

Northern Labor Market Clearinghouse Rural College Innovative Practices Toolkit July 2011

- Purpose- this report gives you tools and ideas for organizational and regional improvements – “fix-ups”
- Project Toolkit- has internal and external tools you can use
- Is a companion report to the main report
- Shows how to assess your situation and apply a tool to create a new approach

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Keys to Implementation

- Choose the correct tool/ idea/model for regional use by a college- link to strategic plan and provincial plans
- Empower champions to lead- with assistance
- Awareness meetings-internal to test ideas
- Conduct research as needed
- Check understanding with stakeholders
- Implementation meetings (for involvement) towards an outcome (shared vision)- can take time
- Build into annual business plans
- Monitor and measure-with assistance

Contents

- SWOT
- Match Industry Needs in R&D
- Quebec Matrix
- Lean thinking
- Knowledge Hub and Peer to Peer Collaboration
- Mind Maps/ Economic development thinking
- Applied Research-Regional innovation networks
- College Roles
- Clusters and networks



Project Toolkit -

(Also see main report from Clearinghouse)

- **Internal tools -which can be used by an organization**
- SWOT matrix for strategic plan- strengths, weaknesses, opportunities and threats assessment, uses critical thinking skills
- Match Industry Needs– example of the University of Alberta engineering oil sands response, provides an example of how to map business needs against industry R&D skills
- Quebec college niche matrix – understand your focus
- Lean thinking- a tool to reduce 7 sources of waste



1. SWOT Tool

- Strengths- of the organization or business unit, from which to build
- Weaknesses- which can be improved or changed as needed
- Opportunities- for growth and increased service delivery
- Threats- against the region or organization which must be considered

College SWOT Framework-

for strategic thinking

Strengths

- College presence in communities
- Dedicated and passionate staff
- Brand recognition
- Supernet potential
- Proven expertise/ models
- Access to industry
- Strongest regional economy

Weaknesses

- Industry practices- lean, productivity, HR, tech
- Communication models
- Highly dependent on core funding
- Leadership and staff aging
- Program focus meeting industry need
- Links to key stakeholders- biz, youth
- Operations may reflect poor strategic approach

Opportunities (1-3 Yr)

- Supernet and website for much broader social outreach
- Regional innovation network
- Applied research projects
- Involve youth and community more
- New collaborations for social change; re-inventing is possible
- Create sustainable funding base from biz- applied research, co-ops, capital plans, new ventures
- Global alliances and delivery

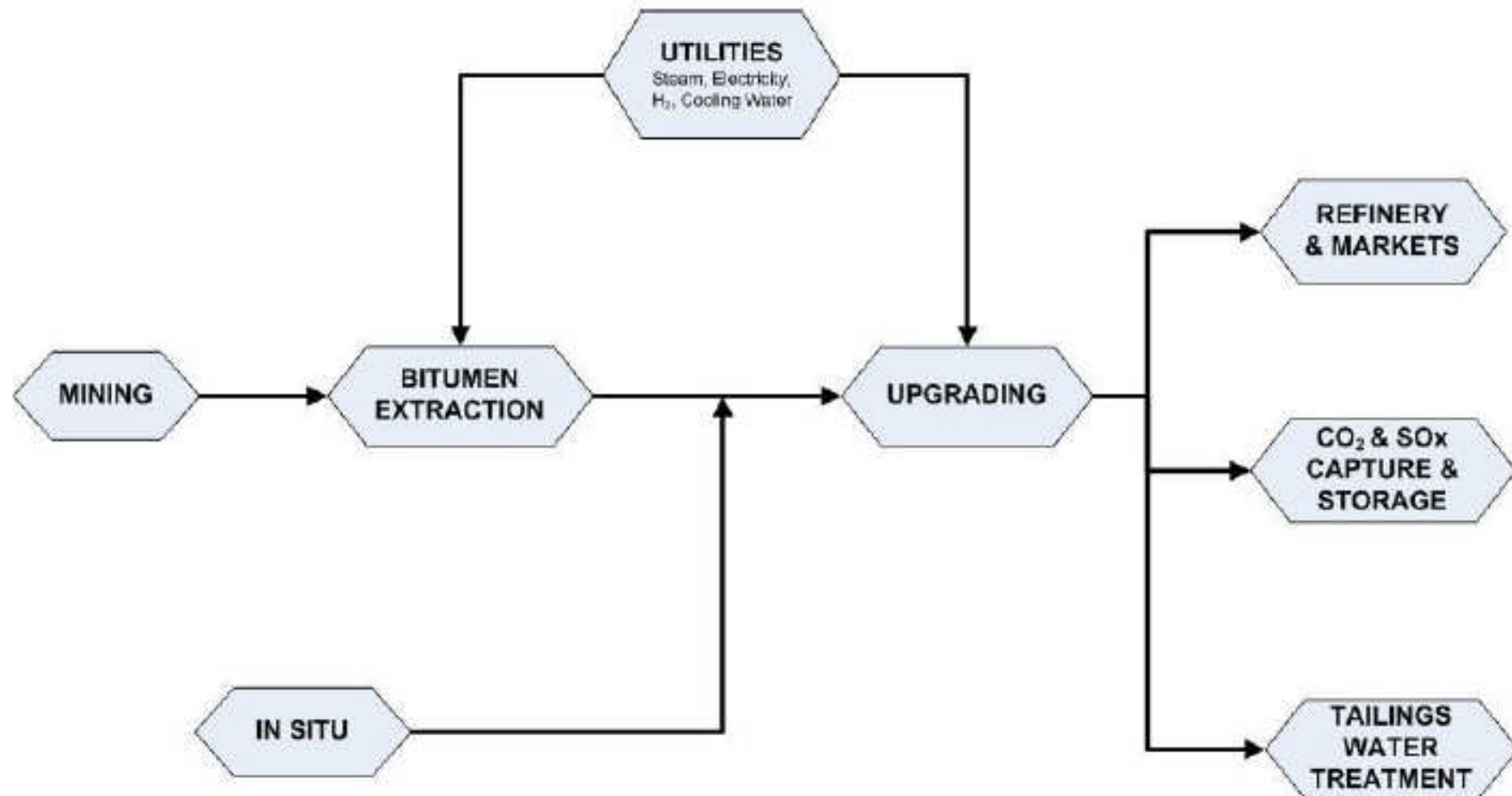
Threats

- No change means forgone potential
- Leadership, management gaps vrs industry/ student need
- Lack of growth in changing world
- Competitive education marketplace
- Mission duplication with others?
- Regional economic development gaps

