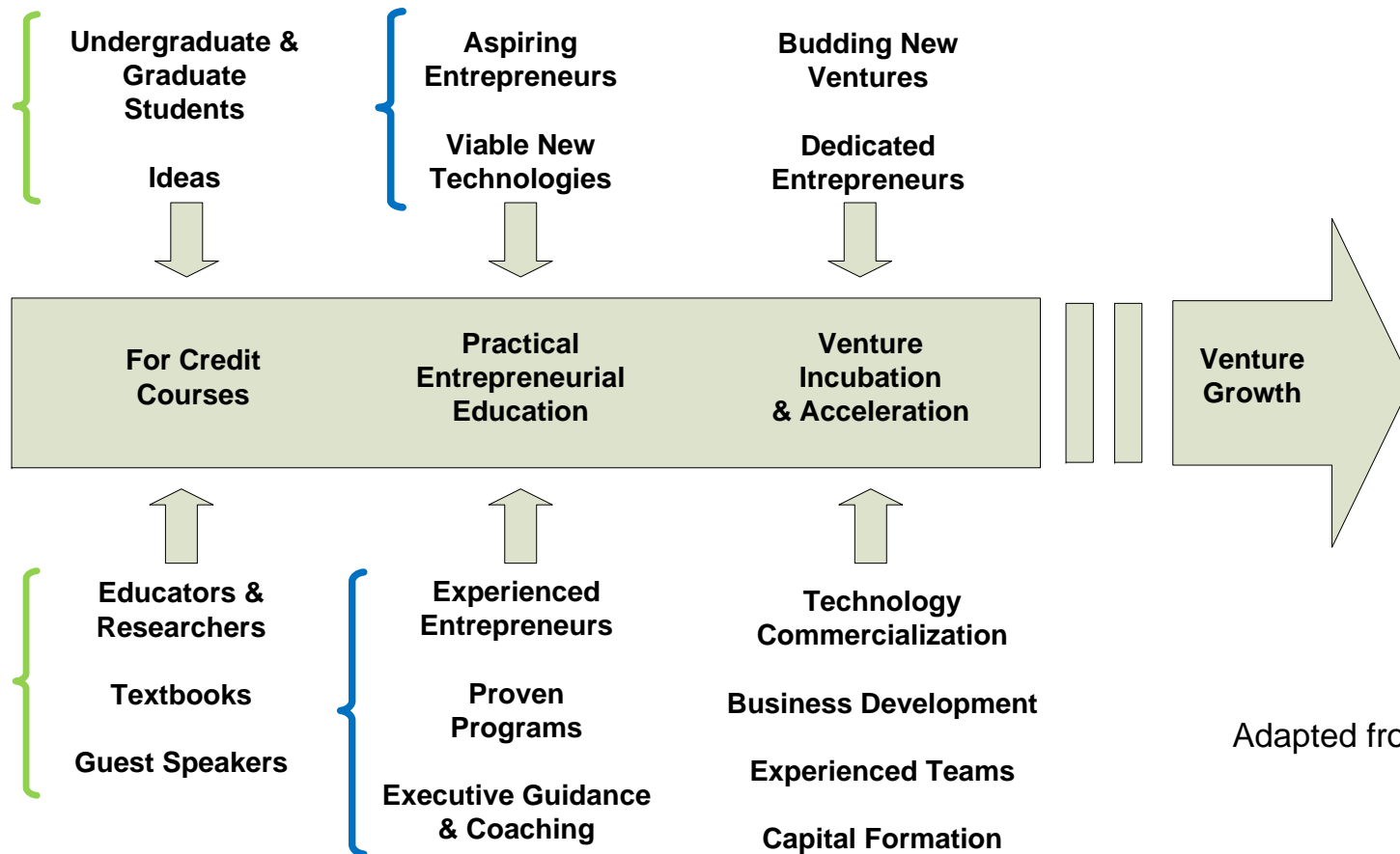


Adapted from O'Neill, 2008



# Where You at Right Now?

## Continuum of Entrepreneurial Programs



Adapted from O'Neill, 2008



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# Some Potential Outcomes

- ✓ Professional Development
- ✓ University accredited courses
- ✓ Science & Technology Ventures
- ✓ Rural Entrepreneurs
- ✓ Sustainability Ventures
- ✓ Social Enterprise
- ✓ Nursing Entrepreneurs
- ✓ Music & Arts Entrepreneurs
- ✓ Local & Global successes



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# Current Undergraduate Degree

## Junior & Senior year opportunities:

- Entrepreneurial courses as electives
- Summer Internships at SMEs\*
- Extra-year option for a Masters
- Business Plan Competitions

\* Small & Medium-Sized Enterprises



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# Current Graduate Degree

- Entrepreneurial courses as electives
- Internships at SMEs\*
- Intellectual Property Development
- Business Plan Competitions
- Continuation into a terminal degree

\* Small & Medium-Sized Enterprises



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# Intrapreneurship

- Entrepreneurship within existing organizations.
- Has been treated as beneficial for revitalization and performance of corporations and SMEs.\*
- Four dimensions:
  - New-business-venturing
  - Innovativeness
  - Self-renewal
  - Proactiveness



\* Small and Medium-Sized Enterprises



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Source: Antoncic & Hisrich, 2001

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# Intrapreneurship

## Critical factors:

- Organizational approach and attitude
- Resources committed
- Intellectual Property Development
- Corporate Spin-offs

The 3M logo is displayed in a bold, red, sans-serif font.

