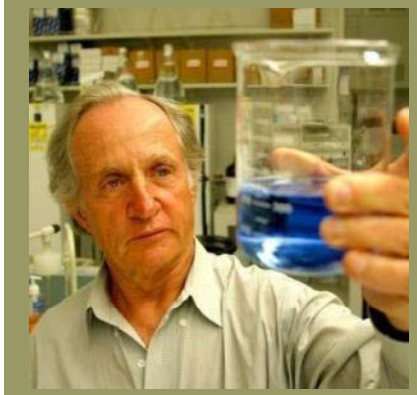
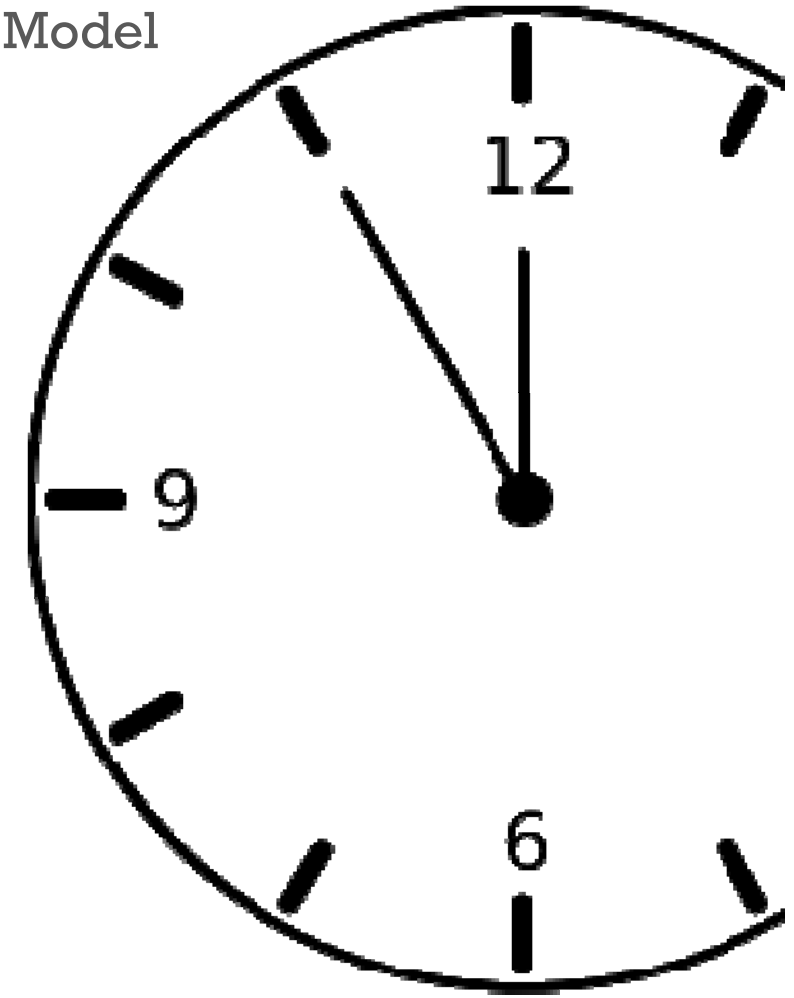


Utah Cluster Acceleration Partnership Initiative (UCAP)

Cameron K. Martin, PhD
Associate Commissioner for
Economic Development & Planning
Utah System of Higher Education

Agenda for Today

- Introduction to the UCAP Initiative and Model
- Overview of Current UCAP Projects
- Sample of Report Outcomes and Model Summary Graphics
- Q&A Open Discussion



Utah Cluster Acceleration Partnership (UCAP) Initiative

The UCAP initiative is designed to support cutting-edge, innovative projects that will help **accelerate the growth** (jobs and wages) and capacity of key industry clusters by addressing their need for **talent** and **innovation** support.