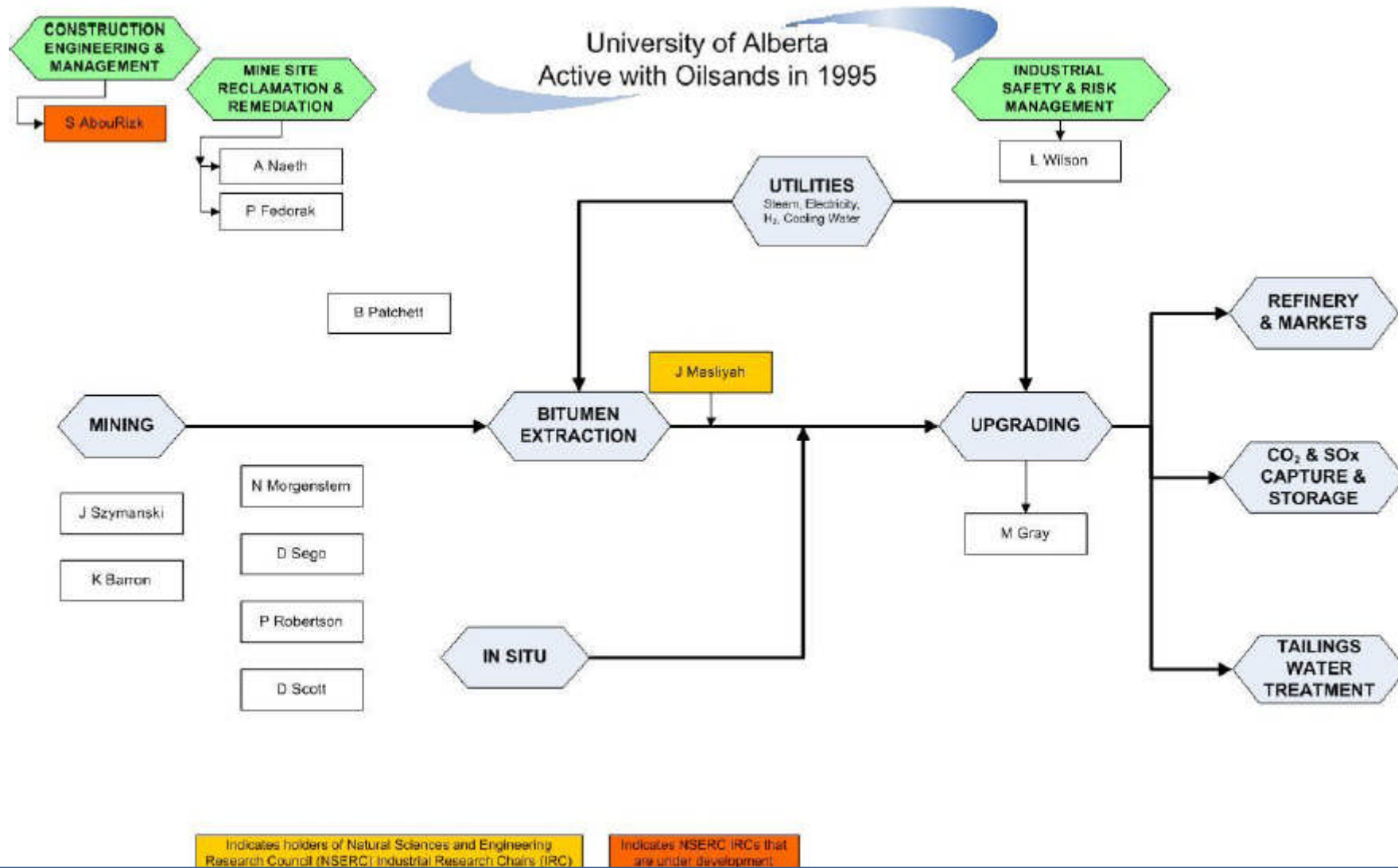
2. Match Industry Needs in R&D- Tool (Courtesy Dr. Lynch, University of Alberta)

- How the U of A engineering faculty addressed the oil sands - they saw a need for R&D matching with a new expanding industry
- Benchmark and map the main industry problems and key competitive issues (8 areas)
- Annually, recruit key skills and knowledge into key areas to match the industry needs
- Collaborate and communicate to industry on projects and students
- Now nearly 1,100 high skill and leadership positions exist, relevant to oil sands issues

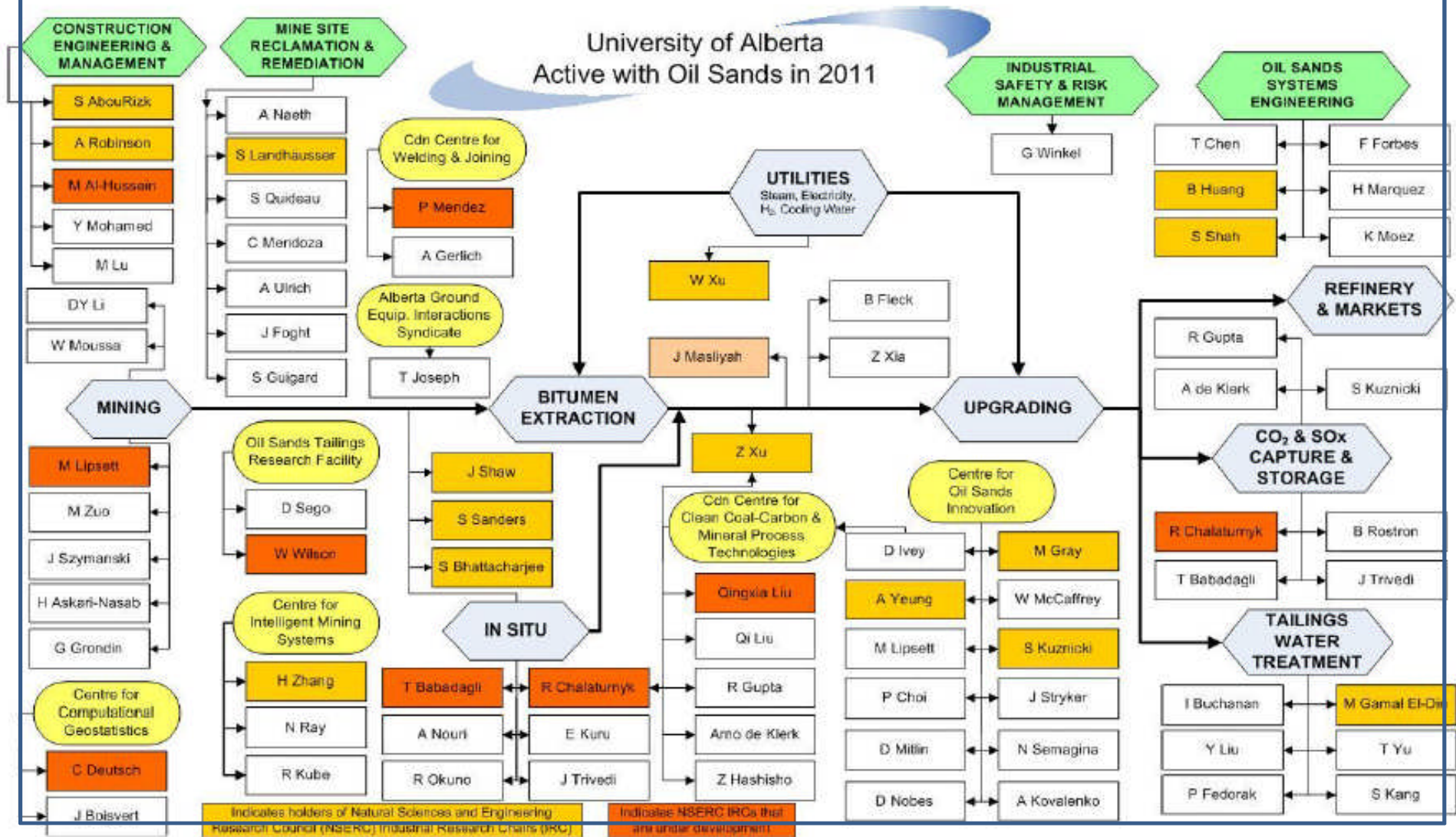
Example-U of A Model- to Respond to/ Support the Oil Sands



