

Methodology for economic cost/benefit analysis and stakeholder analysis

Bright Animal Workshop
on economic implications on PLF

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Increased Precision leads to increased Profit and Welfare

"The pathway to future profitability for agriculture is centered as it always has been in innovation..."

The name of the pork production game in the next decade is managing the variance....

Bringing precision agriculture to pork production will reduce input consumption and cost per unit of output and simultaneously increase per unit revenue. It's that sort of double impact to the bottom line that makes this approach both exciting and worthy of rapid adoption."

www.nationalhogfarmer.com: **Precision Pork: Pathway to Profitability**

Apr 15, 2010, By Dennis DiPietre KnowledgeVentures, LLC, Columbia, MO



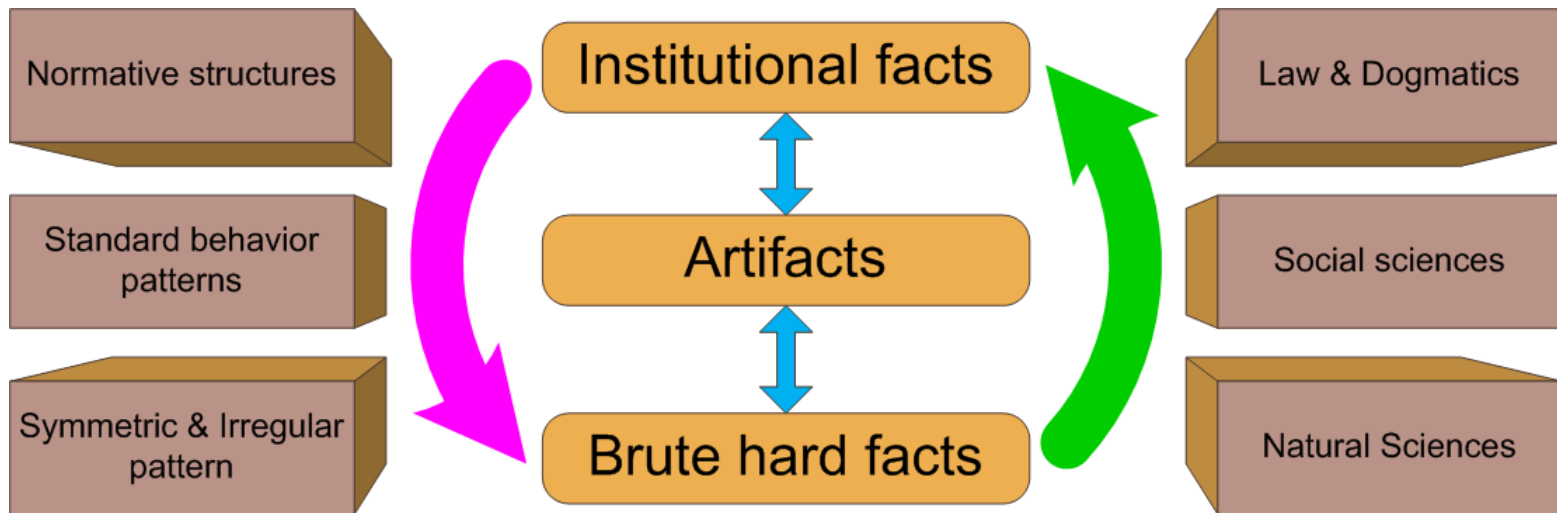
Objective with this session

- **Identify** and **categorise** key economic parameters in relation to PLF
- **Discuss** economic implications of PLF
- **Agree** on key stakeholders and their inter-relationship
- **Propose** a road-map for PLF showcases

Structure

- Key Parameters
- Identifying Costs and Benefits
- Stakeholder Analysis
- Market Penetration with PLF
- Conclusion

Key Parameters



Source: Peter Ørebech, Norwegian Fishery College

Brute Hard Facts

- Heat detection
- Feed intake, multi-phase feeding and individual diets
- Climate control, e.g. air quality & humidity
- Identification of deceases in animals
- Individual assessment
- Efficient record management, e.g. lactation status
- Stocking density
- Cost of investment
- Labour

