

IDAM Conference

INTEGRATED ENVIRONMENTAL UNDERSTANDING OF FOOD SECURITY IN AFRICA

Experiential discussion

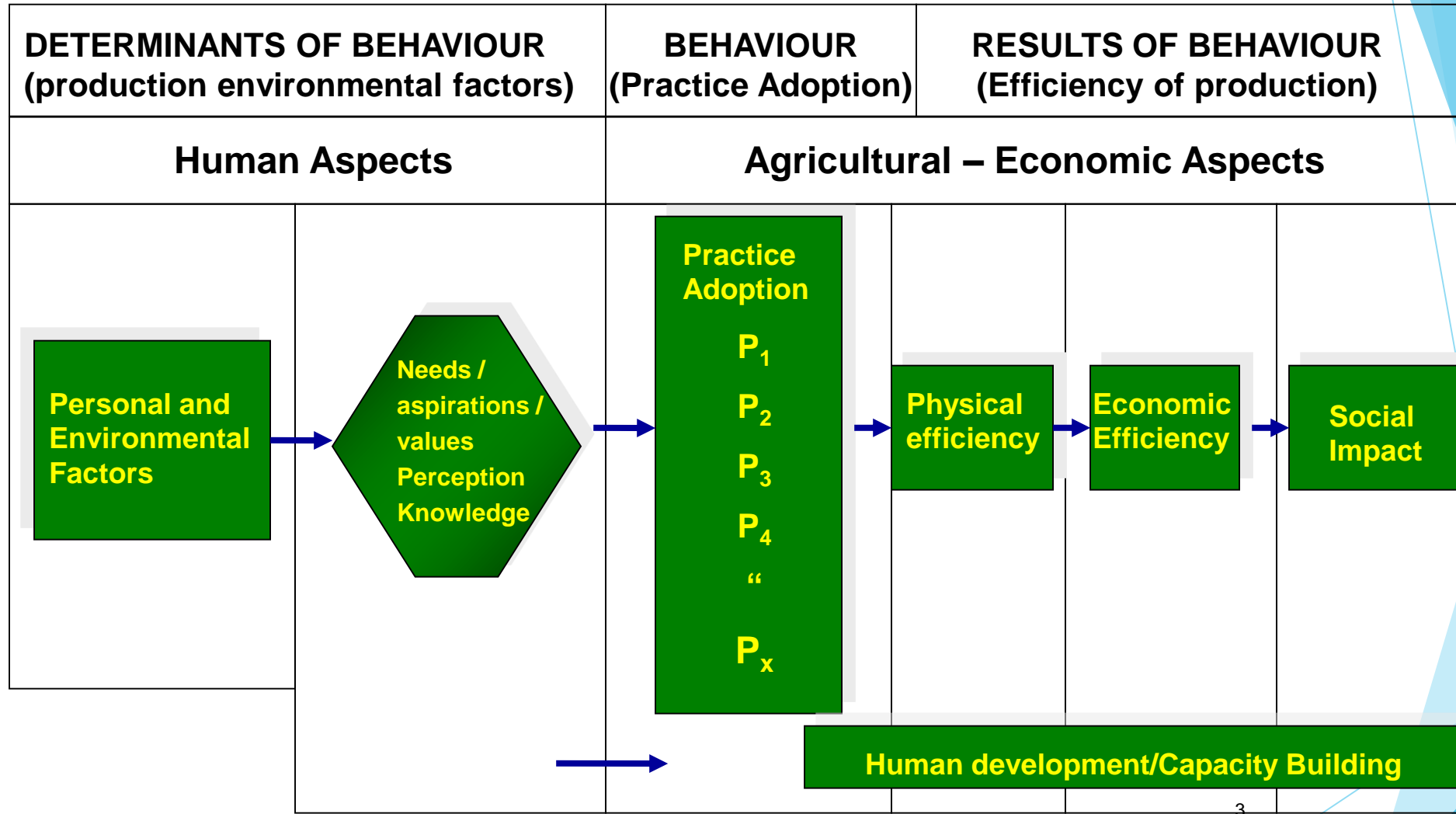
**Fundamental complexities for providing
information to agricultural producers**