U of A Model- 1995



U of A Model- 2011





3. Quebec College System (Cegep)- Matrix Tool

- Quebec college system matrix of skills and focus- on students, business, region
- Highlights the specialization need
- Can use criteria to help think through a college's regional and industry approach

Quebec Cegep Focus Matrix-for region

response

	Sector					
	College Program	Educational Environment	College Administration	Regional Development	Opening to the World	Research
Developing or improving the quality of student services						
Improving the college's image or visibility						
Improving relations and maintaining or developing partnerships						
Developing or improving the training offer						
College management or optimization of resources						
Regional development and improving the services provided to the community						
Improving academic success and diploma acquisition						
Managing human resources and the work environment						
Developing research and transfer of knowledge						
Recruiting students						
Improving access to education						
Improving the job placement rate and internship offer						
Improving student or teacher mobility						
Other						



4. Lean Thinking- Tools

(Source: James Womack, Lean Thinking)

- Lean thinking is a way of assessing process improvements, can realize huge quality and customer gains, used in service and manufacturing businesses since 1996
- Lean tools help identify and eliminate waste
- Tool- 5- S, sort, shine, set in order, standardize, sustain- the first step
- Tool- value stream mapping- so customers do not pay for waste- the next step
- Tool- visual –signboards, maps – to help in continuous improvements

The 5 Principles of Lean Thinking

(Reduce process waste)



Seven Forms of Waste

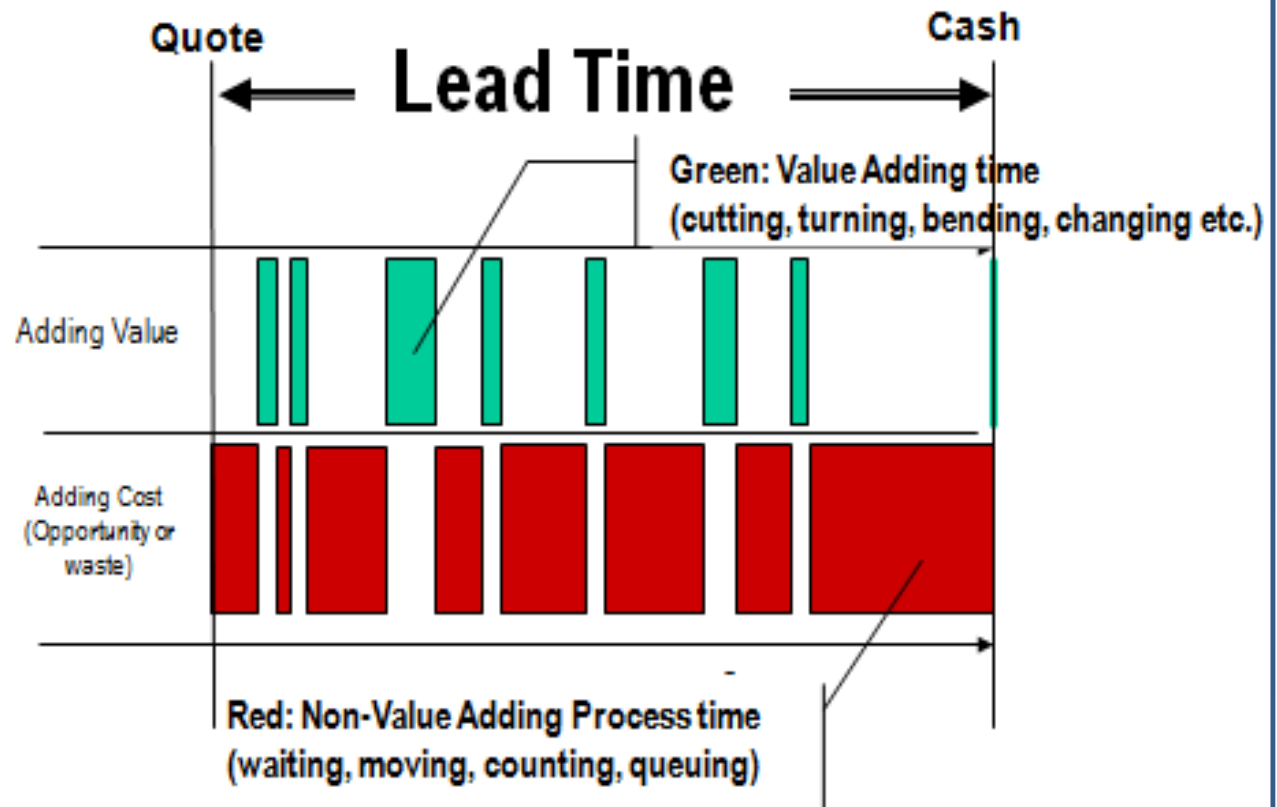




Consider Time Waste Example

- Recently in a lean project, pedometers were used to track doctors daily travel and found 3 hours were spent in in hospital travel simply in getting supplies, files, etc.
- This is wasted time and many professionals likely see the same issue.
- Answer- locate commonly used supplies nearby
- What would you find for your staff?
- This is where lean thinking helps to find “process waste”.