Artifacts

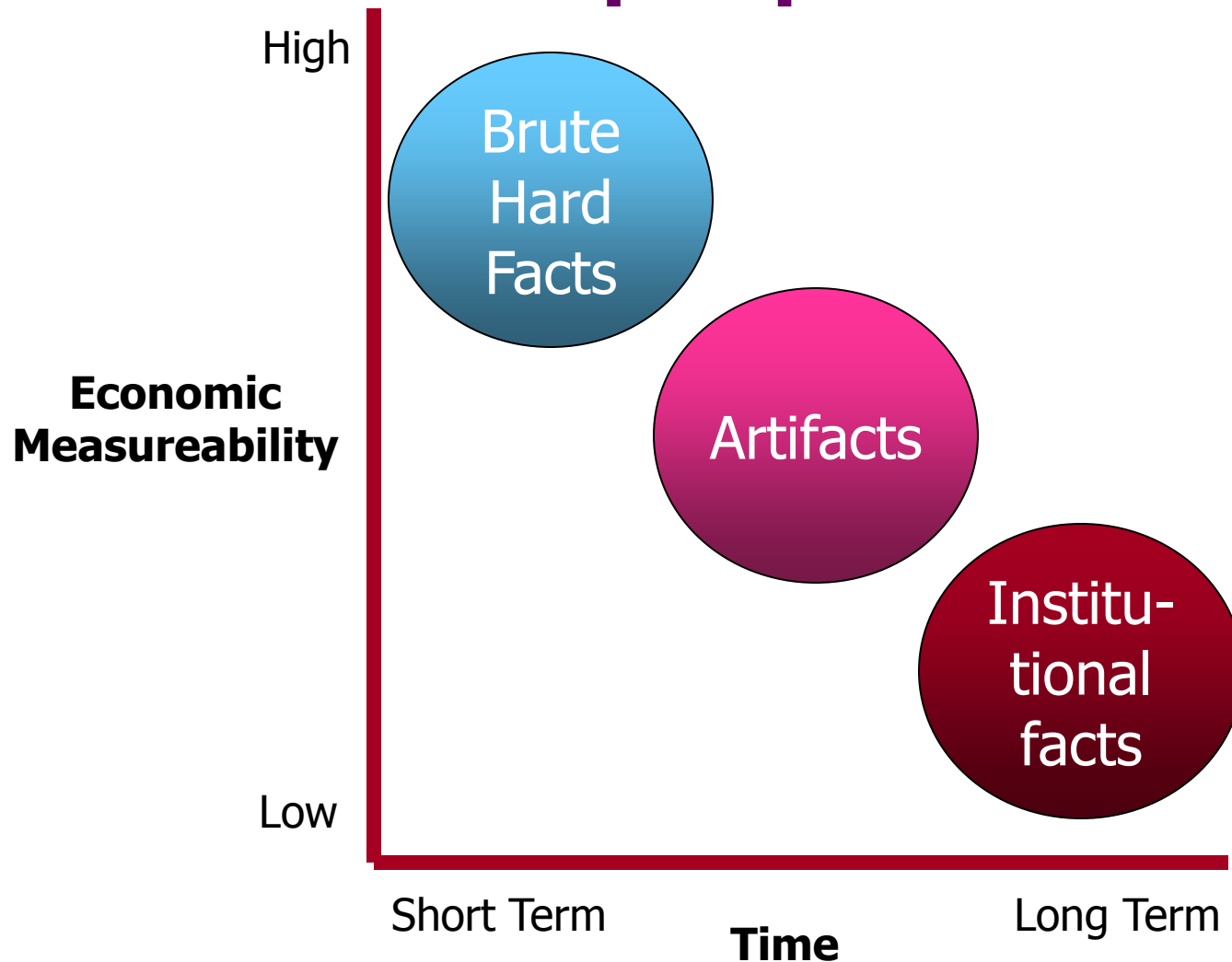
- Practical implementation
- User capabilities/competences
- Lameness
- Skin infections
- Animal welfare, e.g. 12 criteria defined by Welfare Quality[®]
- Market communication, e.g. traceability
- Market Price



Institutional facts

- Environmental impact, e.g. manure utilisation and reduced leach of nitrogen
- Food safety standards
- Market access
- Penalties, fees, etc.

Parameters in an economic perspective



Identifying Costs and Benefits

Economic analysis

PLF's impact on the:

- farmer
- society
- financials
- various stakeholders
- risks
- sustainability

- Undertake the project?
- Project's financial impact?
- Are cost recovery efficient and equitable?
- Environmental impact etc?