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The APICS logo features the acronym 'APICS' in a large, bold, black font with a stylized star above the 'I'. Below it, the full name 'The Association for Operations Management' is written in a smaller, black, sans-serif font.

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# Concept Development

Most products or services value propositions emerge from:

- Overlooked opportunities between current businesses.
- The identification of a local or global need not previously addressed.
- Organic corporate growth across regions

**But, how to be different?**



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# Concept Development

One useful approach is: **The Blue Ocean Strategy**

*Competing in overcrowded industries is no way to sustain high performance.  
The real opportunity is to create blue oceans of uncontested market space.*



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Source: Kim & Mauborgne, 2007

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# Concept Development

## The Blue Ocean Strategy transition

From:

**Red oceans** where companies try to increase their market share of an existing and finite demand.

To:

The **invention and capture** of new demand while offering customers a leap in **value** supported by a profitable business model



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Source: Kim & Mauborgne, 2007

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# Concept Development

The Blue Ocean Strategy: An Example.

## *Cirque du Soleil*

Invented a new industry by blending traditional circus elements with sophisticated theater. In just 20 years this organization surpassed Ringling Bros and Barnum & Bailey, the world's leading circus which needed more than a century to build their brands.



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Source: Kim & Mauborgne, 2007

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# Business Plan Development

1. It should tell a story that triggers a response action.
2. Describe which is your Distinctive Competence.
3. The rest of the business plan sections must support the previous points



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# Business Plan Development

General structure:

- **Executive Summary**
- Mission & Vision
- **Team Members**
- Main assumptions
- Business Model
- Financial and Operational feasibility



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# Available Resources

## University & Industry Business Plan Competitions

### MIT Clean Energy Prize

Jointly award **\$200,000** with the Department of Energy



### Rice University, Business Plan Competition

Combined funds of **\$800,000**



### Walmart Better Living Business Plan Challenge

Sustainability-oriented projects are funded with **\$20,000**



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# Available Resources

## U.S. Small Business Administration (SBA) programs:

- Small Business Innovation Research (SBIR)
  - Small Business Technology Transfer (STTR)
- Combined funds of **\$2 Billion** for high-tech businesses

## The Kauffman Foundation

Diverse grants available ranging from **\$4,000 to \$500,000**.

## The Lemelson Foundation

200+ University Members, **\$2 Million** granted annually



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# Available Resources

Types of prices:

- ✓ Legal advice for incorporation
- ✓ Intellectual Property Development mentoring
- ✓ Financial advice
- ✓ Web-hosting and exposure to big forums
- ✓ Office space at Business Incubators



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# Where Does APICS Fit In?

- Process-based understanding of organizations.
- Businesses viewed as holistic systems.
- Operations Management Body of Knowledge.

Programs:

**CPIM** – Certified in Production and Inventory Management

**CSCP** – Certified Supply Chain Professional



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# Where Does APICS Fit In?

## CPIM – Certified in Production and Inventory Management

Since 1973, the CPIM program has educated more than 90,000 manufacturing professionals.

- Functional knowledge increase.
- Improve efficiency across **processes**.
- Streamline operations through accurate forecasting.
- Maximize customer satisfaction through JIT approach.



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# Where Does APICS Fit In?

## CSCP – Certified Supply Chain Professional

APICS latest certification is aimed to professionals seeking in-depth knowledge and understanding of their entire supply chain.

- Employees hoping to boost productivity and collaboration.
- **Innovators** promoting global supply chain management.
- Managers interested in optimizing business performance.