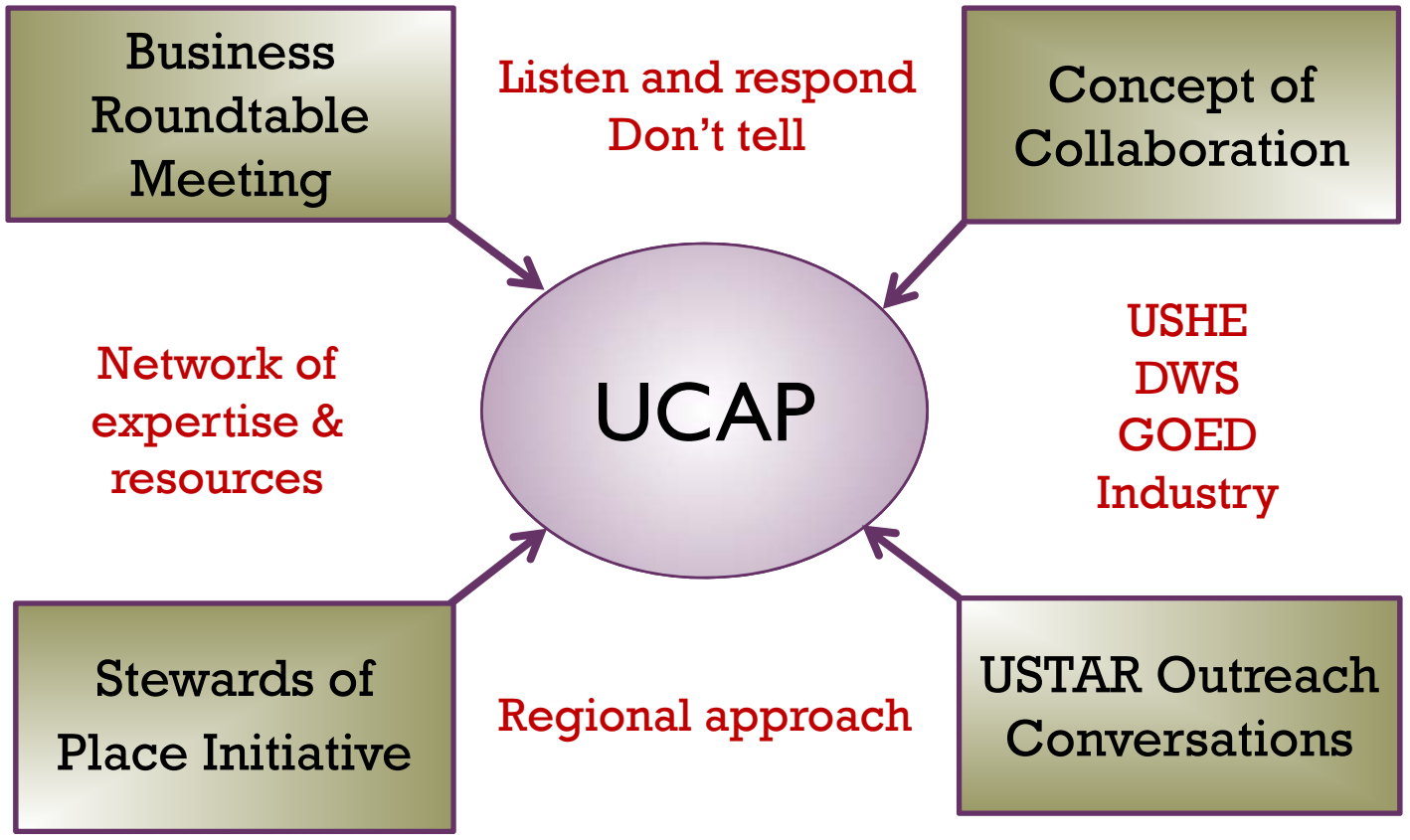
Utah Cluster Acceleration Partnership (UCAP) Initiative

The UCAP initiative **develops and implements a strategic plan** for how industry, government, and higher education can be **aligned** to create more robust, internationally recognized clusters of business industries.

