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TA for piloting rapid uptake of Industrial EE and Efficient Water utilization in the Industrial sectors

Illustration of the TA

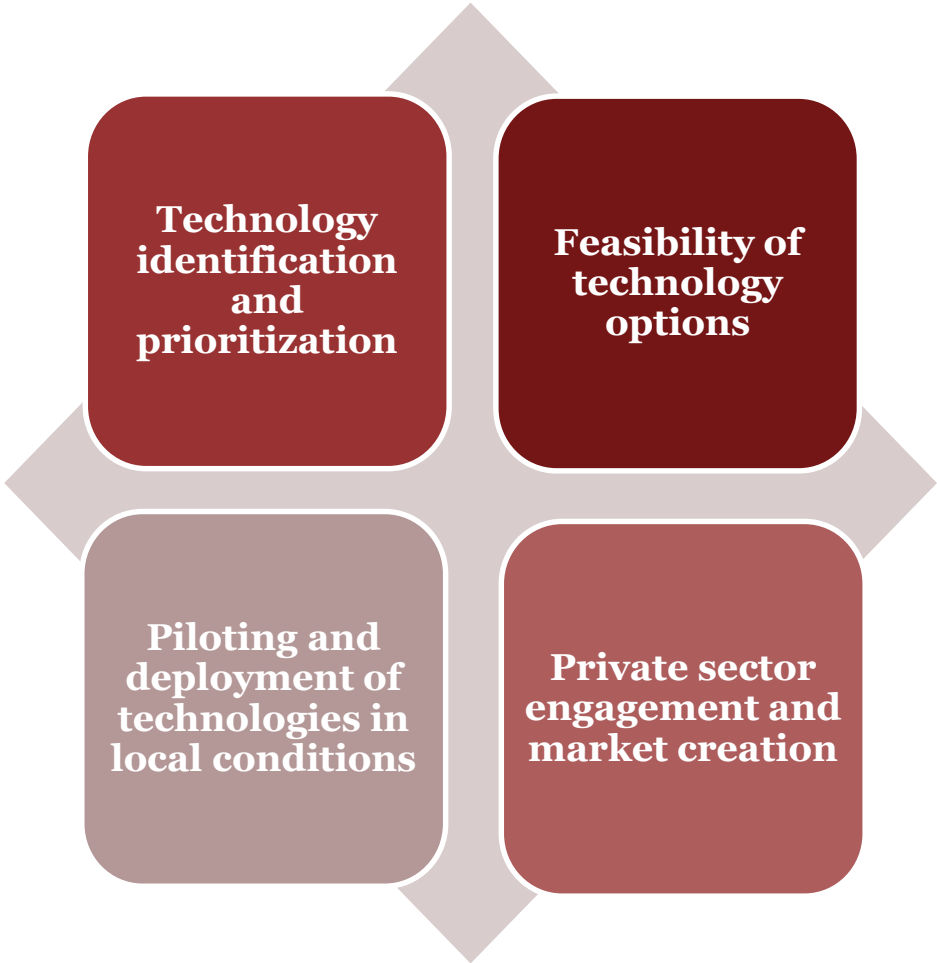
Strictly Private and Confidential

January 2019

Objectives of the assignment

Identify energy, water efficiency and management improvement potential in 10 selected pilot companies

Create capacities to replicate and implement such interventions in companies across Zimbabwe in the future



Focus areas of Technical Assistance

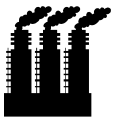
Applies methodology

1. Unit Selection for energy and water audit

- **Preliminary rating criteria**: Preliminary screening of industries based on capacity utilization, energy & water use intensity, Management willingness
- **Desirable criteria**: Secondary rating based on affiliation to recognized industry association and willingness to co-invest in implementing proposed options

2. Training of company staff and external consultants

- **Classroom training**: Engaging training which included case studies, role playing, group exercise, brainstorming and demonstration.
- **Hands on training**: First hand experience in execution of energy and water audit covering aspects like electrical, thermal, water & RE assessment and data collation.



3.Execution of Energy and Water audit

- Initial preparatory work and inception meeting
- Collection and analysis of time series data
- Field study
- Data analysis and measures for improvement
- Report preparation and presentation

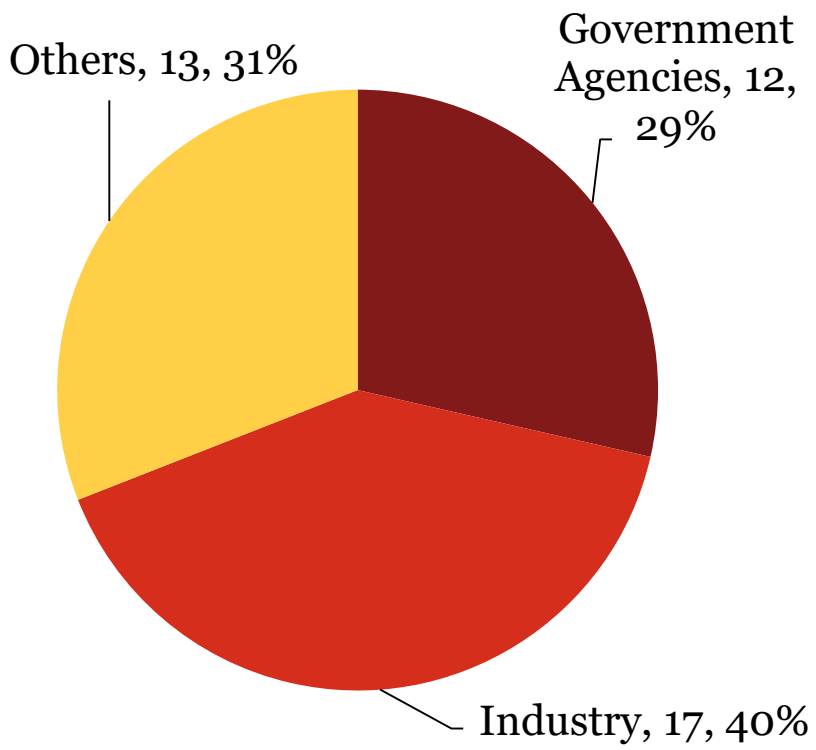
4. Training manual for energy & water management

