



Aligning scientific knowledge with farmers' learning preferences to create on-farm innovation

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And

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Overview

- Innovation and change in the dairy industry
- Synopsis of three studies
 - Farmer : advisor learning partnerships
 - Dairy Moving Forward
 - Professional development in farming systems advisory work
- Conclusion
 - Adaptation through knowledge partnerships



Unrelenting change...

The Australian dairy industry is confronting change at an unprecedented level.

"things have changed.... What is going to sustain us in a new environment?.. Most simply.. what are the features of farms we want in this new situation?"

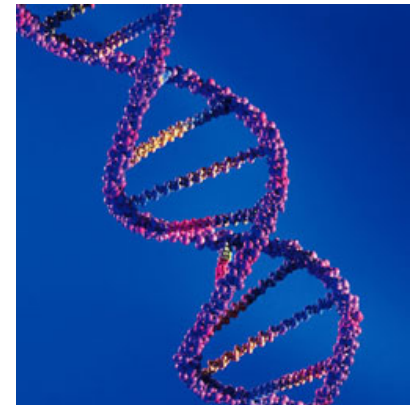
"we do not have one dairy industry, but increasingly we need to think that we have 8-10 dairy industries, each with a very different range of issues. ."

Allan Burgess, ADF 31 Jan 07



Forces for change

- Climate change
- Water & Environment
- Energy
- Population expectations
- Economic instability