UCAP Objectives

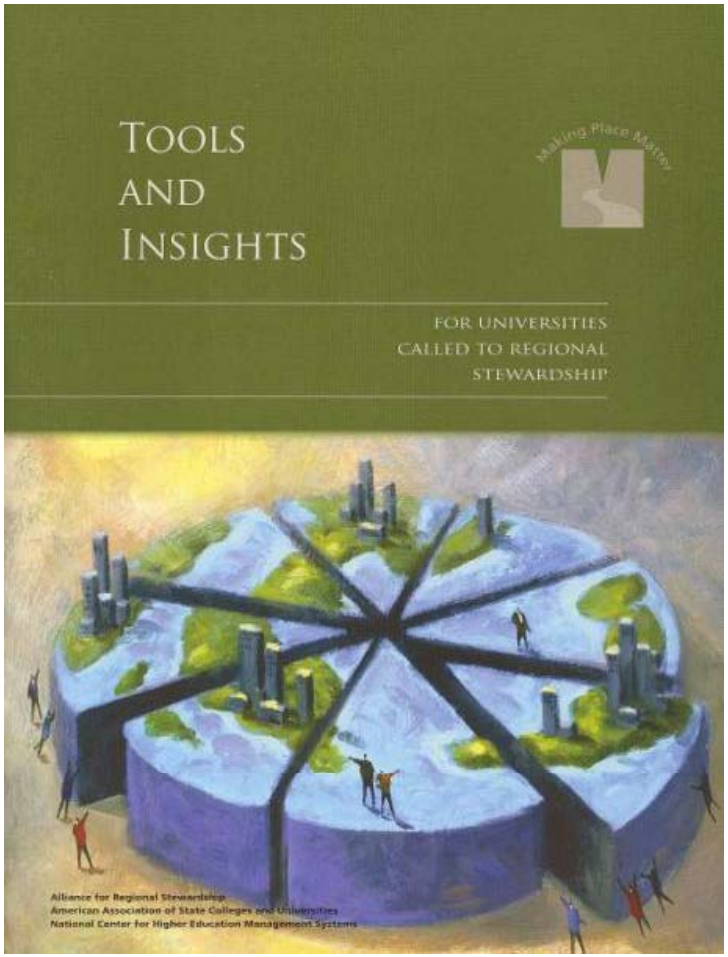
- Integrate, align, and leverage resources
  - Across higher education community (public/private)
  - Among USHE, DWS, GOED, USTAR, UCAT, and other state agencies
- Be complimentary to USTAR (Utah Science Technology and Research)
  - USTAR = research of discovery (tech transfer; new businesses)
  - UCAP = applied research (accelerate existing businesses)
- Accelerate growth in strategic Utah industry clusters and regional economies
- Position USHE institutions as regional hubs of economic activity and as a network of expertise and resources to be leveraged
- Replicate the process

UCAP History



UCAP Model

- Pre-Phase – A **stewardship audit**
  - Convened by institutional president
  - Identify institution's capability to meet regional needs
  - Builds relationships between institution and stakeholders
  - Build USHE institutions' network of services
  - Identify and prioritize specific cluster acceleration partnership projects
  - One-time endeavor



UCAP Model

- Phase I – Conduct an **strategic assessment** of the industry.
- Phase II – Develop an **acceleration strategy** to meet the industry cluster's needs
- Phase III – **Implement** the strategic plan with measures of accountability
- Phase IV – Report **outcomes** including wage levels and job creation

UCAP Oversight/Management

- Oversight Committee (financiers)
  - Heads of:
    - DWS
    - USHE
    - GOED
  - Quarterly meetings
    - Project updates
    - Project approvals
- Projects "convened" by a higher education institution
- One-time funds to seed activity per project
- Outcomes sustained through repurposed resources of partners

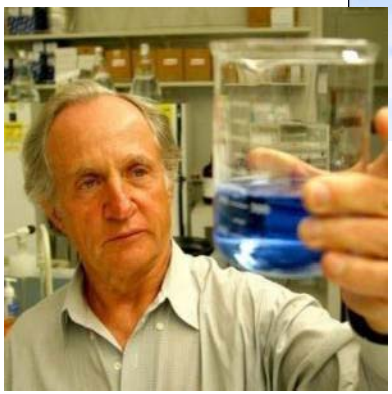
Department of Workforce Services
Utah's Job Connection

