2nd Asian Irrigation Forum
Securing Water and Food for the Future
20–22 January 2016 · Asian Development Bank, Manila, Philippines

Modernization – Planning, Implementation and Monitoring

Dr. Beau Freeman
Lahmeyer International

[Revitalizing Irrigation Performance – Lessons from the Region]
20 January 2016

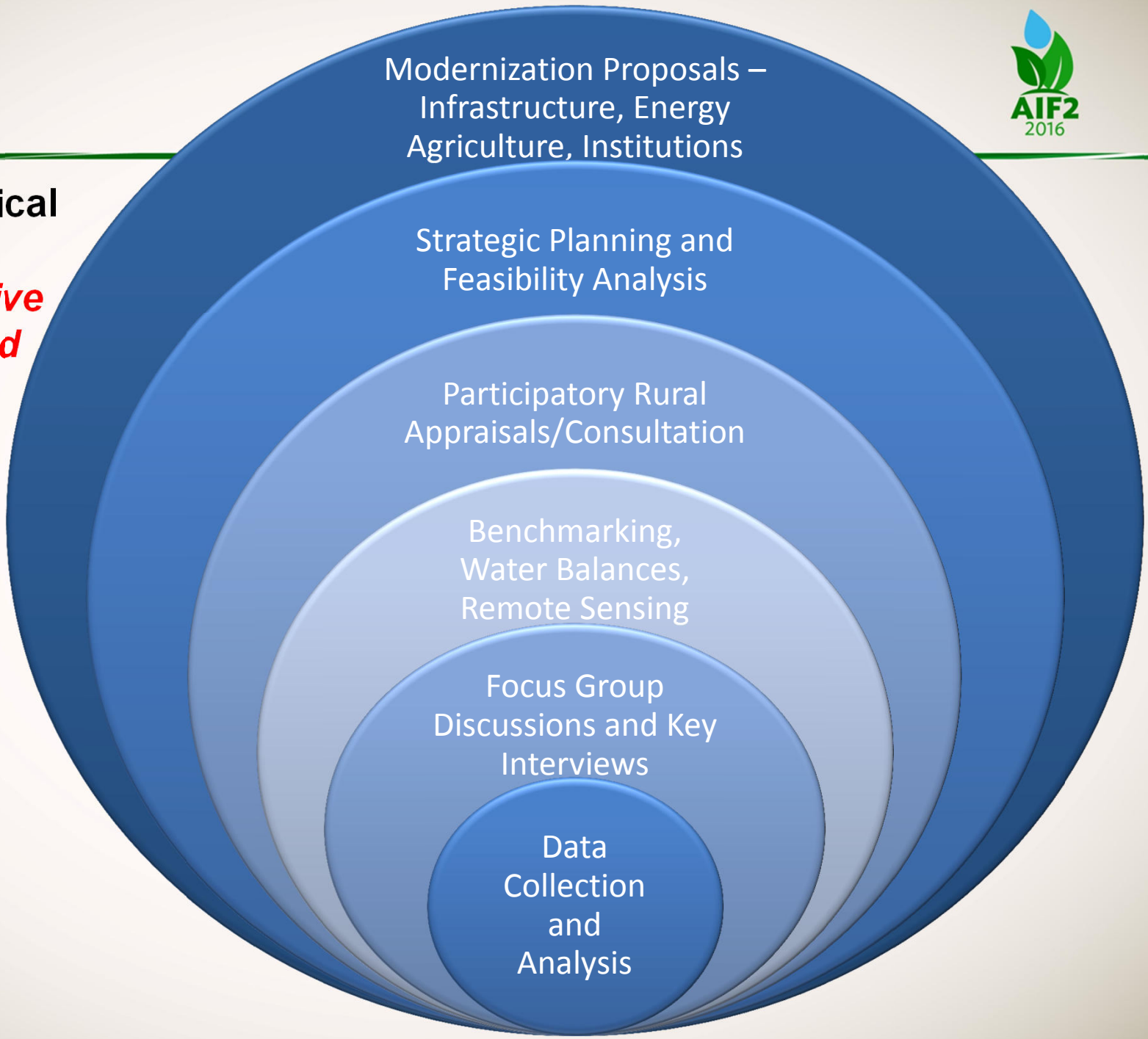
Challenges for Modernization Plans

- Few good examples of successful modernization
- Core modernization concepts cannot be taken for granted: *service orientation, water rights, cost recovery*
- Busy work schedules and people's patience
- Low or very low performance baseline to start with
- How does one fix something they do not really understand?