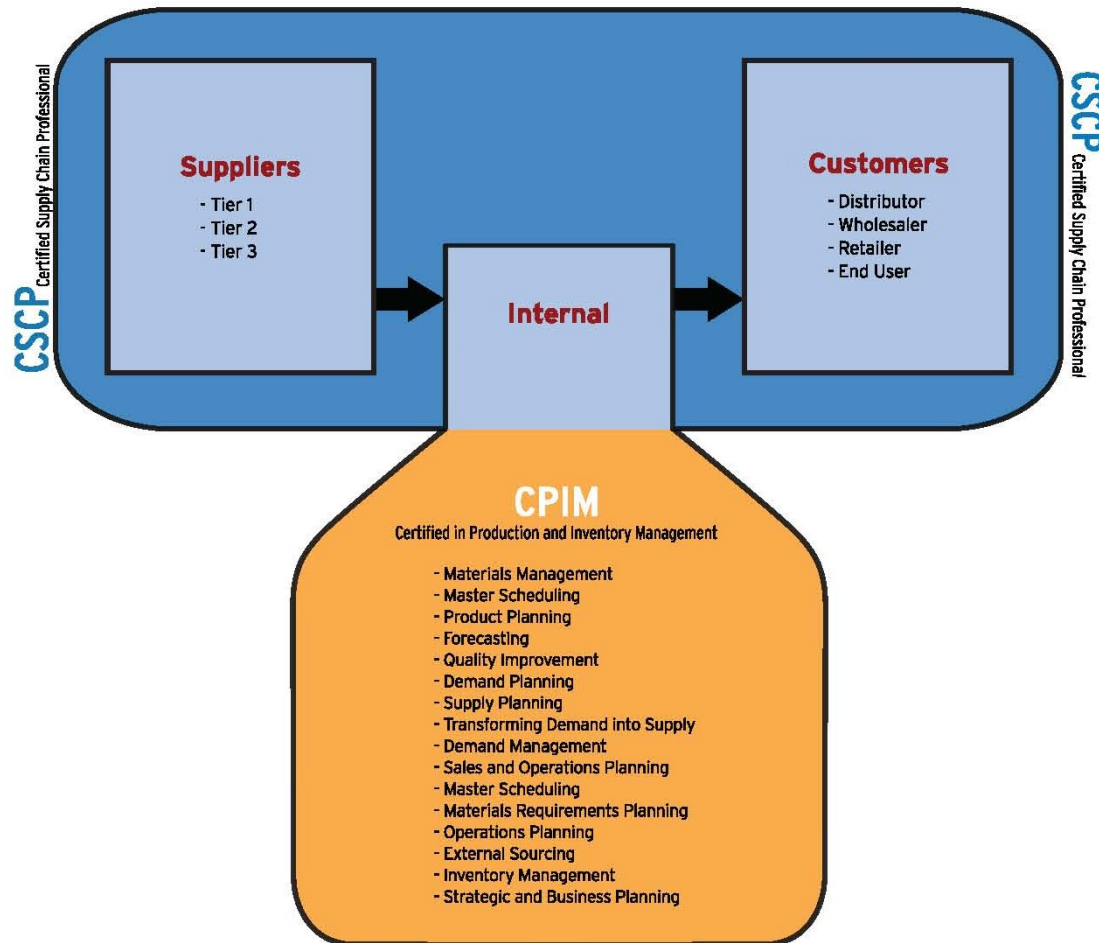
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# Where Does APICS Fit In?