UTAH SYSTEM OF HIGHER EDUCATION
Building a Stronger State of Minds℠

Utah Governor's Office *of* Economic Development
BUSINESS • TOURISM • FILM

UCAP Projects

- 2009-10 Projects (three pilot projects)
  - Aerospace and Defense (WSU convened)
  - Energy (SLCC convened)
  - Digital Media (USU convened)
- 2010-11 Projects
  - Healthcare (WSU/UofU convened)
  - Life Sciences (Westminster/UofU convened)
  - Stewardship Audits
    - SUU, Dixie, Snow, USU-CEU
    - Project launches spring 2011



Dr. Mario Capecchi, co-winner of the 2007 Nobel Prize in Physiology/Medicine, University of Utah

UTAH'S ENERGY CLUSTER ACCELERATION STRATEGY

Growth Opportunities

Sustain the core

Resources

Maintain Competitive Oil, Gas and Coal Production

Ensure Utah maintains its core energy businesses and capacity to extract the state's reserves of oil, oil shale/oil sands, natural gas, and coal in a cost competitive and environmentally responsible position relative to regional, national and global markets.

Access Resources on Hydrocarbon Based Lands

Ensure continued access to and timely issuance of federal and state government permits for energy exploration on lands within the state.

Generation/ Distribution/ Transport

Consistent Increase of Energy Generation and Transmission

Consistently generate and transmit an increasing supply of low-cost electrical energy by Rocky Mountain Power, Intermountain Power Agency and Utah municipal power plants.

Maintain Economically Viable Refineries

Maintain the economic viability of Utah's oil refinery businesses, the associated jobs, and wage base to continue to benefit Utah's oil businesses.

Support

Sustain Energy Transport and Support Businesses

Sustain the numerous service and product businesses that support the energy industry and transport Utah's energy resources.

Drive growth accelerators

Resources-Traditional

Continued Expansion of Natural Gas Production

Continue to responsibly explore new fields and expand the production of Utah's natural gas reserves.

Enable Oil Shale/ Oil Sands/ Shale Gas Production

Enable responsible extraction and development of Utah's oil shale/oil sands, and shale gas resources.

Innovate Clean Coal Technologies for Increased Coal Production

Innovate and adopt new technologies, such as carbon sequestration, that satisfy clean coal environmental restrictions and lead to an increased production from Utah's coal reserves.

Specialize in Energy Training and Certification

Become the leader in specialized energy training services, safety training and employee certification, which require direct access to a range of energy resources, in-situ operational facilities, and specialized curriculum focused on oil, gas, and coal extraction processes.

Resources-Renewable

Fully Develop Utah's Renewable Resources

Fully access and make available to companies all federal and state financial incentives for the development of solar, wind, biodiesel, geothermal, and biomass.

Integrate Renewable Power Generation with Traditional Power Plants

Encourage the state research universities to pursue solutions to the integation of intermittent renewable energy.

Generation

Upgrade and Support Electrical Grid

Upgrade the physical facilities that comprise Utah's electrical grid and increase the number of trained grid technicians and linesmen and support the siting of critical transmission infrastructure.

Expand Natural Gas Power Plants

Capitalize on the upgraded electrical grid by expanding gas fired turbine power generation to meet the expected increase in demand for power consumption and to maintain Utah's low cost supply of energy.

Explore future opportunities

Resources

Capitalize on Federal Research Initiatives

Capitalize on federal research initiatives conducted at Utah's universities including carbon sequestration, biofuels, and other related energy research projects by effectively applying findings, technologies, and innovations to Utah's energy industry.

Distribution/Transport

Explore the Application of Cost Effective New , Transmission Storage and Power Usage Technologies

Explore the application of new information and physical technologies to improve the transmis sion, efficiency, usage, distribution, and battery capacitor kinetics of electrical power delivered over the grid.

Consumption

Promote the Use and Adoption of Green Construction Techniques

Promote the growth of green construction businesses by encouraging the adoption of green construction techniques, innovations and services.

Consumption

Improve the Viability of Cost Effective Innovative Energy Efficiency Businesses

Improve the economic viability of innovative energy efficiency businesses by adopting reasonable energy efficiency requirements set by the local, state and federal government entities. Capitalize on federal tax credits and tax breaks for energy efficient products and services.

Expand Natural Gas Vehicle Use

Expand Utah's leadership by promoting the growth of businesses that provide services, solutions and innovations that encourage the adoption of natural gas vehicles for public and private sector fleets and private vehicle use.