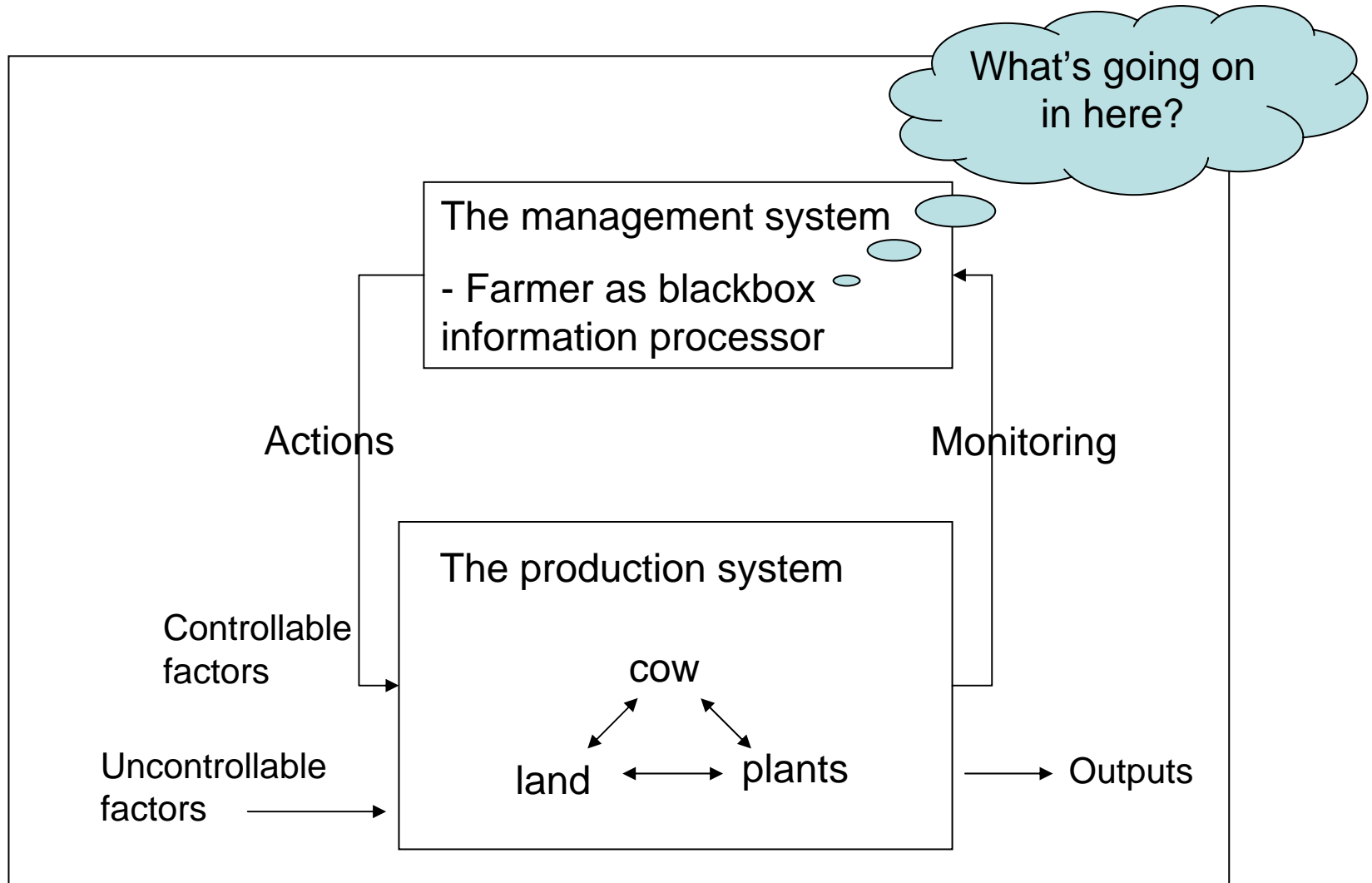


(Homer-Dixon, 2006)



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So what are farmers doing?

- Learning and adapting
- Being creative
- Using technological innovations
- Networking
- Acting collectively

(Cerf *et al.*, 2000)



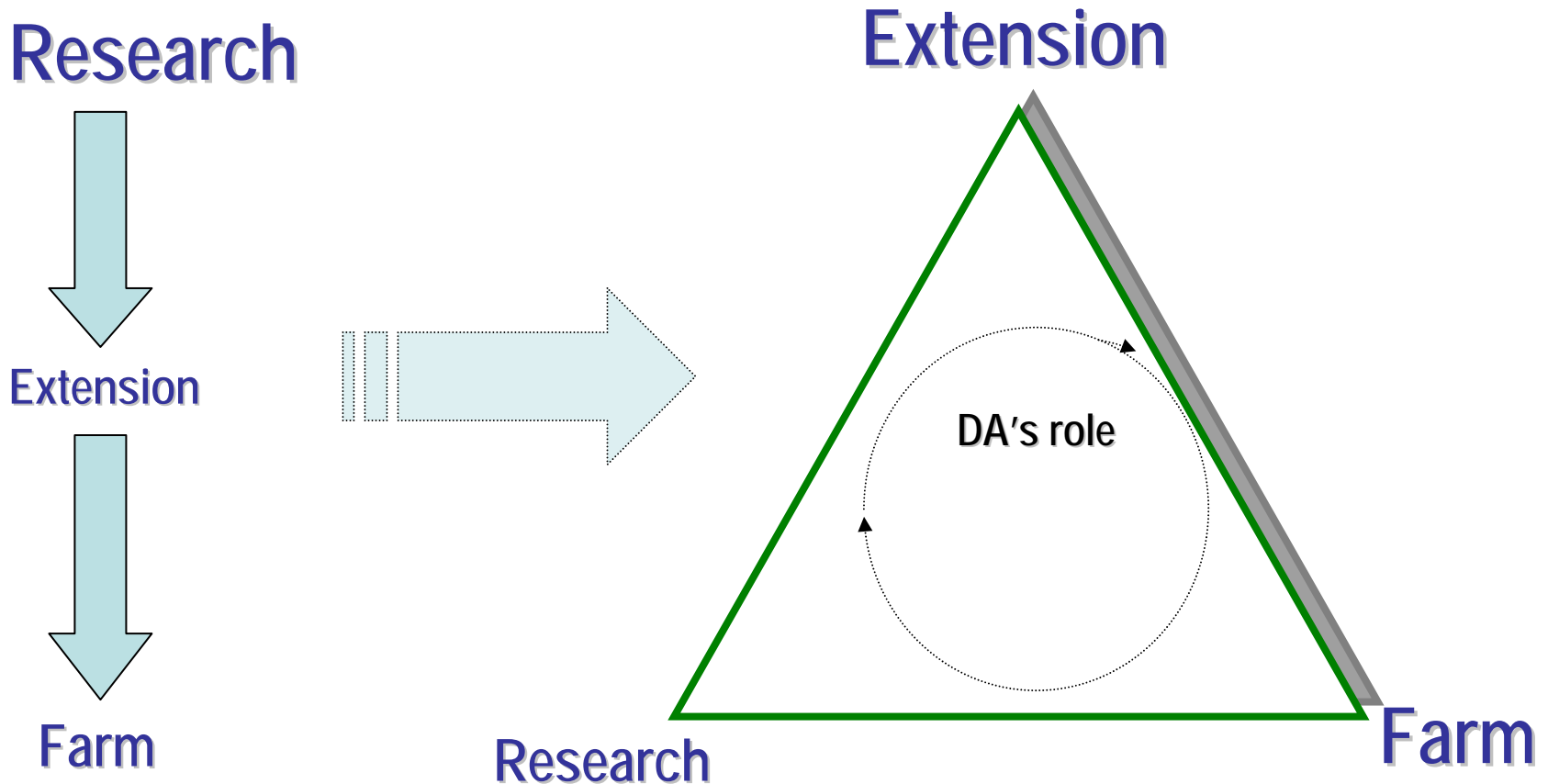
Dairy Australia recognises the importance of farmer knowledge