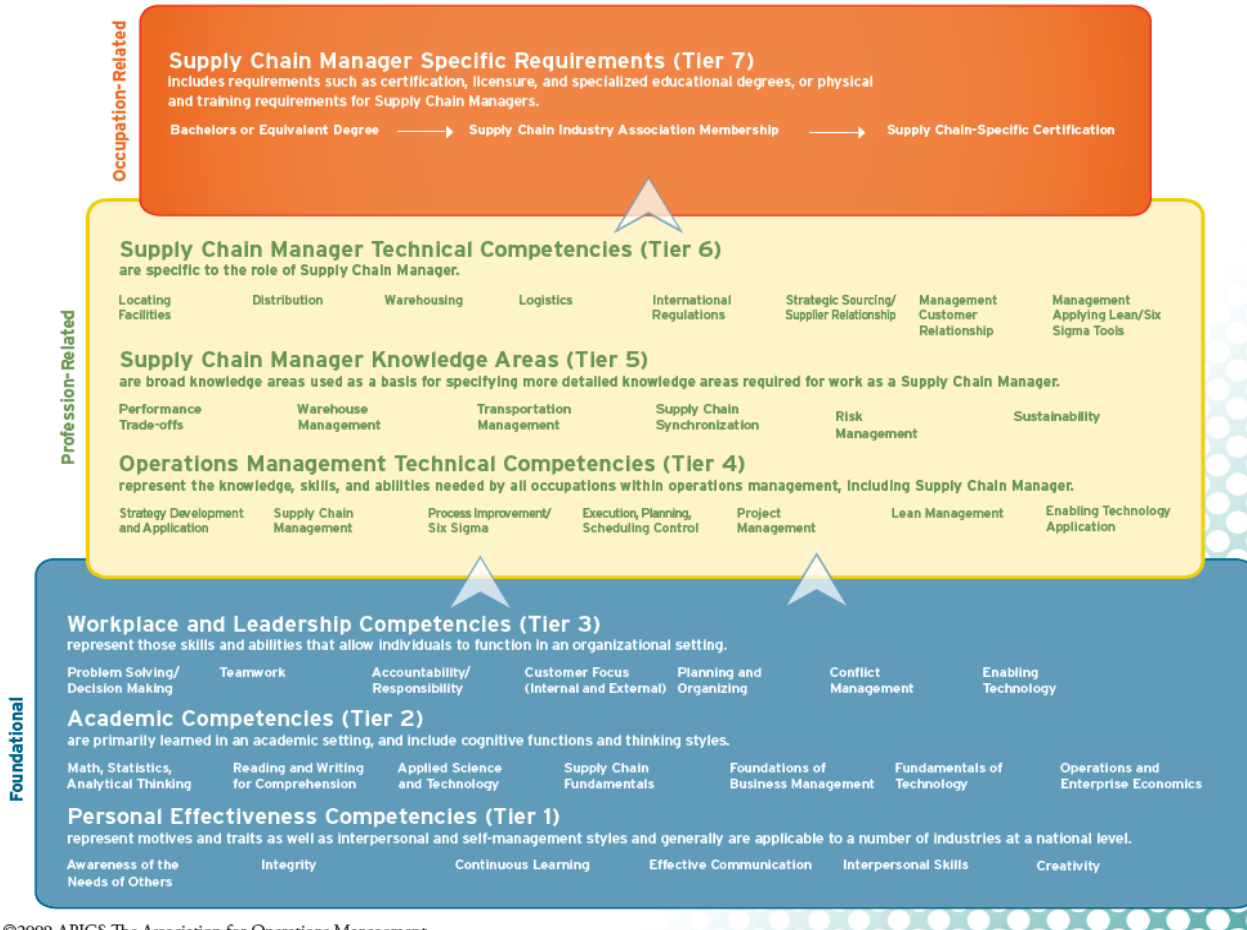
## CSCP/CPIM Educational Relationship



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# Where Does APICS Fit In?



## Supply Chain Manager Competency Model

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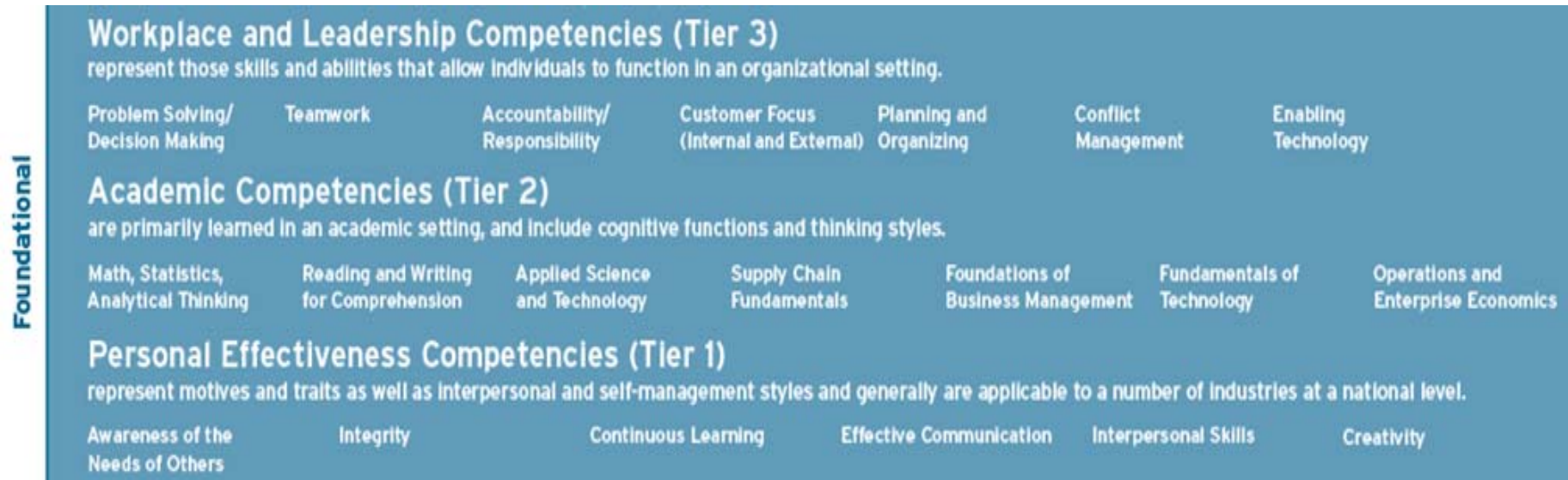
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# Where Does APICS Fit In?

## Supply Chain Manager Competency Model



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# Where Does APICS Fit In?

## Supply Chain Manager Competency Model

Foundational Tiers can be supported by:

- ✓ Entrepreneurship electives
- ✓ Your current or prospective degree
- ✓ Internship experience



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# Where Does APICS Fit In?