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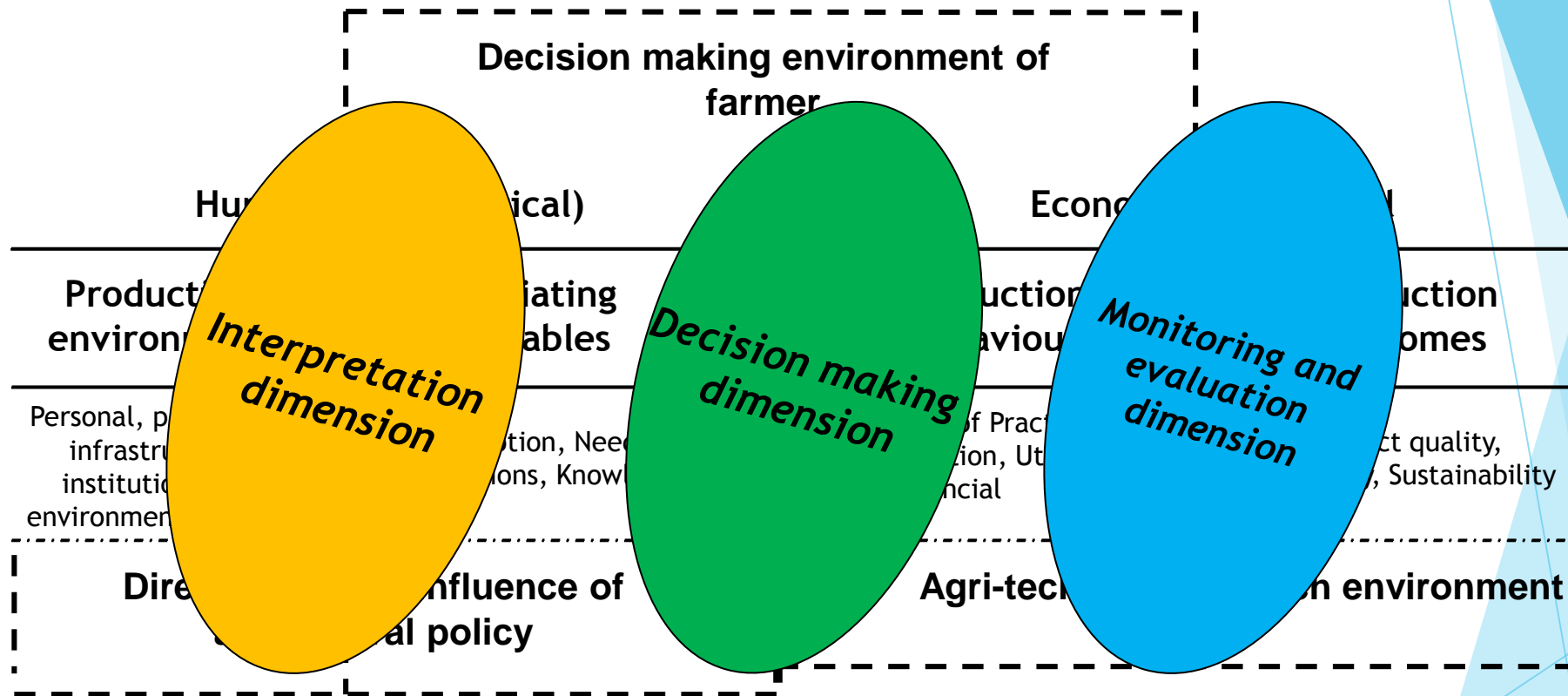
Basic premises

- ❑ Agricultural production is not an instinct but an acquired skill – placing default demand on decision making and efficiency
- ❑ Agricultural production practices are developed as result of a predetermined decision – decision forego action
- ❑ Information is fundamental to agricultural practice development and production decisions

Interrelationships in the agricultural production process (synoptic view)



Interrelationships in the agricultural production process (knowledge, skills and information dimensions)



Extension challenge is to integrate human behavior and the natural environment to achieve sustainable and efficient production

Important functions of accessible information

Interpretation of the environment:

A contextual understanding of a given set of production factors creating relevance and a conceptual framework of understanding of the problem / need for information.