The future is a productive, sustainable and competitive industry. This will be achieved to the extent that the industry can build the capacity of its people.

- **It is the capacity of people that ensures we capture the opportunities that science and technology create**
- **People with greater capacity capture more.**
- **Capacity can be built at individual, organisational and industry levels - these are additive**



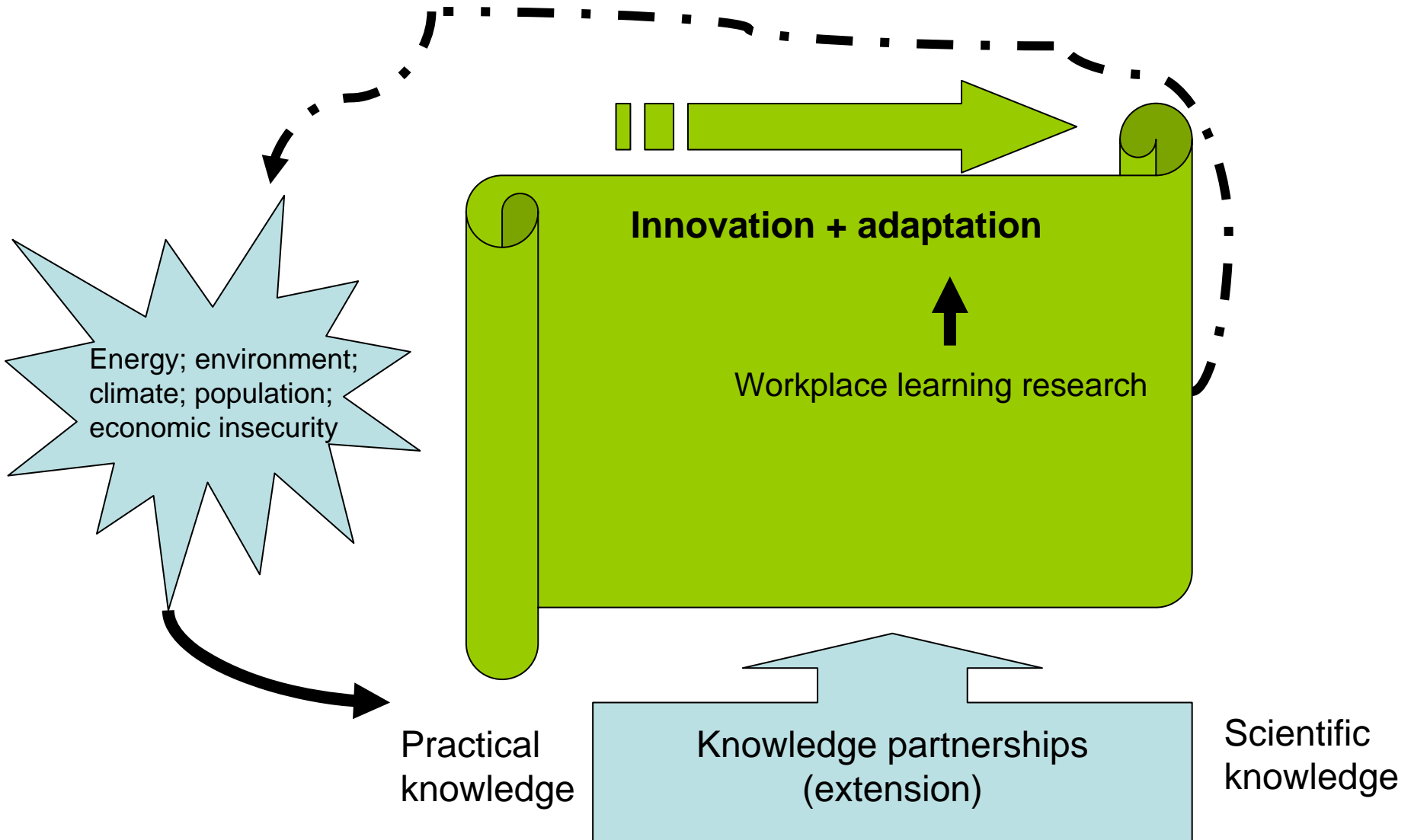
Horses for courses ...