Benchmarking Challenges

- Lack of good quality data and maps
- Time to organize and QC the available data
- No meaningful distinctions in low ratings
- Terminology: *Service area vs. Command area*
- Benchmarking and understanding the results requires good experience with modern irrigation

MFLW Analytical Approach – ***Comprehensive and Integrated***



Common findings (1/2)

- Lack of *service* equity and little *service* mentality
- Lack of innovation in design and engineering
- Insufficient coordination between canal operations and farm irrigation needs
- Political interference and governance

Common findings (2/2)

- No cost recovery, minimal budgets
- No *real* and comprehensive water balances
- Information management is outmoded
- Uncertainty over what are the real objectives

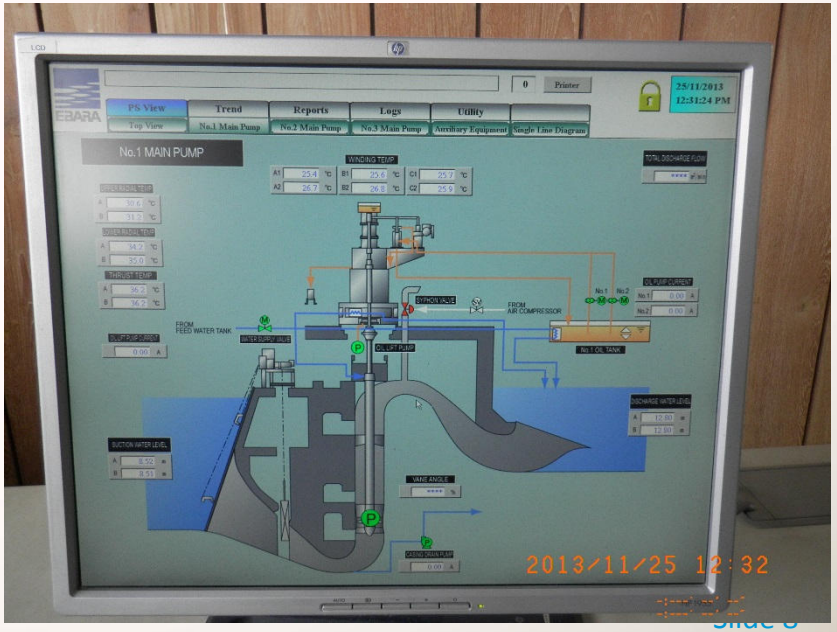
Where to start

- Improve measurement and water control in canals
- Monitoring and documentation of spills
- Internal recirculation or buffer storage
- Centralized control of the main distribution system (not automation)
- Water ordering and processing of real time flows
- Better flow measurement at all turnouts


2013/12/05 15:38


2013/12/05 12:43


27.06.2014 13:53


PS View
Trend
Reports
Logs
Utility
Top View
No.1 Main Pump
No.2 Main Pump
No.3 Main Pump
Auxiliary Equipment
Single Line Diagram
No.1 MAIN PUMP
25/11/2013
12:31:24 PM
2013/11/25 12:32

New management approaches needed

- No group has a mandate and capacity to resolve issues: *technical, institutional, social and political*
- Conjunctive management is outside the scope and capacity of Water Users Associations
- Full cost recovery for operation and maintenance
- Private sector: *system management and commercial agricultural services*
- Increasing productivity requires a parallel program of agricultural support

Can we afford not to modernize?

- Investment Costs: $1500 to $3000 per hectare
- Gross Crop Value: increases by $100 million per scheme or $1150 per hectare per year
- Productivity of Water: increases 20-60% ($ per m^3)

Planning Team Cannot Control

- Project cycle and budgets
- Past history at a project
- Unrealistic expectations
- Unmotivated and under-resourced staff
- Quality of other consultants and project staff
- What other people do not know about design and innovation in irrigation and agriculture