UTAH'S ENERGY CLUSTER ACCELERATION STRATEGY

Key Supporting Strategies

TALENT DEVELOPMENT

Increase Trained Workforce- Increase the overall number of trained energy industry workers to meet the projected needs in renewable and traditional resource development, generation,distribution and transport, support, and energy consumption.

APPLIED RESEARCH

Research Viability of Renewable Energy- Undertake consistent research and development of reasonable factors that will eventually make renewable energy an economically viable energy source not dependent on government subsidies or specialized fiscal policies.

RESEARCH AND DEVELOPMENT

State Sponsored Research Agenda- Promote and sponsor a state agenda for energy research, innovations, technologies, and applied research in fields that are of specific interest to Utah, including carbon management, cleaner hydrocarbon, energy efficiency, energy management, electrical grid managment, energy consumption, and renewable energy resources.

BUSINESS EXPANSION

Expand Oil Refineries- Expand Utah's oil refinery business by becoming a viable hub for refining crude oil extracted in Canada and Mexico by partnering with producers in these regions.

BUSINESS ATTRACTION

Increase the Regional Demand for Natural Gas and Low Cost Power- Leverage Utah's low cost power and abundant natural gas reserves to attract national and international heavy power users such as fertilizer and chemical manufacturers.

Create Strong Base of Power Demand- Create a strong economic and industrial base in Utah that utilizes and demands Utah's abundant supply of low cost power.

BUSINESS CREATION

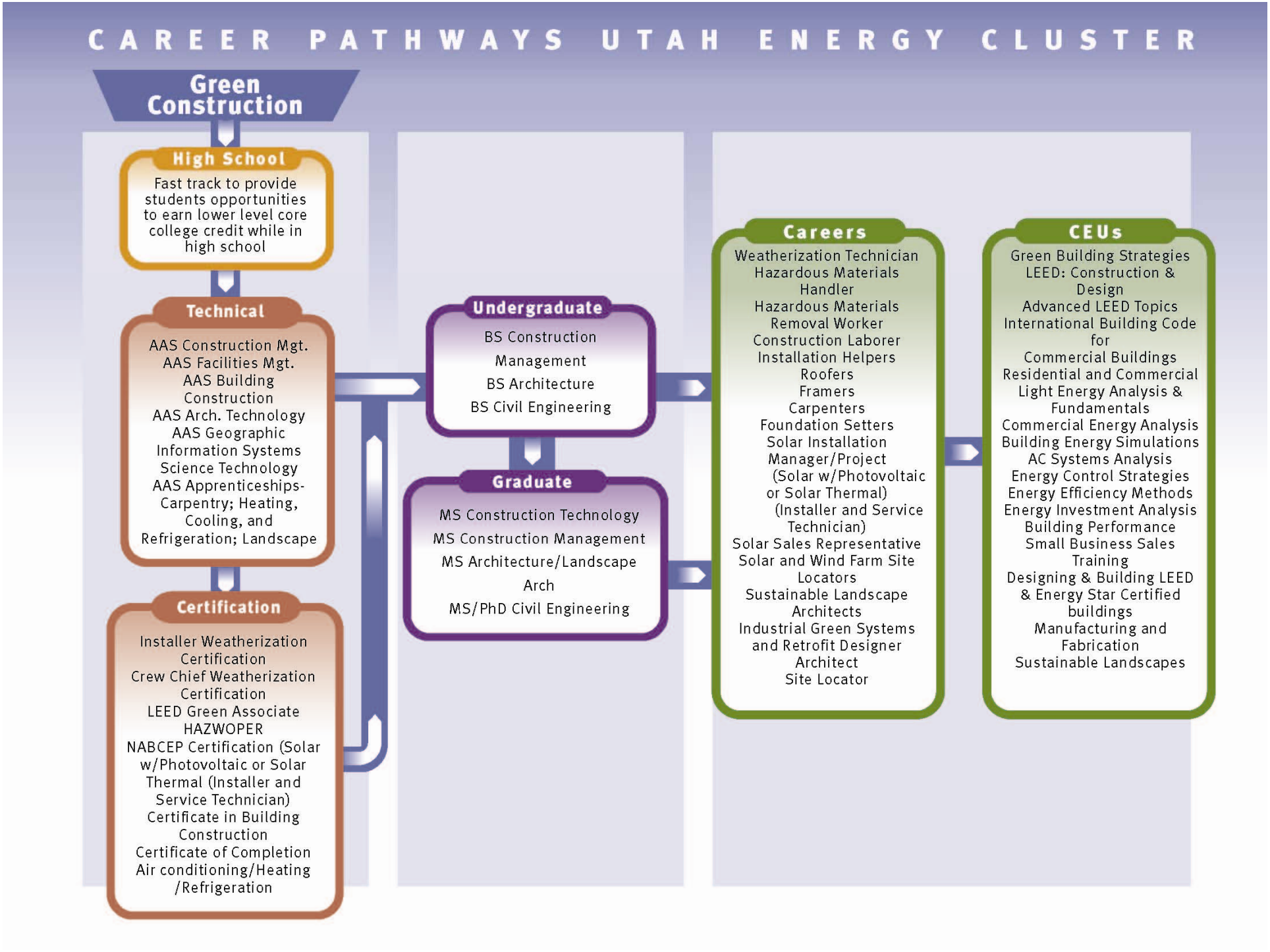
Create Energy Efficient Businesses- Foster the creation of innovative entrepreneur-led businesses in the fields of energy efficiency, energy production, energy management, and energy storage.