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Learning partnerships advisor-farmer
approaches that enable advisors to better align with the learning preferences
of farmers



Dairy InSight



DAIRY AUSTRALIA

Delivering for the dairy industry



Method

- Market research review
- Interviews
 - 2 foci
 - systems of management
 - learning process
 - 3 inquiries
 - Define systems
 - Current and ideal performance
 - How to bridge the gap
- Action Research
- Workshops



(Kenny & Paine, 2002; Paine & Nettle, 2004)



What advisors are looking for:

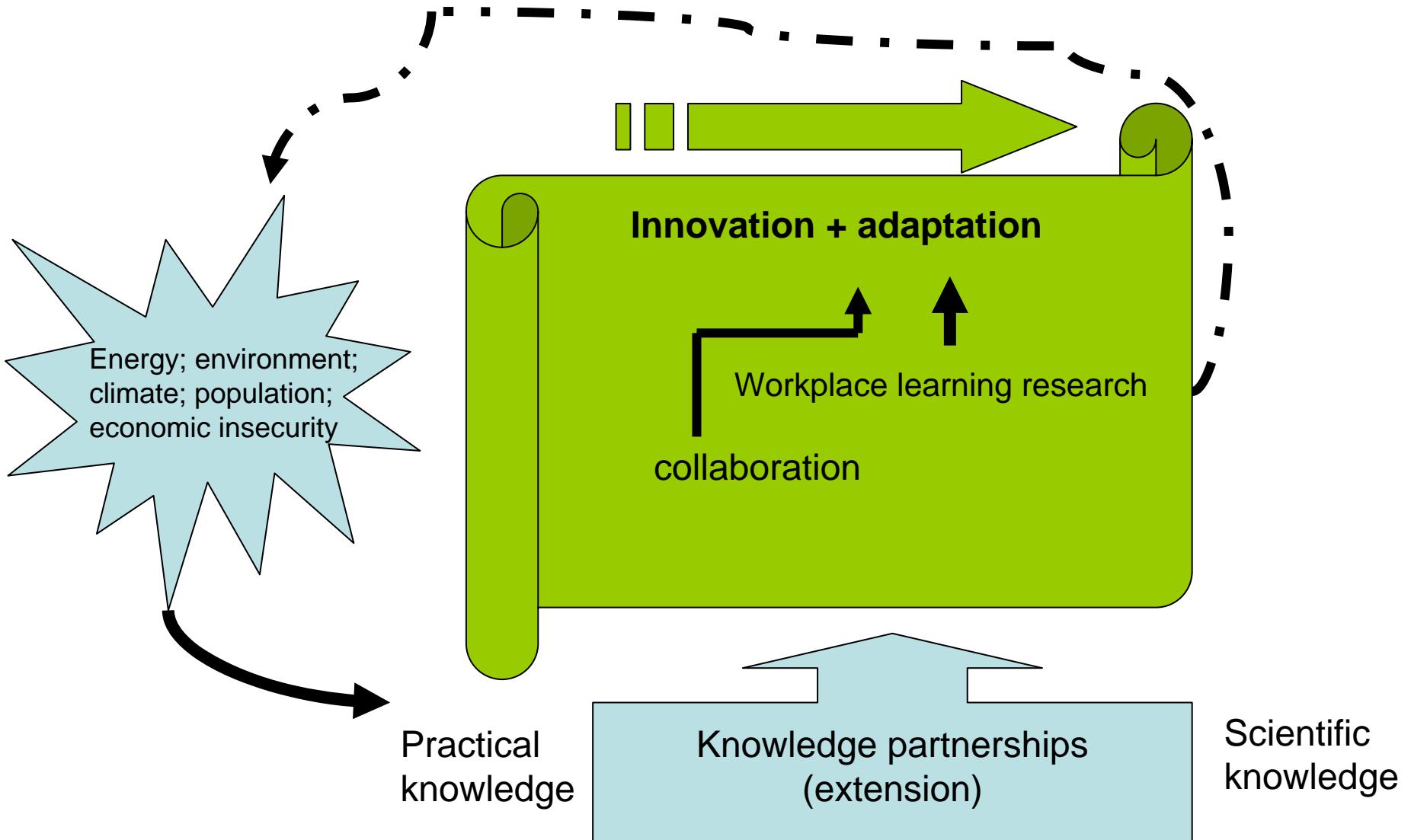
- Build stronger linkages with research and development
 - Extension researchers joining project teams
 - Provision of informed critiques of extension practice
 - Contribute to identification of new fields of research
- Professional development
 - Opportunities for inter-state and international exchanges/sabbaticals
 - Research teams with advisors in the field (interactive workshops) as exercise to reflect on own discipline
 - Focus on farmer driven RD&E
 - Time a critical constraint to many advisors who want to participate in research activities as part of their routine practice
 - Effective evaluation frameworks that provide robust non-economic tools