Thinking Lean begins by focusing on the red spaces



More than 90% of total lead time is usually Non-Value Adding time

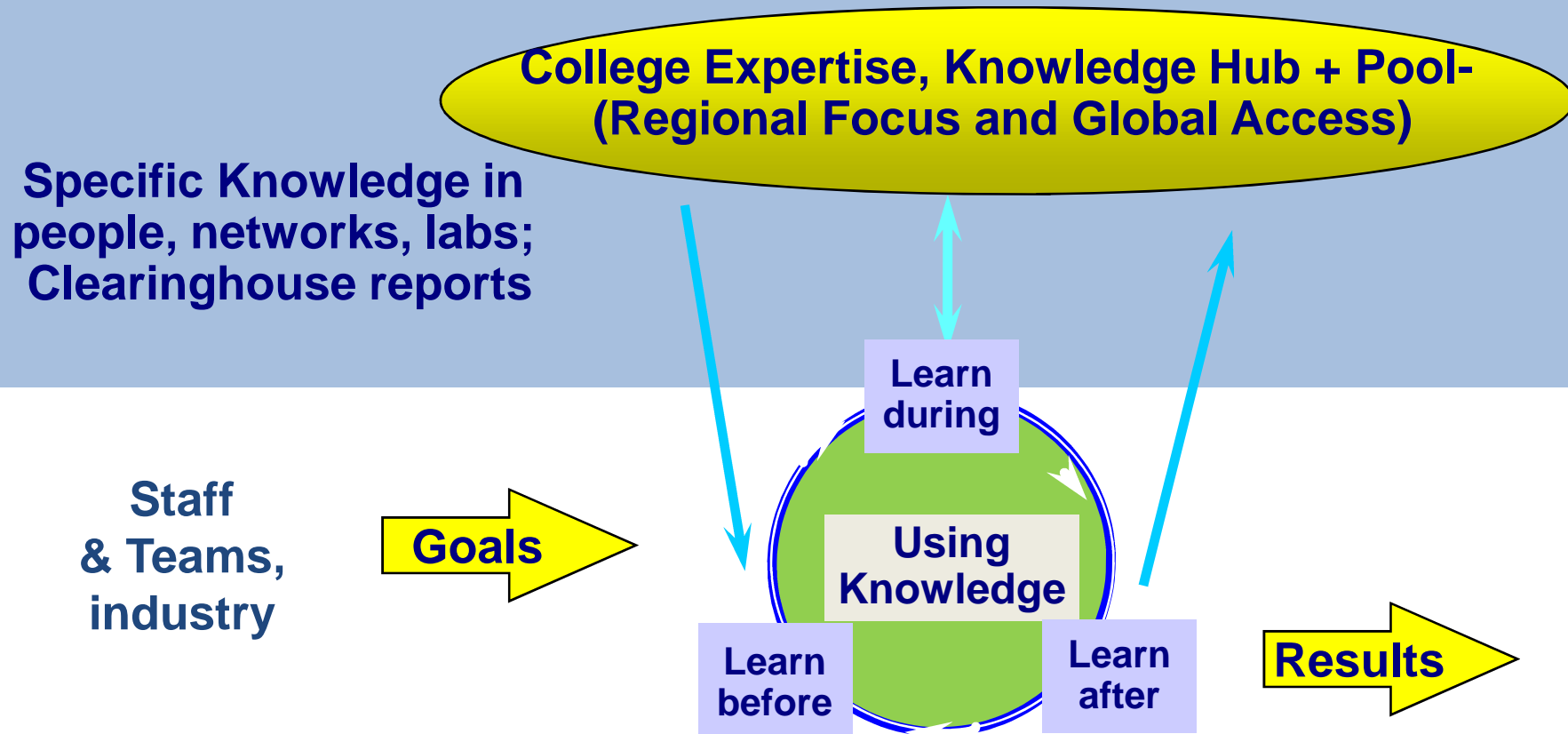


Project Toolkit

- External tools- with outside organizations
- Knowledge hub, peer to peer collaboration
- Economic development thinking, mind maps
- Applied Research-Regional Innovation Network (RIN)
- College Roles
- Clusters and networks

5. Knowledge Hub Framework-

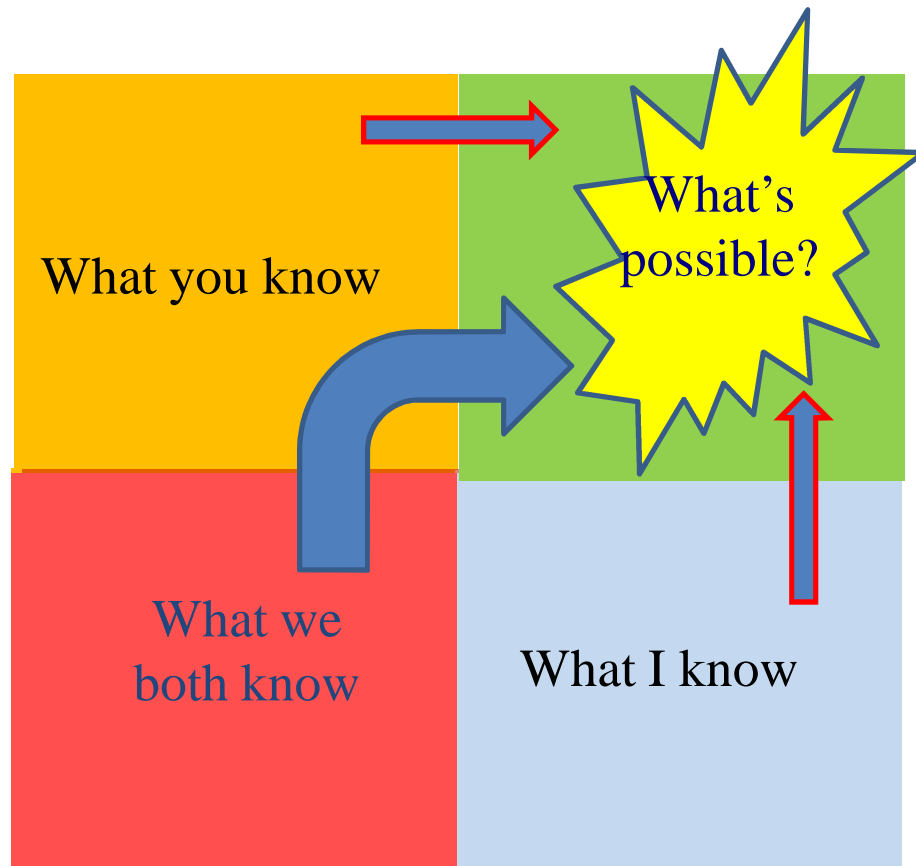
tool to build specialization (Source: Learning to Fly, Chris Collison et al)