CLUSTER LEADERSHIP

Link Small Company Innovation with Large Company Resources and Needs - Foster partnerships between small business innovators of new energy development and production technologies, methods, and processes with larger companies able to effectively capitalize on and integrate these developments into their operations.

ATTRACT EXPAND CREATE

CAREER PATHWAYS UTAH ENERGY CLUSTER



Implementation Responsibilities

Action Items	Industry	USHE	DWS	GOED	USTAR	Other
Capitalize on Training Grants Fully utilize the training grants received by the Department of Workforce Services and managed by Salt Lake Community College for re-training workers for energy industry positions.	⊙	●	⊙			ATC's and Public Education
Applied Research						
Research Viability of Renewable Energy Undertake consistent research and development of reasonable factors that will eventually make renewable energy an economically viable energy source not dependent on government subsidies or specialized fiscal policies.	⊙	⊙		⊙	●	
Research and Development						
State Sponsored Research Agenda Promote and sponsor a state agenda for energy research, innovations, technologies, and applied research in fields that are of specific interest to Utah, including energy efficiency, energy management, electrical grid management, energy consumption, and renewable energy resources.	⊙	●		⊙	⊙	
Business Expansion						
Expand Oil Refineries Expand Utah's oil refinery business by becoming a viable hub for refining crude oil extracted in Canada and Mexico by partnering with producers in these regions.	⊙			●		
Business Attraction						
Increase the Regional Demand for Natural Gas and Low-cost Power Leverage Utah's low-cost power and abundant natural gas reserves to attract national and international heavy power users, such as fertilizer and chemical manufacturers.	⊙			●		Economic Development Corporation of Utah
Create Strong Base of Power Demand Create a strong economic and industrial base in Utah that utilizes and demands Utah's abundant supply of low cost power.	⊙			●		Economic Development Corporation of Utah
Business Creation						

UCAP PROJECT PHASES

UCAP PROJECT PHASES

Phase I
Strategic Assessment

Work

Assessment of economic cluster and factors influencing acceleration and cluster growth

Tasks

- Industry leader interviews
- Academic leader interviews
- Cluster data review
- Integrate higher education leadership consituents
- Form Strategy Committee
- Strategy work sessions
- Determine factors of influence

Results

- Determine cluster growth potential
- Determine acceleration factors
- Determine cluster value

Parties

- Cluster Industry leadership
- Academic leadership
- Higher educ public/private leaders
- Regional support leaders

Phase II
Acceleration Strategy

Work

Design acceleration strategy and define career pathways and talent development to grow targeted economic clusters

Tasks

- Facilitate strategy work sessions
- Determine acceleration strategies
- Determine work force skills required
- Align educational programs to meet cluster needs/train skill sets
- Set research agenda
- Assign implementation accountability