Assimilation of own knowledge with interpretation outcomes of the environment to create understanding:

- ❑ Explaining and understanding interrelationships and interactions
- ❑ Conceptual interrogation of theoretical and functional approaches to building understanding.
- ❑ Building pathways for increased interaction between perception and theoretical concepts in decision making frameworks.
- ❑ Building arrays of potential / preferred applications/solutions/practice niches for information.

Prioritization:

- ❑ Focusing on weighting and risk perception valuations for selecting preferred pathways of actual problem solving actions

For sustainable food security in Africa ICT should:

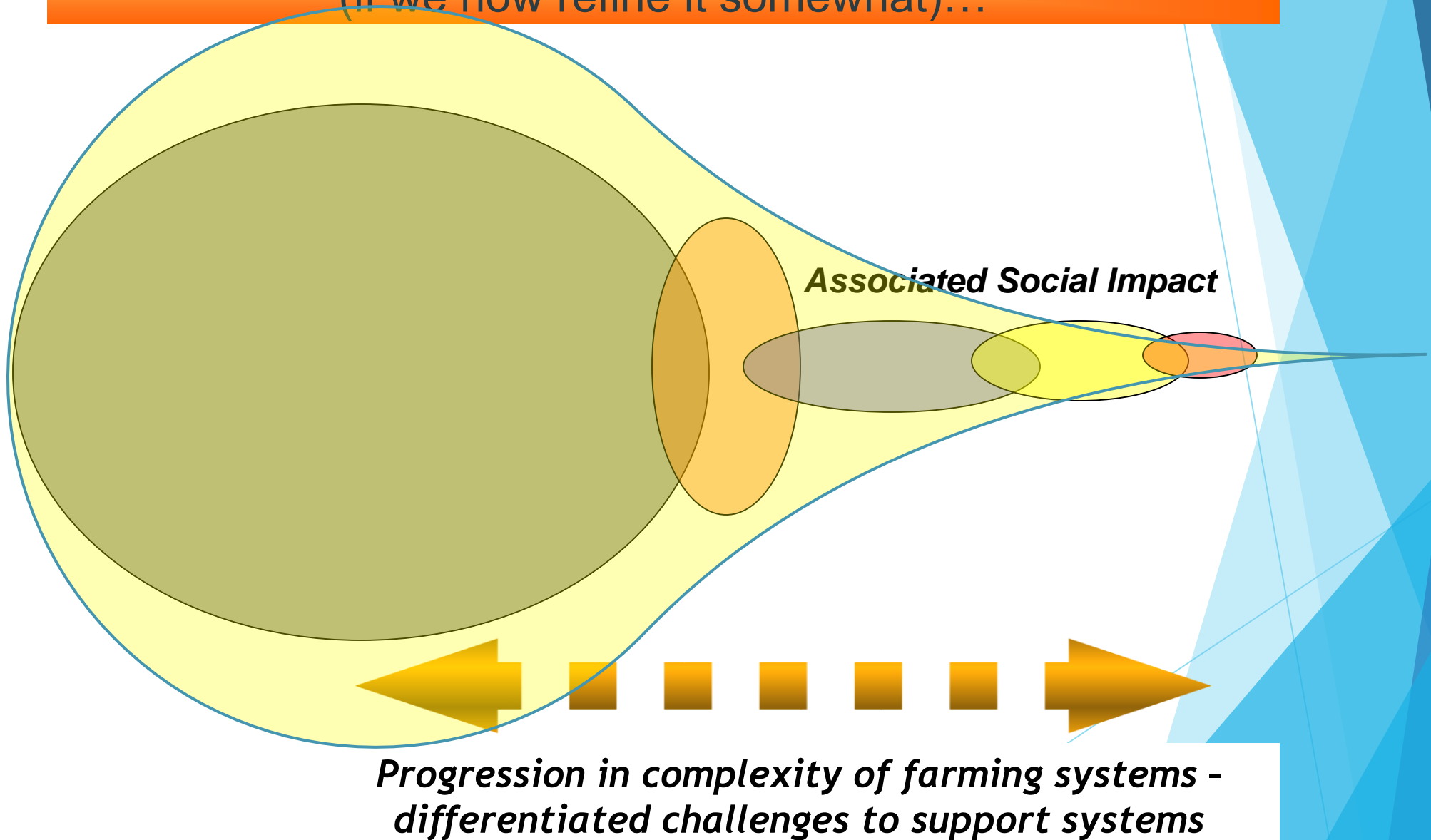
- ❑ Create systems and structures to encourage farmers in small scale production systems to engage the innovation cycle;
- ❑ Promote the structuring and refining of communication possibilities to stimulate the uptake of agri-scientific innovations and settings that could increase their contribution to food production;
- ❑ Create (and innovatively support) networks and support structures (services) to promote the increased usage of a variety of communication / information systems.