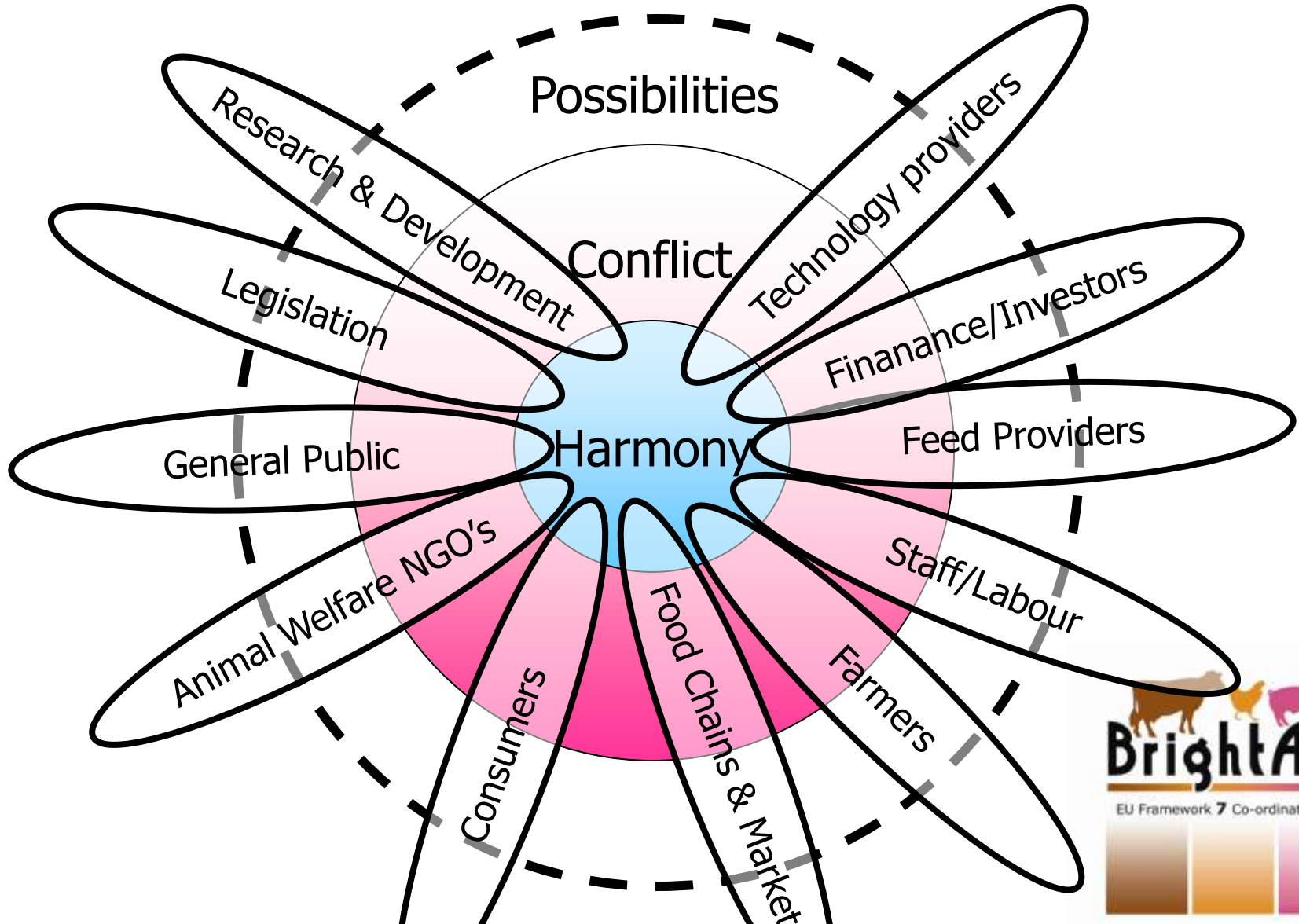
Definition of stakeholder

A person, group, organization, or system who affects or can be affected by an organization's actions

www.wikipedia.org



Potential stakeholders



Stakeholders to PLF

Stakeholder	Contribution	Reward	Possibilities
Farmers	Investment	Profitability	Increased Welfare
Technology provider	PLF Solutions	Profitability	Continued development
Feed Providers	Optimised feed	Profitability	
Food Chain & markets	Market Access	Profitability	Sustainable label
Finance / Investors	Capital	Interests	Reduced risk
Staff / Labour	Time & competence	Remuneration	Reduced need of labour
Consumers	Revenue	Value for money	Healthier food
Animal Welfare NGO's	Assessment & recommendation	Increased Animal Welfare	Happy animals
General Public	Accept & trust	Reliable information	Improved image of livestock farming
Legislation	Authorisation	Compliance	Reduced negative impact
Research & Development	Innovation	Resources	New research