## Supply Chain Manager Competency Model



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# Where Does APICS Fit In?

## Supply Chain Manager Competency Model

Profession-related Tiers can be supported by:

- ✓ Internship transition into full-time job
- ✓ Having experience in multiple functional areas
- ✓ Look for regional or international assignments



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# Where Does APICS Fit In?

## Supply Chain Manager Competency Model

Occupation-Related

### Supply Chain Manager Specific Requirements (Tier 7)

includes requirements such as certification, licensure, and specialized educational degrees, or physical and training requirements for Supply Chain Managers.

Bachelors or Equivalent Degree → Supply Chain Industry Association Membership → Supply Chain-Specific Certification



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# Where Does APICS fit In?

## Supply Chain Manager Competency Model

Occupation-related Tiers can be supported by:

- ✓ Finish your current degree
- ✓ Work towards a professional certification
- ✓ Garner the benefits of professional membership

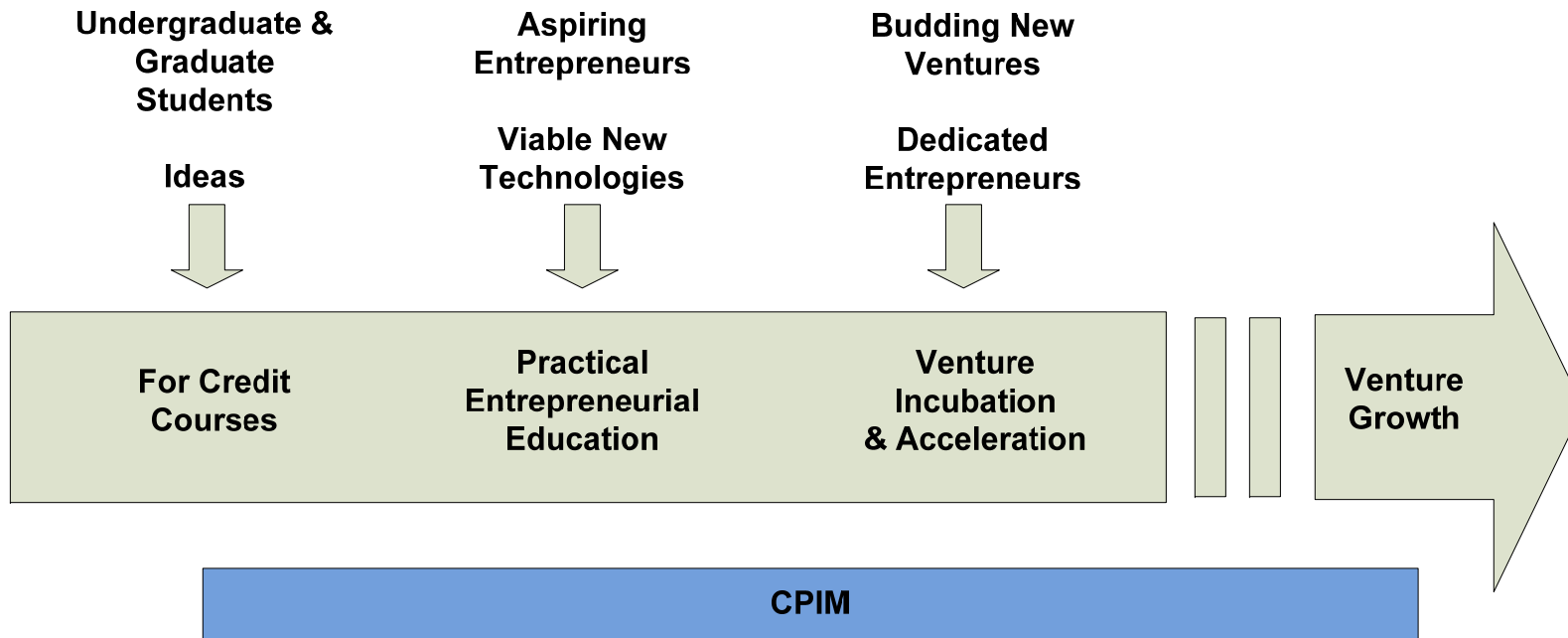


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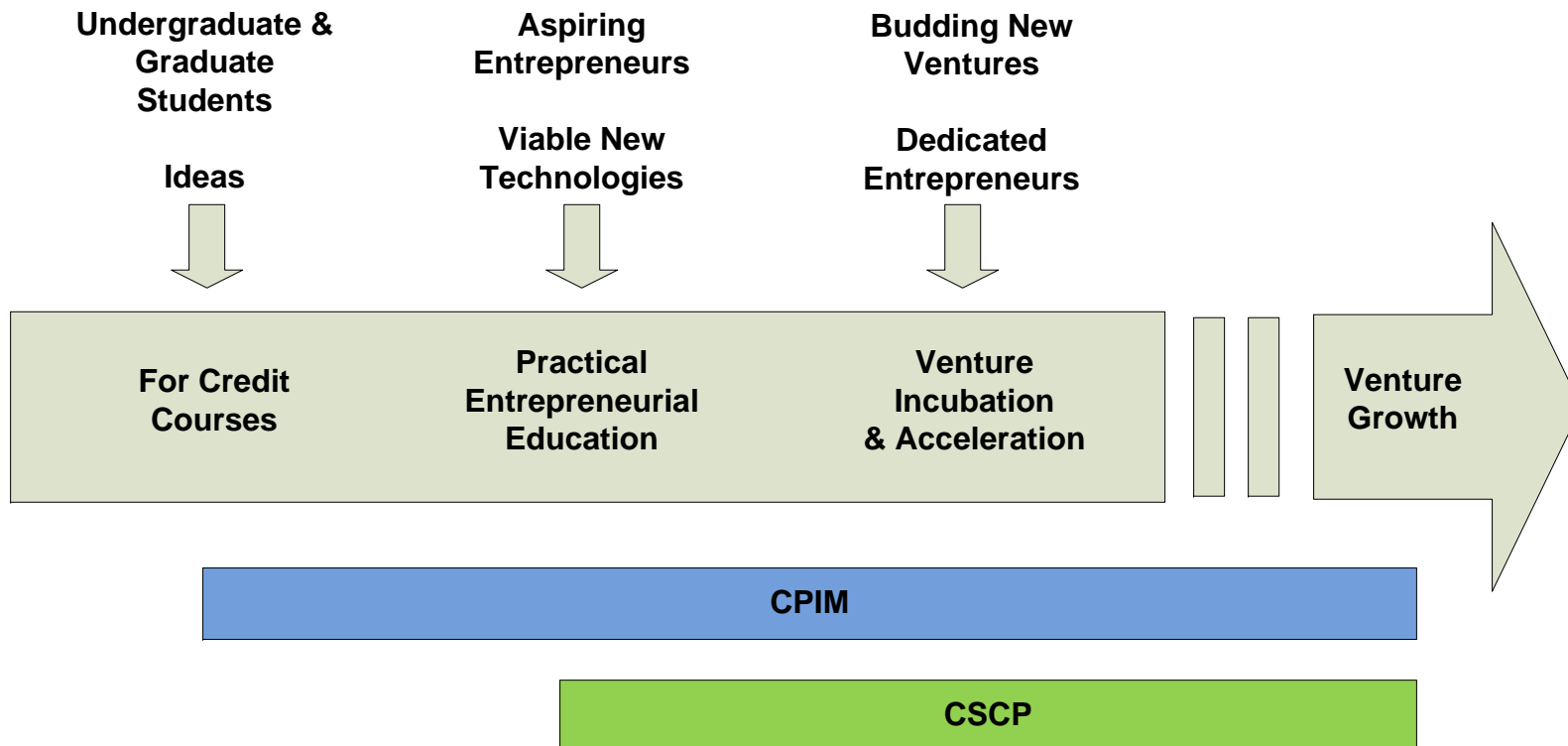
# An Integrated View