6. Peer to Peer Collaborating

with stakeholders for a Shared Vision





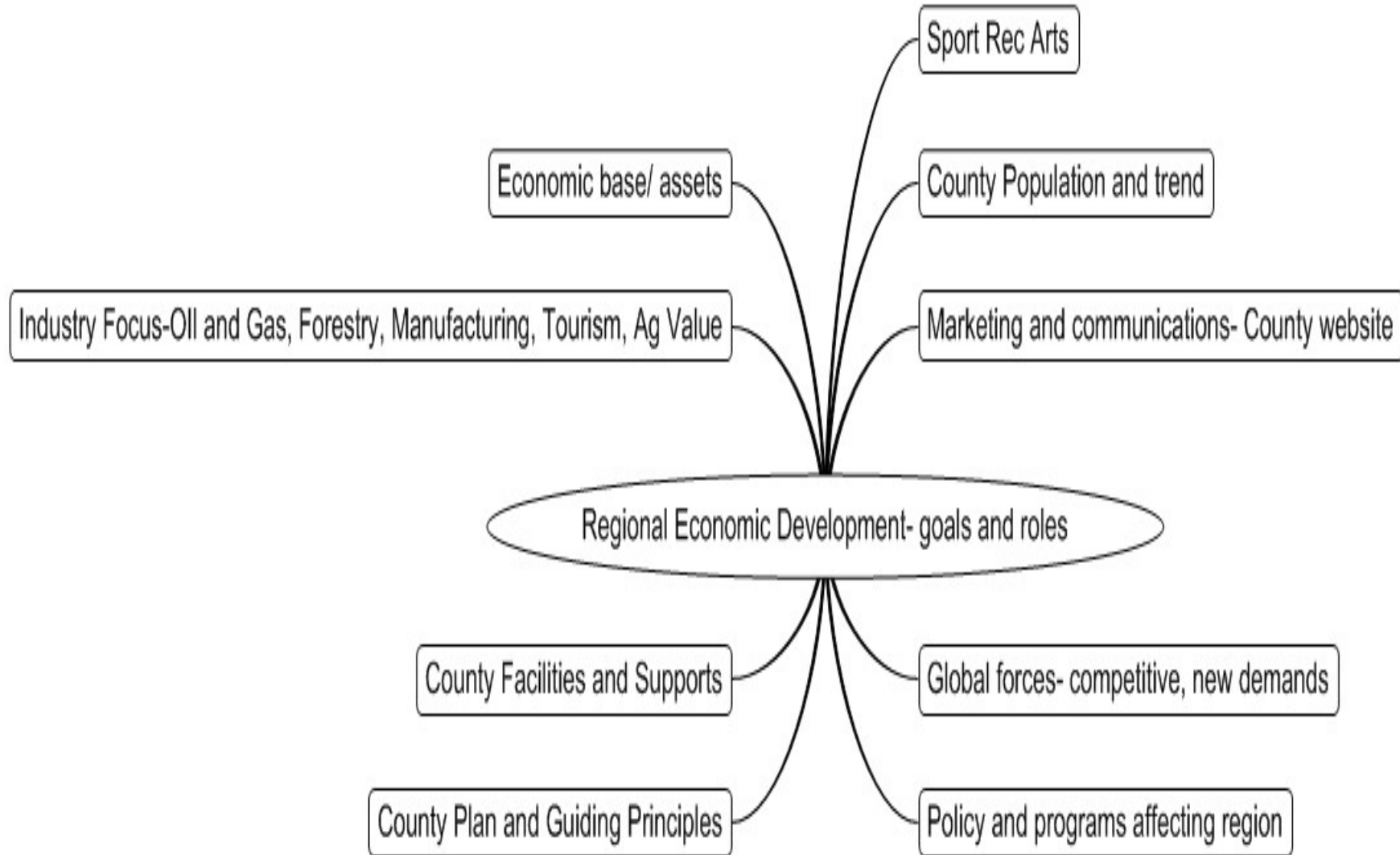
7. Mind Map Tool-

for economic development thinking

- Can be used to identify many ideas in a brainstorming session with varied levels of knowledge and experience
- Can be computer or paper- based
- Economic development links to colleges are varied and can be enhanced



Mind Map



What is Economic Development? -Goals Require Many Processes

**Building Business
Networks &
Critical Mass**

**Doing Business &
Creating New Industry**

**Opportunity
Identification &
Investment Attraction**

**Market Access,
Marketing &
Branding**

**R&D/
Commercialization
& Innovation**

What else?



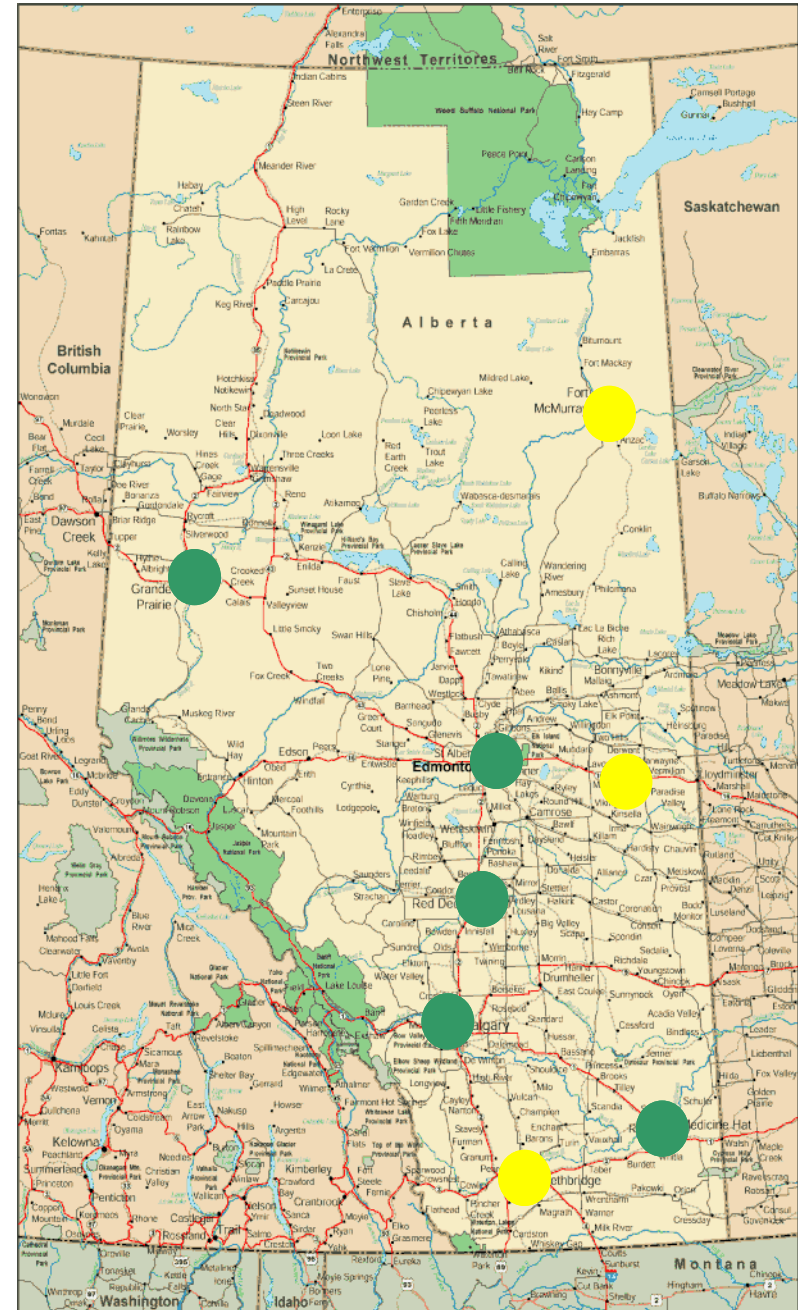
8. Applied Research Tool- Regional Innovation Network (RIN)