Success drivers of PLF

<p>Stakeholder influence & power (on the success of PLF)</p>	<p>Farmers Technology providers Animal Welfare NGO's</p>	<p>Finance/investors Staff/labour Consumers Food Chain/Market</p>	<p>Feed providers Legislation General Public Research & Development</p>
	<p>Great</p>	<p>Some</p>	<p>Minor</p>

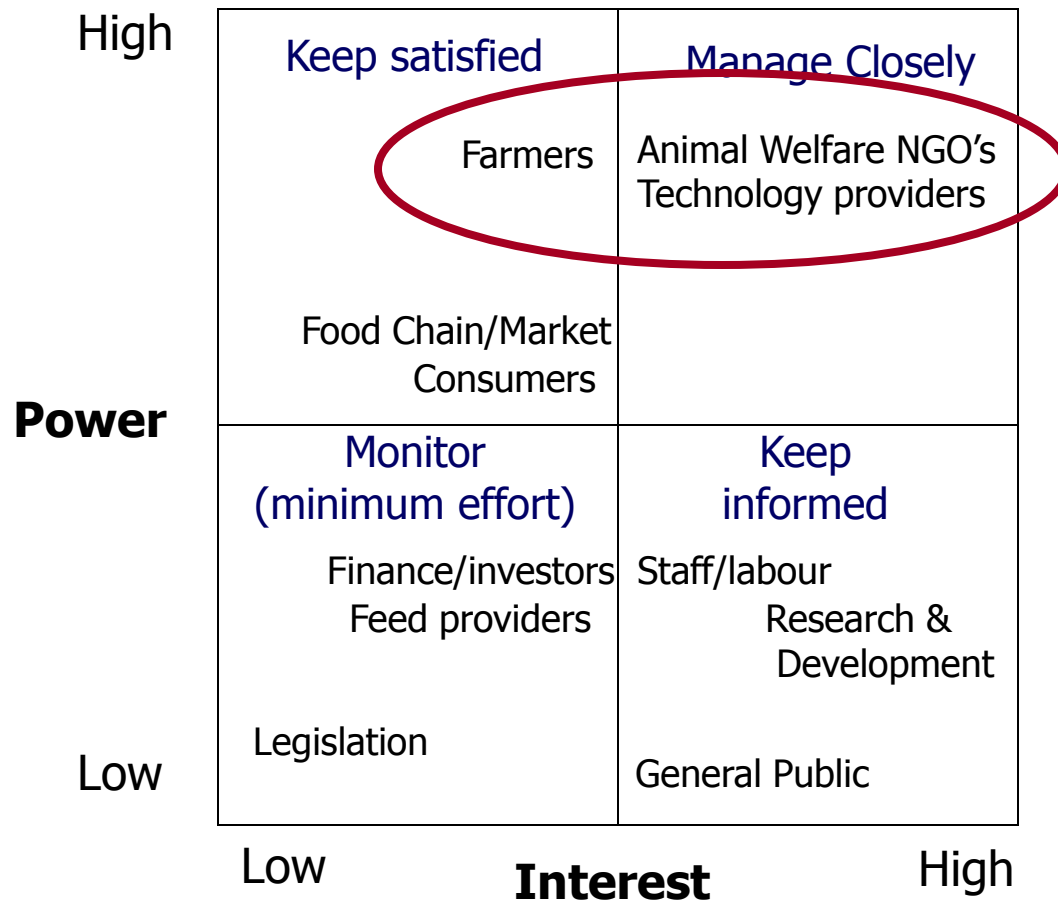
Impact & Attitude in relation to Stakeholders

PLF's impact on the stakeholder

Very comprehensive change		Farmers	
Some change		Staff/labour Feed providers Legislation	Technology providers
Poor	Animal Welfare NGO's	Finance/investors Consumers General Public	Food Chain/Market Research & Development
	Negative, resistance	Passive	Positive, enthusiastic