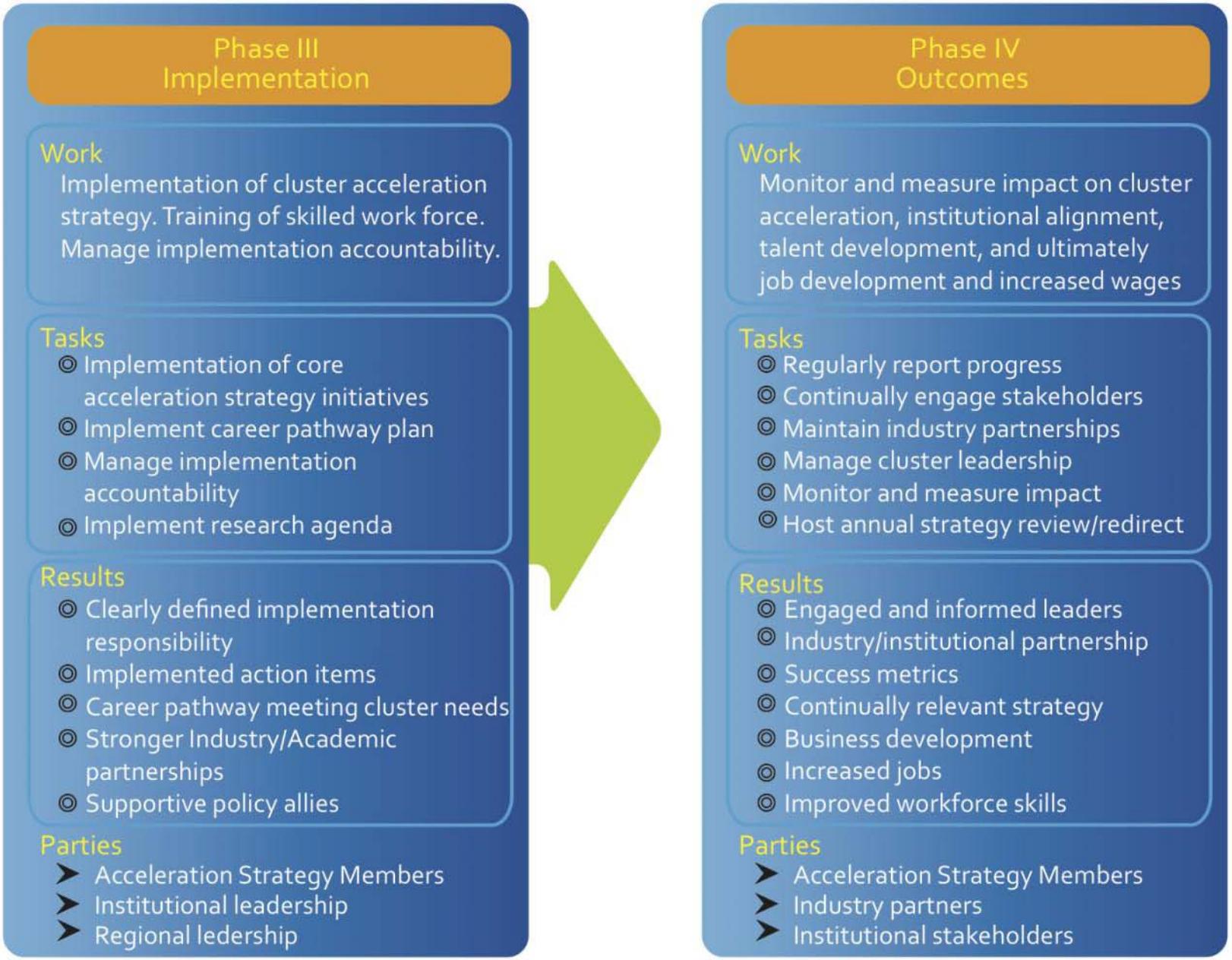
Results

- Comprehensive cluster acceleration strategy
- Engaged and committed leadership
- Defined work force training
- Defined research needs

Parties

- Acceleration Strategy Members

UCAP PROJECT PHASES



Thank you!