- Understand the Alberta system plan- map
- Understand the business needs in the region-
may need market research/ other services
- Define the college role



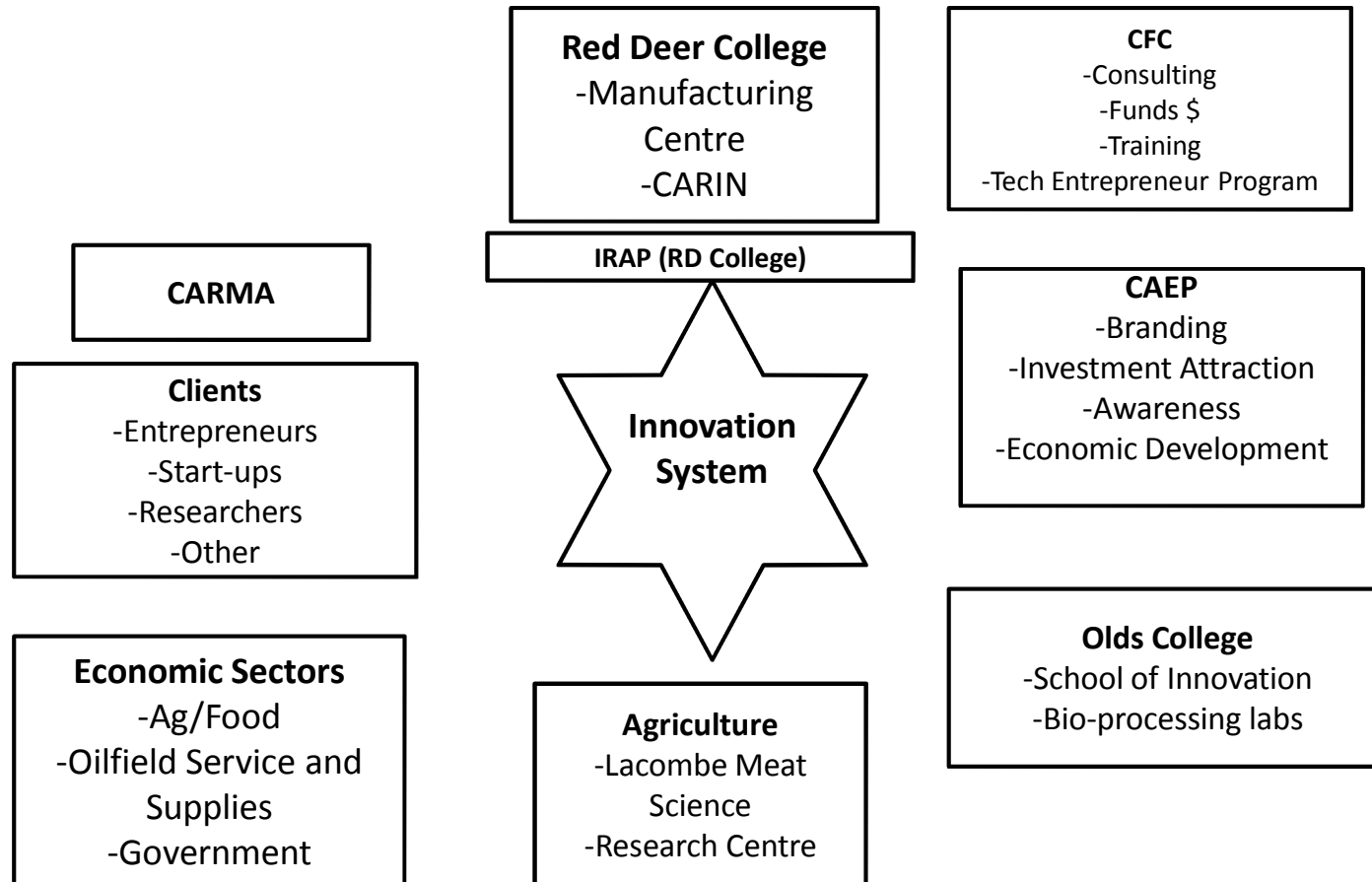
AB RIN System new plan- 2011+

5 sites now=green
3 planned= yellow



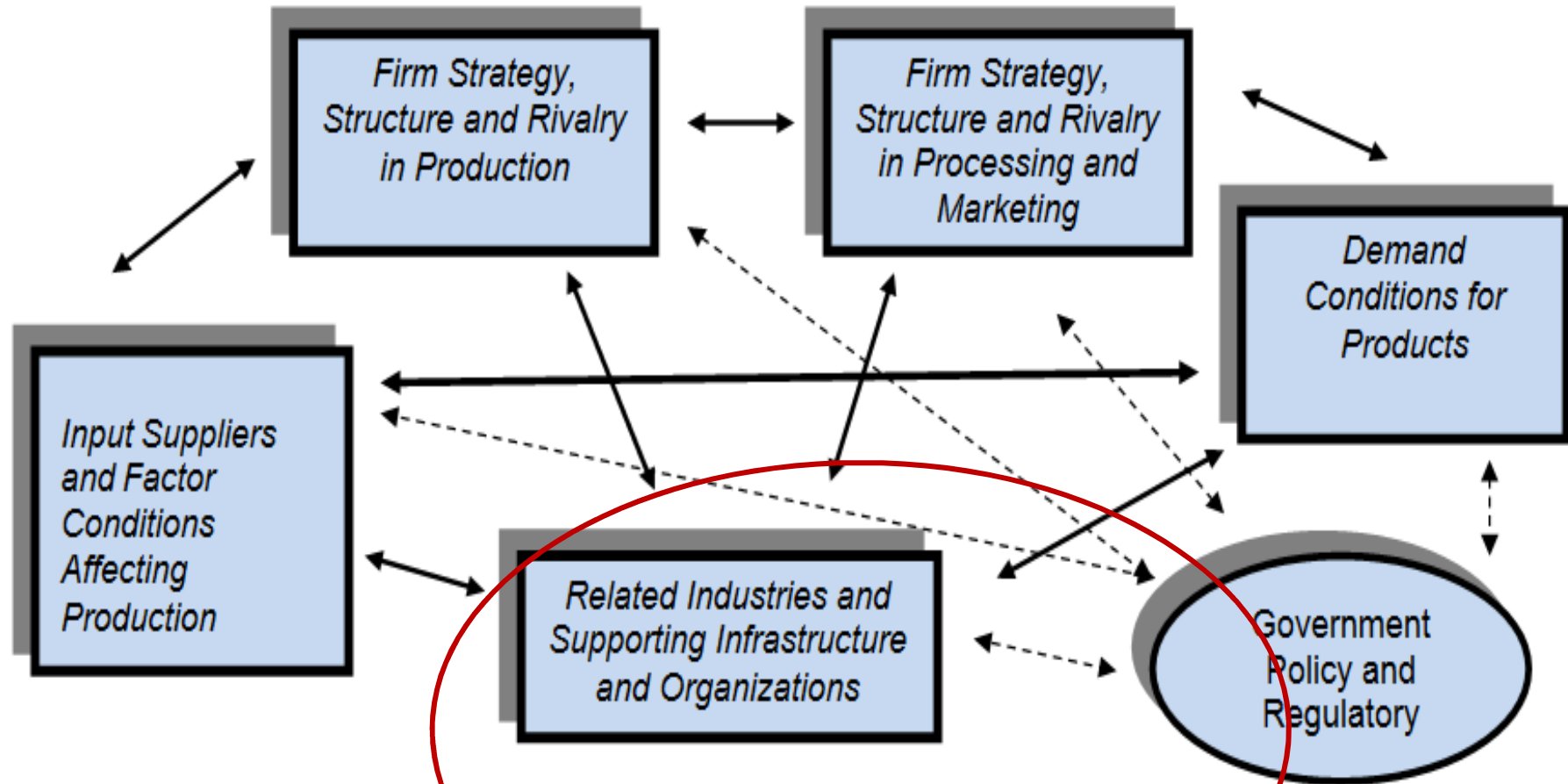
Regional Model-TBMC

Innovation System- Red Deer Region



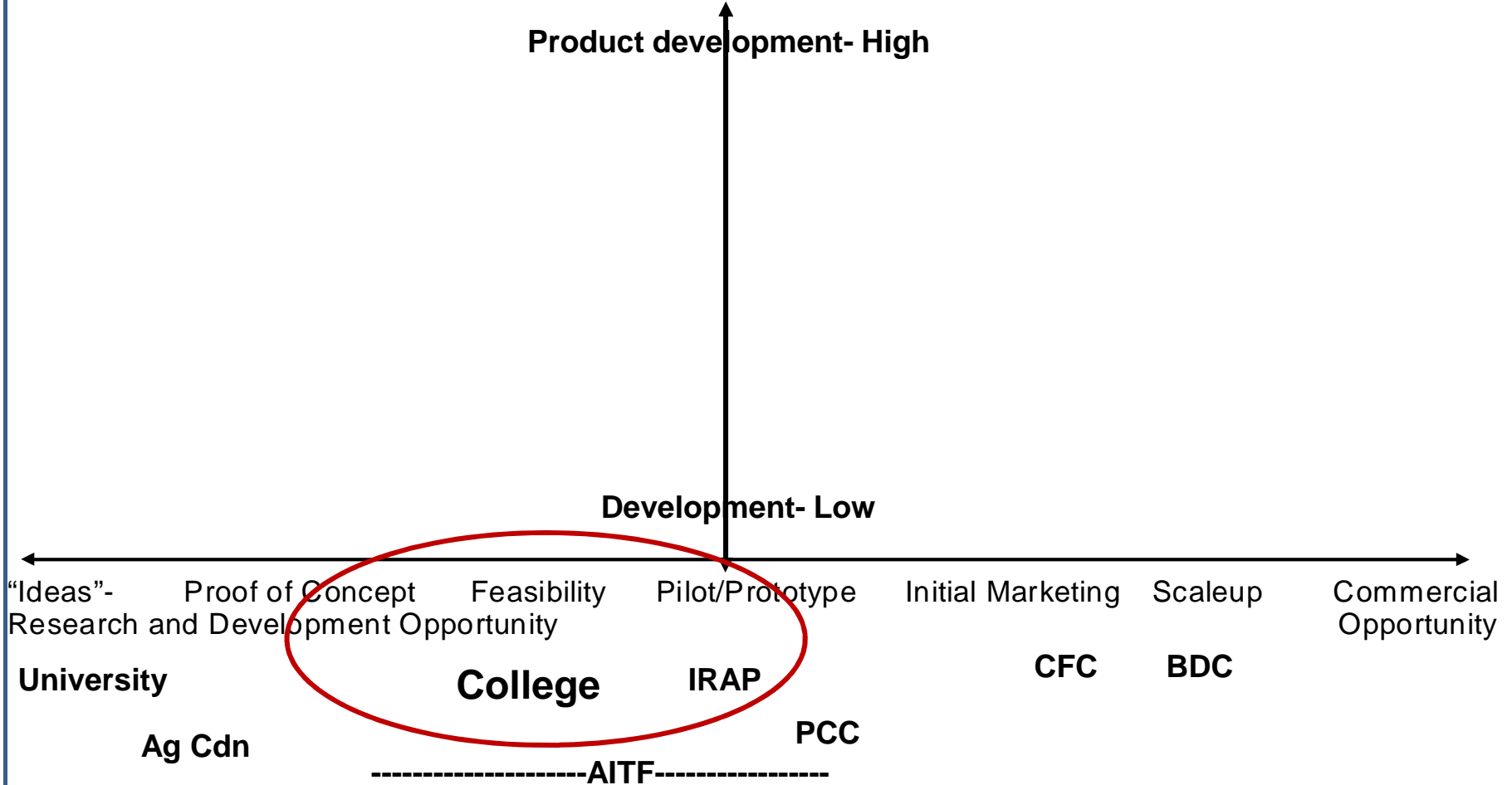


Competitive Advantage and the Canadian Supply Chain



College Roles

Innovation System Roles vrs Region/ Business Need





9. College Roles Tool

- Education is a core role- other roles?
- Leadership, “Sounding Board”
- Economic development, entrepreneurship
- Regional supports- research, innovation
- Tech transfer/ adaptation in ICT/social networks
- Workforce Development- key