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Dairy Moving Forward

- An industry response to drought X deregulation X milk price
- Commenced early 2004, funded by a special allocation of reserves (\$5m) from Dairy Australia
- A collaborative partnership of private + public + collective + education
 - More than 50 dairy groups invested resources

Investing in this way created expectations of a new way of operating into the future...





Dairy Moving Forward -- principles

- focused on farms
 - short term and fast track
 - matched to the mood
 - regional
 - collaborative
 - straightforward and simple
farmers' personal capacities and motivation
-
- *We learnt a lot about collaboration...*





Impact of the collaboration

Collaborative

- Over 30 companies & organisations committed to delivery
- Based on co-investment – significant leverage
- Genuinely collaborative development

Capacity building

- Over 160 service providers (public, private) trained, with ongoing training, networking, mentoring support
- Steep learning curve for many...



Impact on service providers

- 81% will use the “Taking Stock” approach with clients in the future,
- 65% believe their service is having a greater impact on their clients
- 57% now offer a different and/or new service for farmers,
- 40% of farmers did not usually participate in activities such as discussion groups, courses, workshops or use consultants





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State / region	No. 1 issue / opportunity	No. 2 issue / opportunity	No. 3 issue / opportunity
South Australia	Grain/concentrate costs	Pasture production	Succession planning
Western Australia	Finance / debt servicing	Pasture production	Grain/concentrate costs
SW Victoria	Pasture production	Equity and capital items	Grain/concentrate costs
Northern /Riverina	Pasture production	Finance / debt servicing	Whole farm analysis
Gippsland	Finance / debt servicing	Whole farm analysis	Pasture production
Queensland	Grain/concentrate costs	Fertiliser	Fodder production



Conditions for collaboration

- putting cash on the table provides a catalyst
 - partner organisations complement opening offer
- partners share results driven focus
 - Common goal: respond to industry crisis
 - Scale up impact
- all parties recognise a need to:
 - reduce confusion from multi-services: agreed leadership
 - reduce duplication of services
 - eliminate the disjointed flows of information across industry
 - reach many people with different servicing requirements
 - meet both individual need (self interest) + industry need
 - mitigate risks by working together