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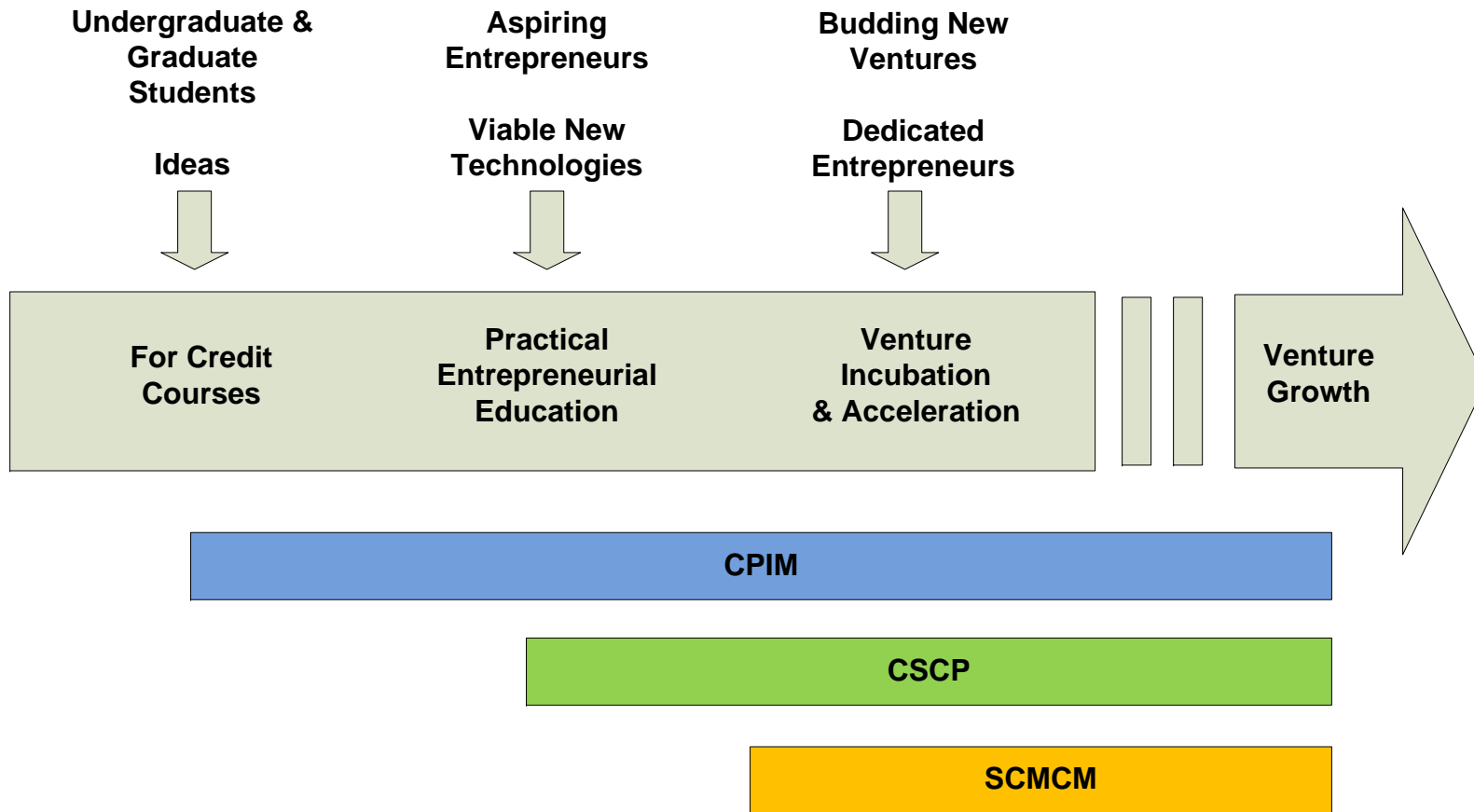
# An Integrated View



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# An Integrated View



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# Why Sustainability?

Ideally, a new value proposition should address the following dimensions:

- ✓ Economic
- ✓ Environmental
- ✓ Social



New businesses are:

- Flexible enough to incorporate sustainability in their design.
- Replicable in different regions across the world.



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# Examples of Sustainable Businesses

## Envirofit Cook stoves for Africa

- Either as a donation or microloan from \$45 to \$65 you can support the purchase of a cook stove for a family in Liberia.
- The project will reach 1,200 families in its first stage and avoid the use of wood and biomass for cooking.
- Other technologies to provide education and literacy in the region are being explored.



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# Examples of Sustainable Businesses

## Envirofit Cook stoves for Africa

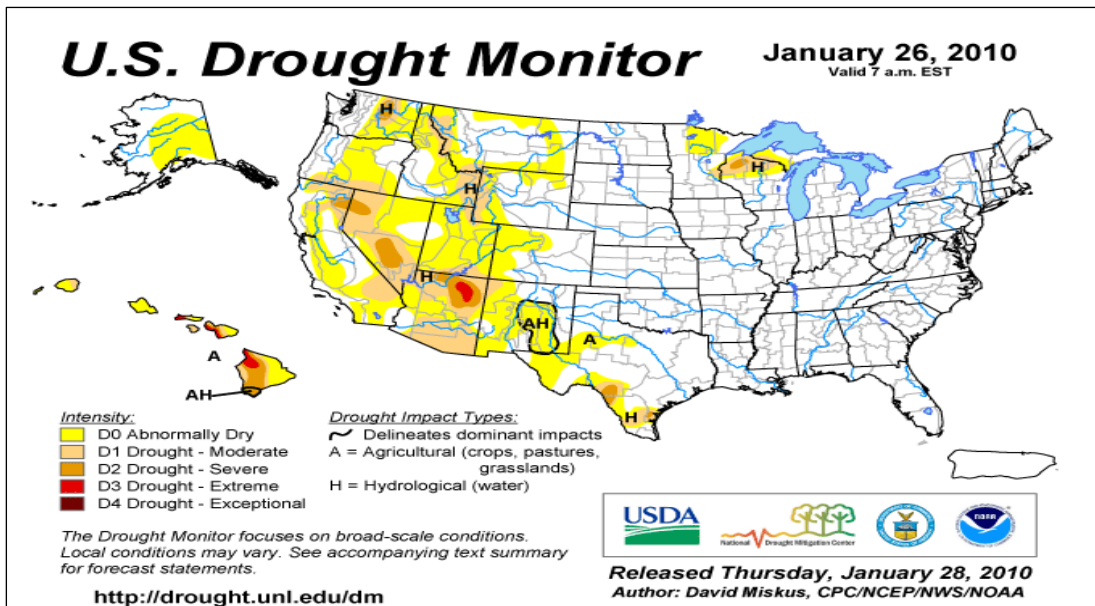


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# Examples of Sustainable Businesses