Complex scenario of land ownership, production systems and decision making frameworks

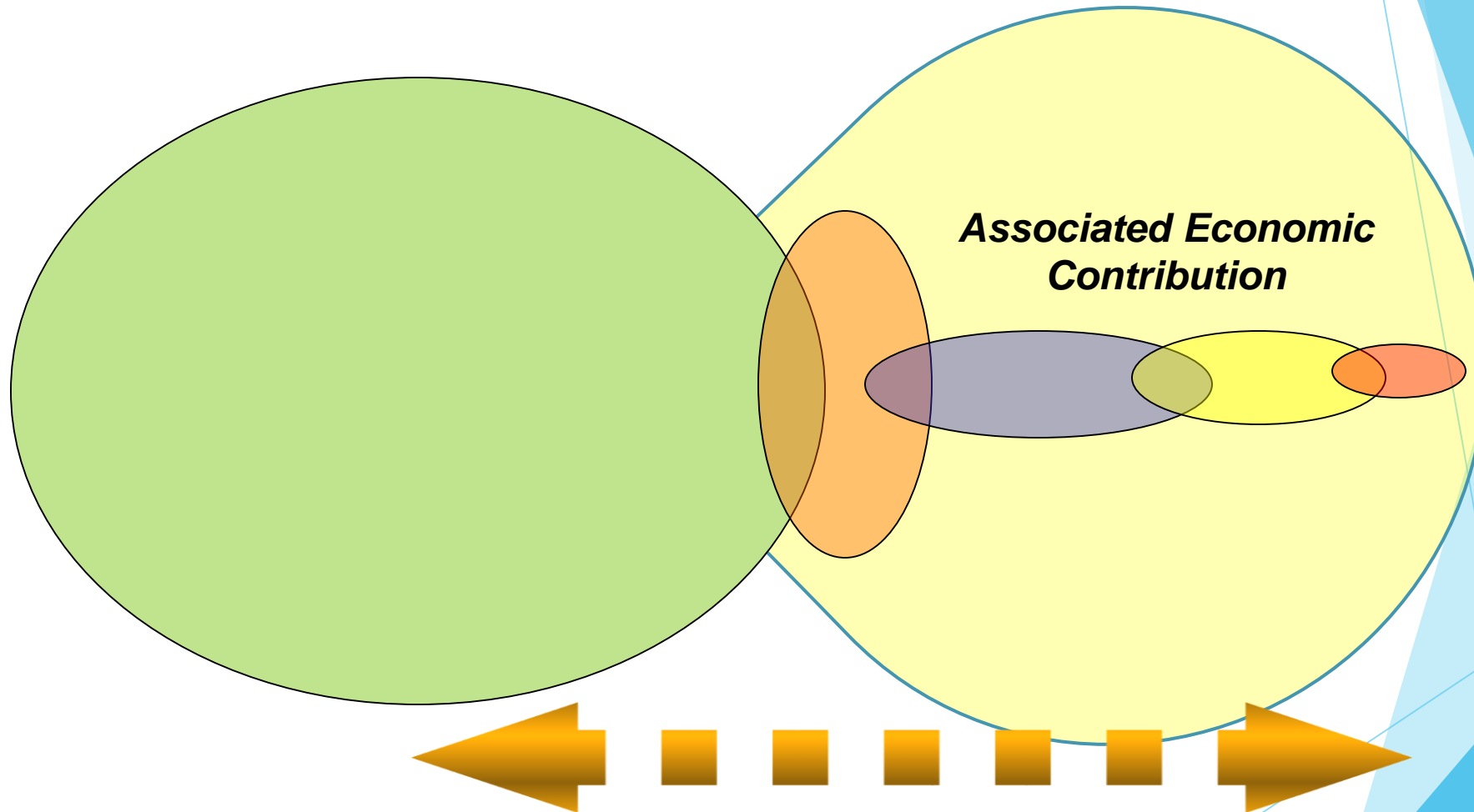
Table 11: Farmer typologies in South Africa