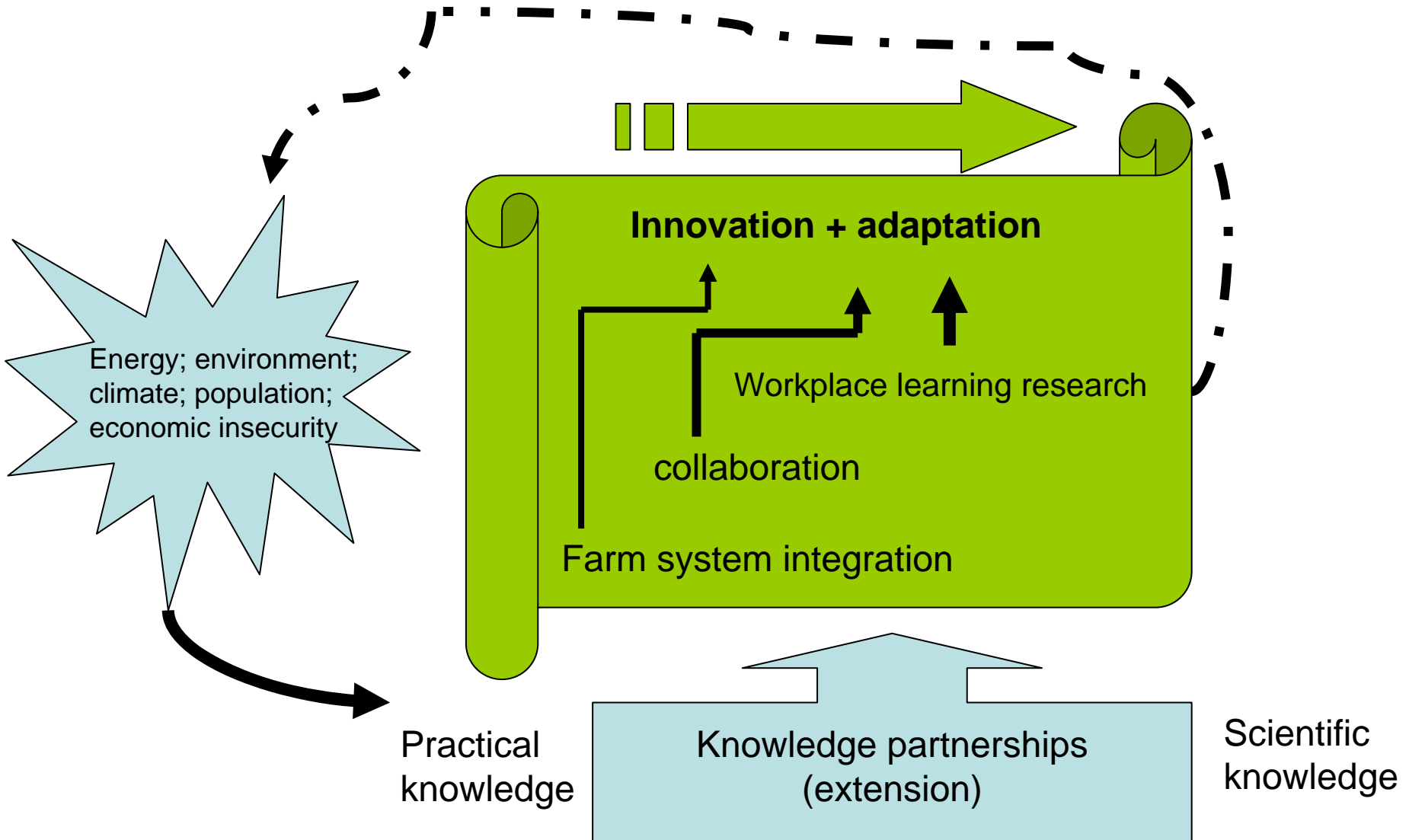
Conditions undermining collaboration

- Restricting interactions to fee for service only
- Protecting the branding and attribution of 'their' services in the region [as distinct from 'us']
- Fear (lack of trust) about others' motives for involvement in the initiative
- Belief that the initiative will not make a difference to industry
- Uninformed criticism allowed a foothold in media reports



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A three stage approach that advisors used to develop farming systems advisory skills

Stage 1	Stage 2	Stage 3
Built capacity in	Groups (test vortex)	Wider team
Systems understanding	Continue action research & reflection	Action learning
Action research	Preparation and planning critical	
Learning log & reflection	Developed guidelines	
Vortex framework	* group member selection criteria	
Fast-track understanding	* approach to 1:1 & group visits	
Levels of decision making	* focus & reflection proforma	
Made recommendations	* basis for learning log	
	Farmer goals & action planning	
	Financial tool	
	Mentoring - consultants	
	Buddy extension officers	
	Continue building staff capacity in whole farm system extension	
	Farming systems training guide	



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Engagement

Quick wins eg Condition Magician

Issue Identification

Farm Resources eg farm map, farm mgt calendar
Farm performance eg Taking Stock, PDQ, Red Sky

Options

Brainstorm & assess feasibility
eg UDDER, Dairy Mod, Milk Map, Diet Check

Action Plan

Clarify solution eg feed budget, Diet Check
Next steps eg yearly planner

Tools – Vortex Framework

- Implementation
 - Monitoring
 - Review

Tools used monthly

Tools used annually



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Levels of Decision Making - Framework

Farm Analysis / DS tools	Specialist Products	Levels of Decision Making	Emphasis on Farmer Goals	Resource consequences		
				Prod'ivity /Profit	Finance	People
		5. Beyond farm resource allocation decisions	H	H	H	H
		4. Whole farm resource allocation decisions	H	H	H	H
	WTTS, FFPF	3. Integrated cross-component (feedbase) decisions	M-H	H	L	M
	Accredited courses	2. Managing farm system components (eg feeding, grazing, fertilisers)	L-M	H	L	L
	Agribusiness services	1. Product choice decisions	L	H	L	L



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