## Agavenol, LLC



*Introduction of agave as bioethanol feedstock in desert regions, while providing social and economic benefits to Native-American communities*



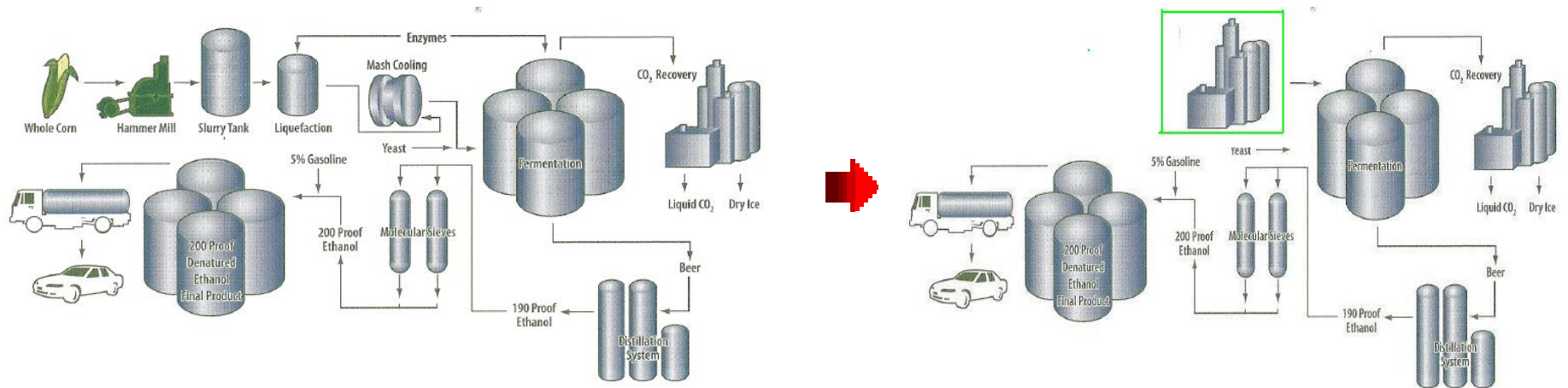
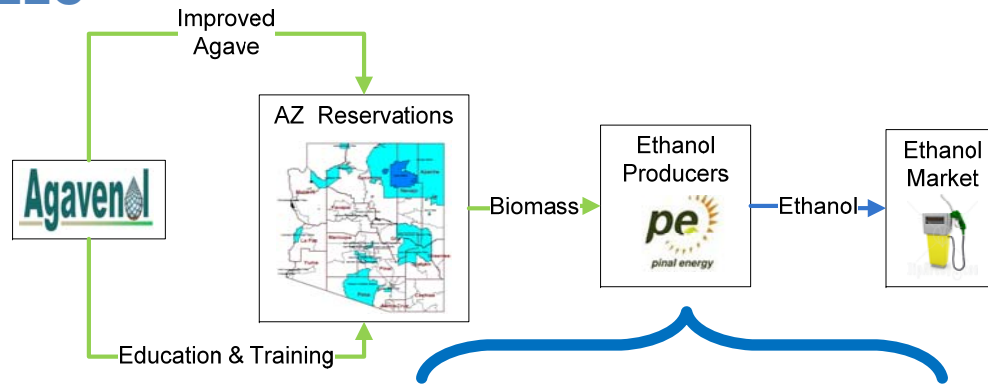
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# Examples of Sustainable Businesses

## Agavenol, LLC






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# Examples of Sustainable Businesses

## Agavenol, LLC

		N.A. Communities 	Ethanol Producers 
<b>Economic</b> Annual Revenues	\$ 6 Million	\$20 Million	\$90 Million
<b>Environmental</b>	65 Million Gallons of Water Saved	4,500 Acres Idle Land Reclaimed	2 Million Tonnes of CO2 avoided
<b>Social</b> Job Creation	25 Positions	40 Jobs/Community	45 Jobs/Facility

*A biotechnological solution deployed on tax advantaged communities to jumpstart Ethanol production in the US Southwest*



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# In Summary

- ✓ Entrepreneurial opportunities surround you.
- ✓ Your current or future degree can support your idea
- ✓ Multiple funding avenues are available.
- ✓ Sustainability-oriented business are in high demand.
- ✓ APICS provides you with a platform for success.



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