Production unit	Turnover	Ownership and management	Number	Binding constraint	Support required
Large commercial on private property	>R2 million	Family owned but incorporated multiple farms Rent in land – professional management	± 5 400	Market size Equity capital	Export market access Financial market innovation
Medium commercial on private property	R300 000 to R2m	Family owned, could be incorporated. Some renting in of land – family management	17 000	Land capital management	Mortgage capital for land access Management training
Small commercial on private property	< R300 000	Family owned, generally part time. Some lifestyle farming (game ranches, weekend farms)	24 000	Management time	
Commercial in communal areas	> R300 000	Communal ownership Development projects Private ownership	–	Capital management infrastructure	Grants for land access Property rights Comprehensive farmer support Credit Physical infrastructure
'Emerging' commercial in communal areas	< R300 000	>20 hectares Communal ownership Small farmers in development project Private ownership	35 000	Land (property rights) Capital labour management Employment opportunities	Grants for land access Property rights Comprehensive farmer support Physical infrastructure Institutional infrastructure
Subsistence farmer in communal areas Allotments Market gardens		<20 hectares Communal ownership Private ownership Little formal market participation	1.256m	Employment opportunities	Social welfare transfers

Agricultural commercialization is a continuum of outcomes
(if we now refine it somewhat)...

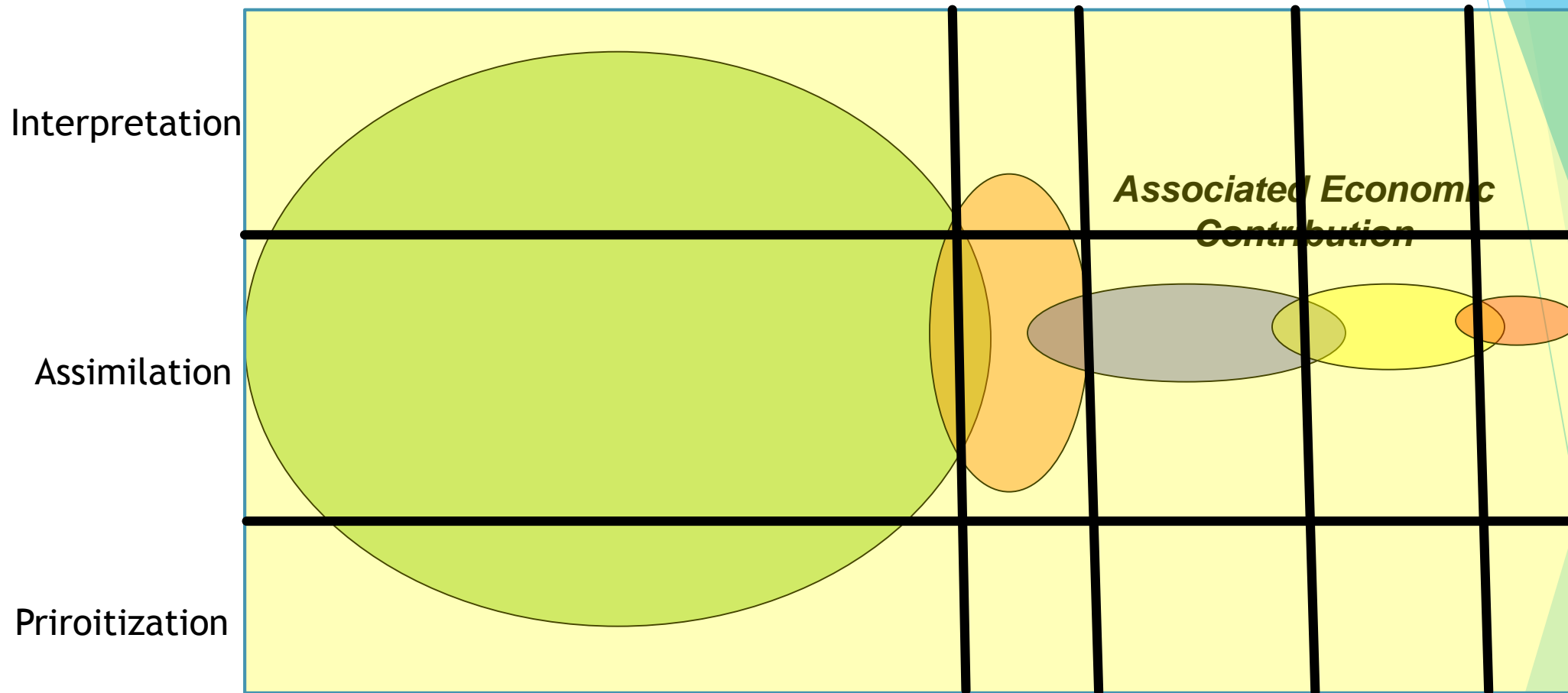


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*Progression in complexity of farming systems -
differentiated challenges to support systems*