Stakeholder's attitude to PLF

Power/interest grid for stakeholder prioritisation

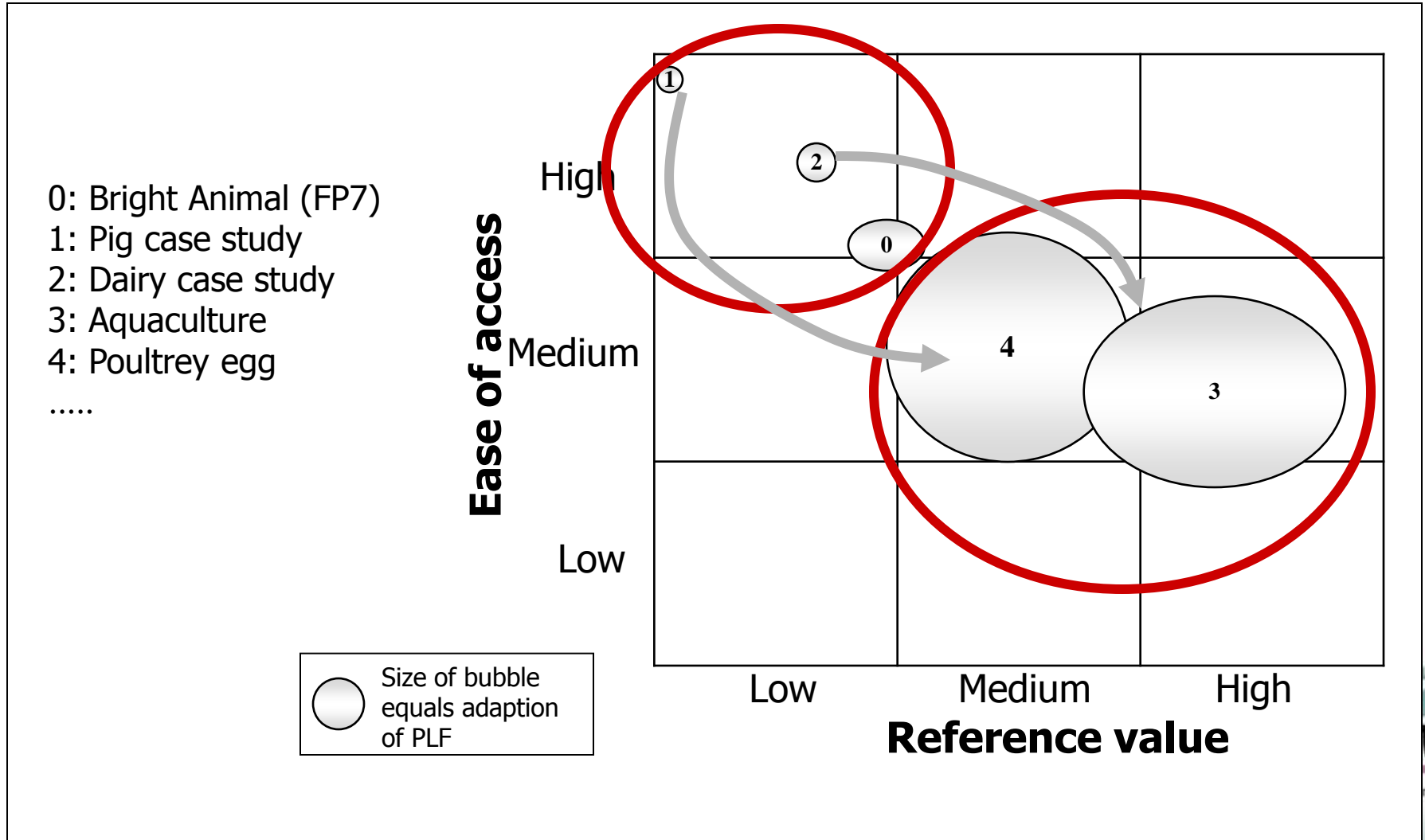


Value Chain Farmer & PLF Service Provider



Showcase evaluation matrix

Reference value, Ease of Access & Market potential



Conclusion

- Key-parameters can be divided in brute hard facts, artifacts and institutional facts
- The economic analysis should give a persuasive rationale about the benefits of PLF
- Prioritised stakeholders should be Farmers, Technology Providers and Animal Welfare NGO's.
- PLF can be more rapidly adopted by farmers trough showcases