Roles -USA Community Colleges

- Mobilize regional leadership on economic development
- Be the centre of workforce development for employers
- Promote tech transfer and competitiveness
- Promote entrepreneurship, small biz
- Develop programs targeting poor people and create jobs
- Encourage the education ethic



Access- Today and the Future-

S. Rubin

Current	Future
Open door admission	Aggressive outreach
Goal is enrolment	Goal is student outcome
Emphasis on degree/ diploma	Emphasis on competency
Teaching focus	Learning focus
Start at 18 yrs	Start at middle school
Travel to campus	Extend class to remote area
College isolated	Strong links to others

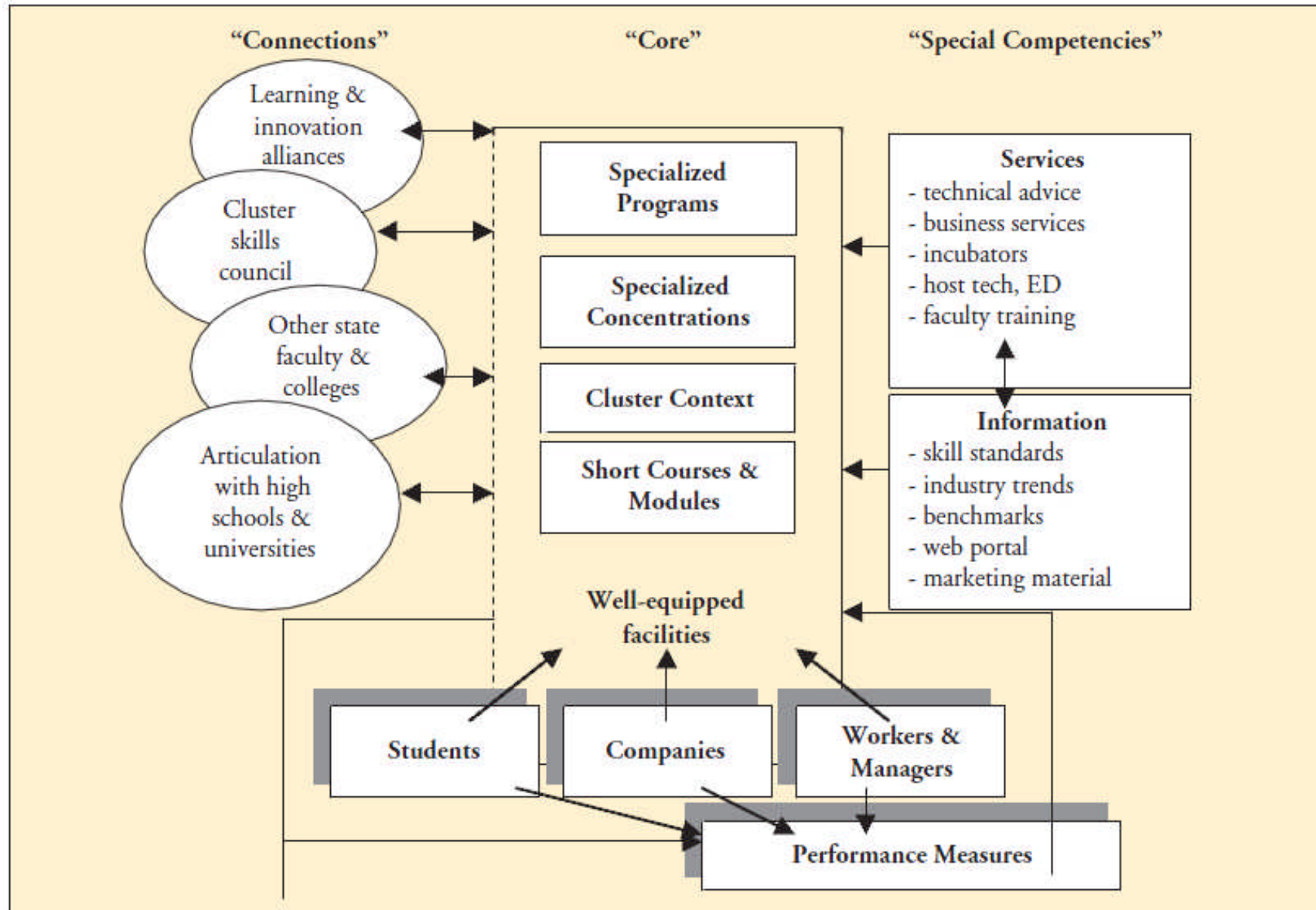


10. Cluster and Network Tools

- Clusters – mean an industry- based model for regional development
- Networks- are smaller and can be flexible or “hard” to accomplish a specific goal- several business and R&D networks exist in Alberta

11. Target Clusters- s. Rosenfeld

CLUSTER CENTER DIAGRAM



Target Networks & Clusters-

S. Rosenfeld

Table 4

CHARACTERISTICS OF NETWORKS AND CLUSTERS

	<u>Hard networks</u>	<u>Soft networks</u>	<u>Clusters</u>
"Membership"	Closed	Open, membership based	None required
Relationships	Collaborative	Cooperative	Cooperative and competitive
Basis for agreements	Contractual	Majority determination	Social norms and reciprocity
Value added	Allows firm to focus on core competencies	Aggregates & organizes demand for services	External economies
Major outcomes	Increased profits and sales	Shared resources, lower costs, benchmarking	Access to suppliers, services, labor markets
Basis of external economies	Shared functions and resources	Membership	Location/proximity
Shared goals	Business outcomes	Collective vision	None



Project Implementation-

Overcome the Knowing –Doing Gap (Source: The Knowing- Doing Gap, Pfeffer, Sutton)

12. Jump the “Knowing-Doing Gap”

- We know what to do but....
- Do we decide by memory, not with data and judgment?
- Do we forget to follow up?
- Actions speak louder than words
- “Man who says, “It cannot be done, should not interrupt man who is doing it”
- Talking a lot does not mean doing a lot
- Simple answers are better than complex ones
- Does knowledge turn into action?



Project Toolkit-

“Plan it Do it”

13. Next Steps

- Choose the correct tool/ idea/model for regional use by a college- link to strategic plan and provincial plans
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