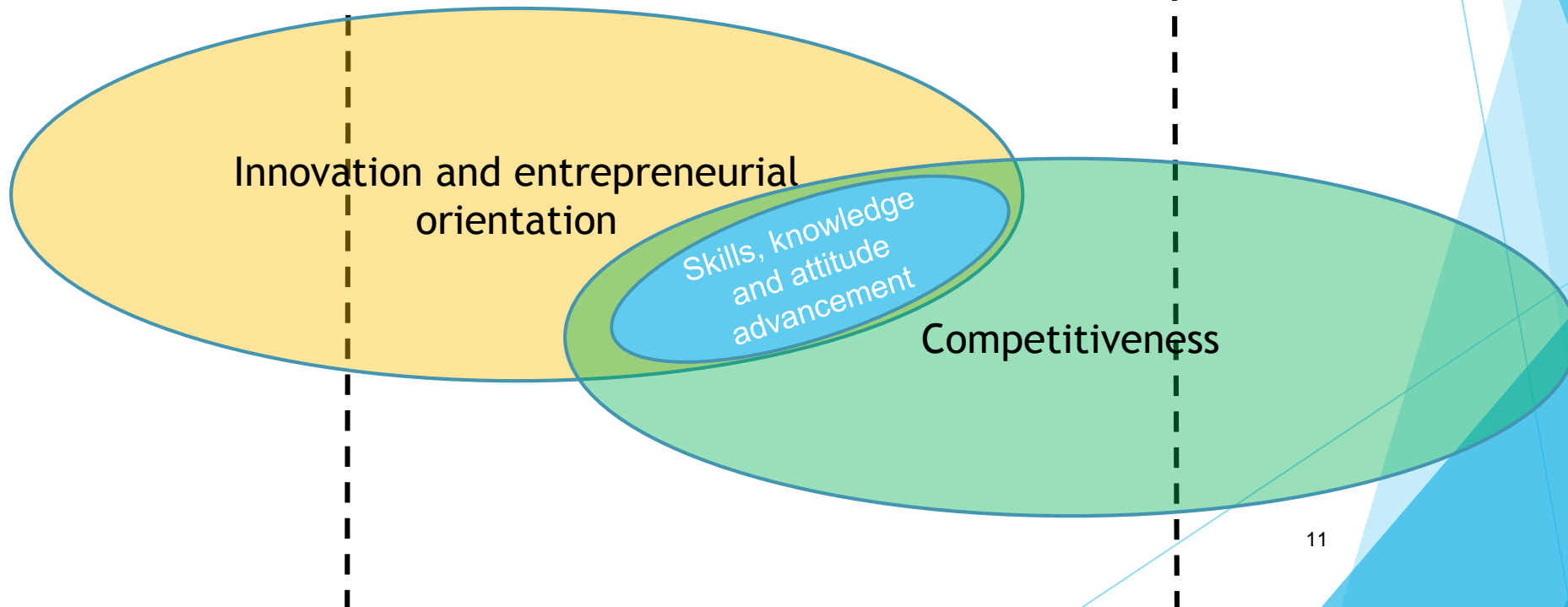
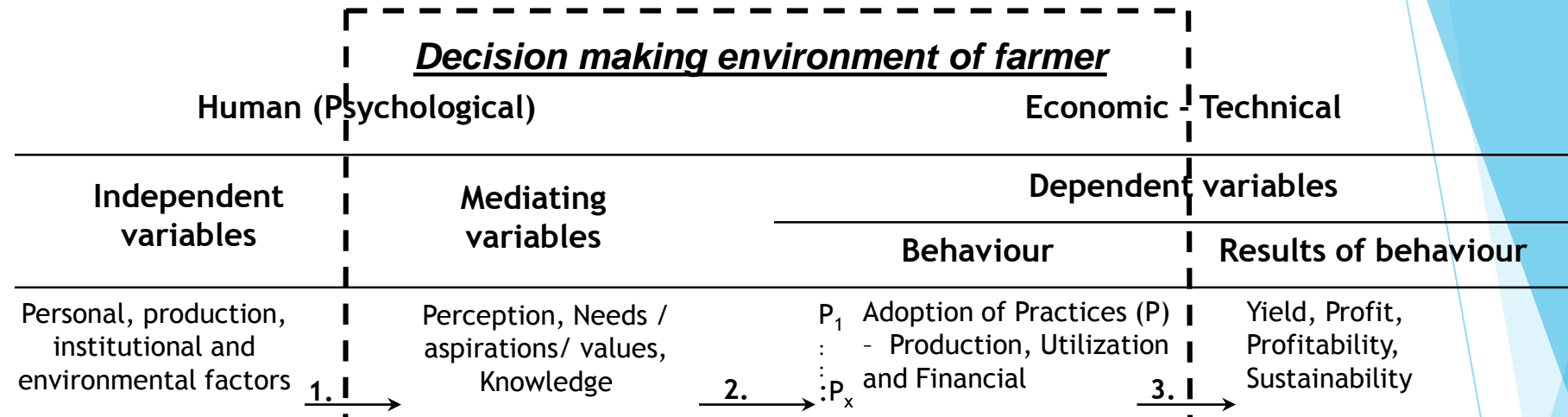
Matrix of information types and needs for agricultural development



Less  More

Progression in complexity of farming systems - differentiated challenges to support systems

Skills requirements associated with Agricultural Extension ...



Research needs

Further information needs on the flow of information:

- ❑ How acceptable is it socially in rural communities to sell excess production – how stratified is this decision?
- ❑ How socially acceptable is competitiveness – fundamental to economic growth in production.
- ❑ What support structures do we need to establish to create conducive push-and-pull effects to stimulate progressive production decision making?
- ❑ Initial indications are that social grants and pay-outs (value) exceed the agricultural potential of the Eastern Cape – no pressure to produce.