- Secondary research (desk research) on status of industry sector in Zimbabwe
- Drawing learnings from the field studies conducted throughout the TA
- Numerous stakeholder interactions to understand present situation
- Leveraging our experience in field of energy and water use efficiency

Some photos from training programme

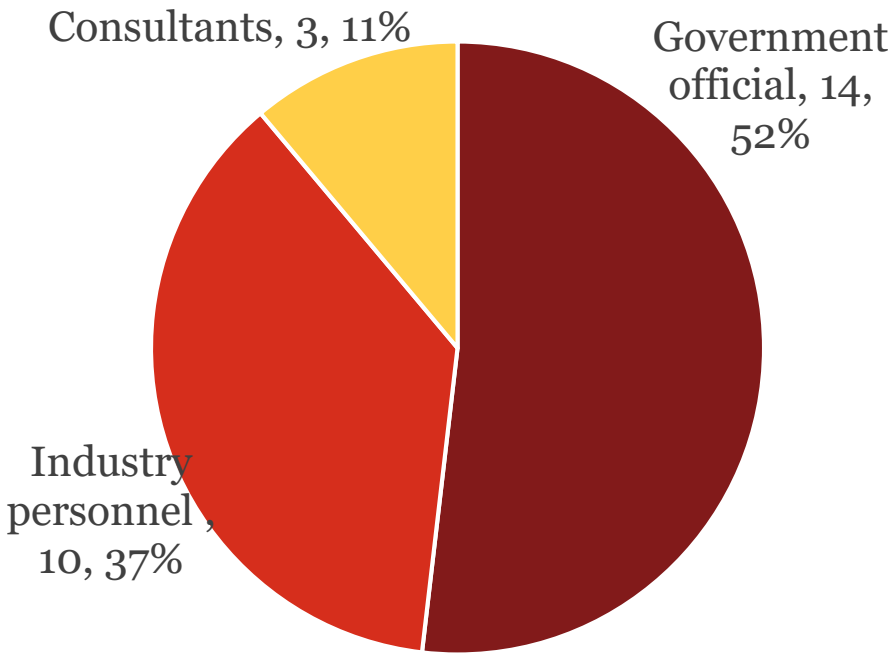
Training demographics

Classroom training (Total no of people who attended: 42)



Majority of the participants were Industry officials (40%)

Hands on training (Total no of people who attended: 27)

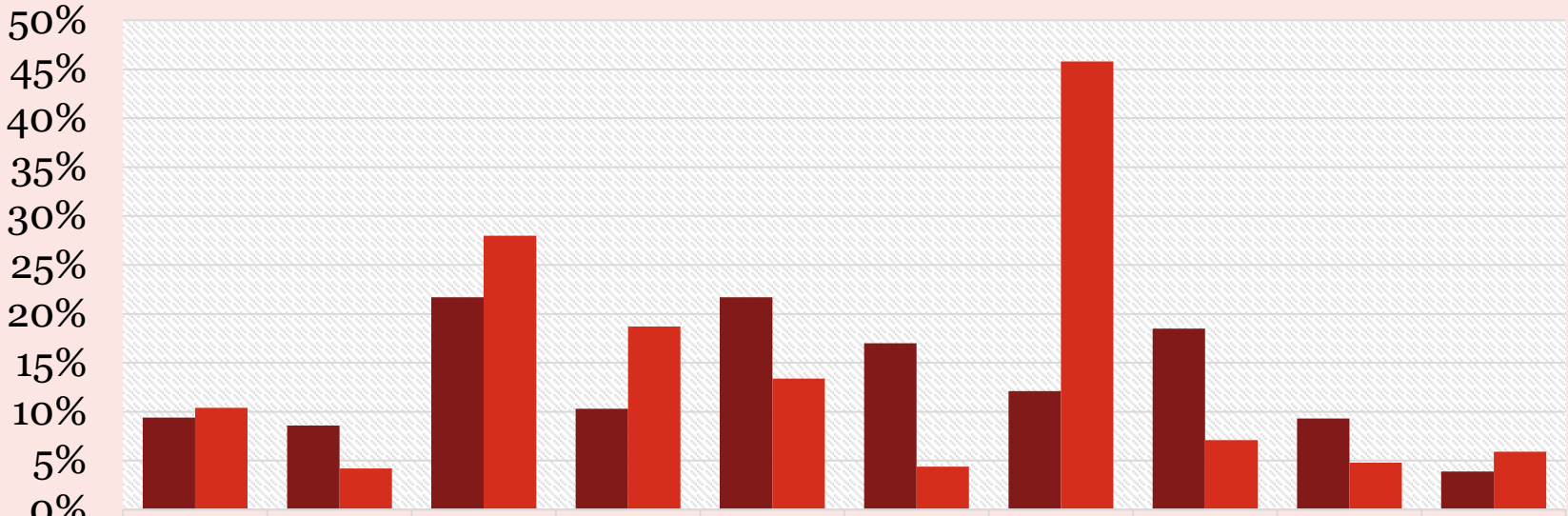


Majority of the participants were government officials (52%)

Hands on training

Audit process

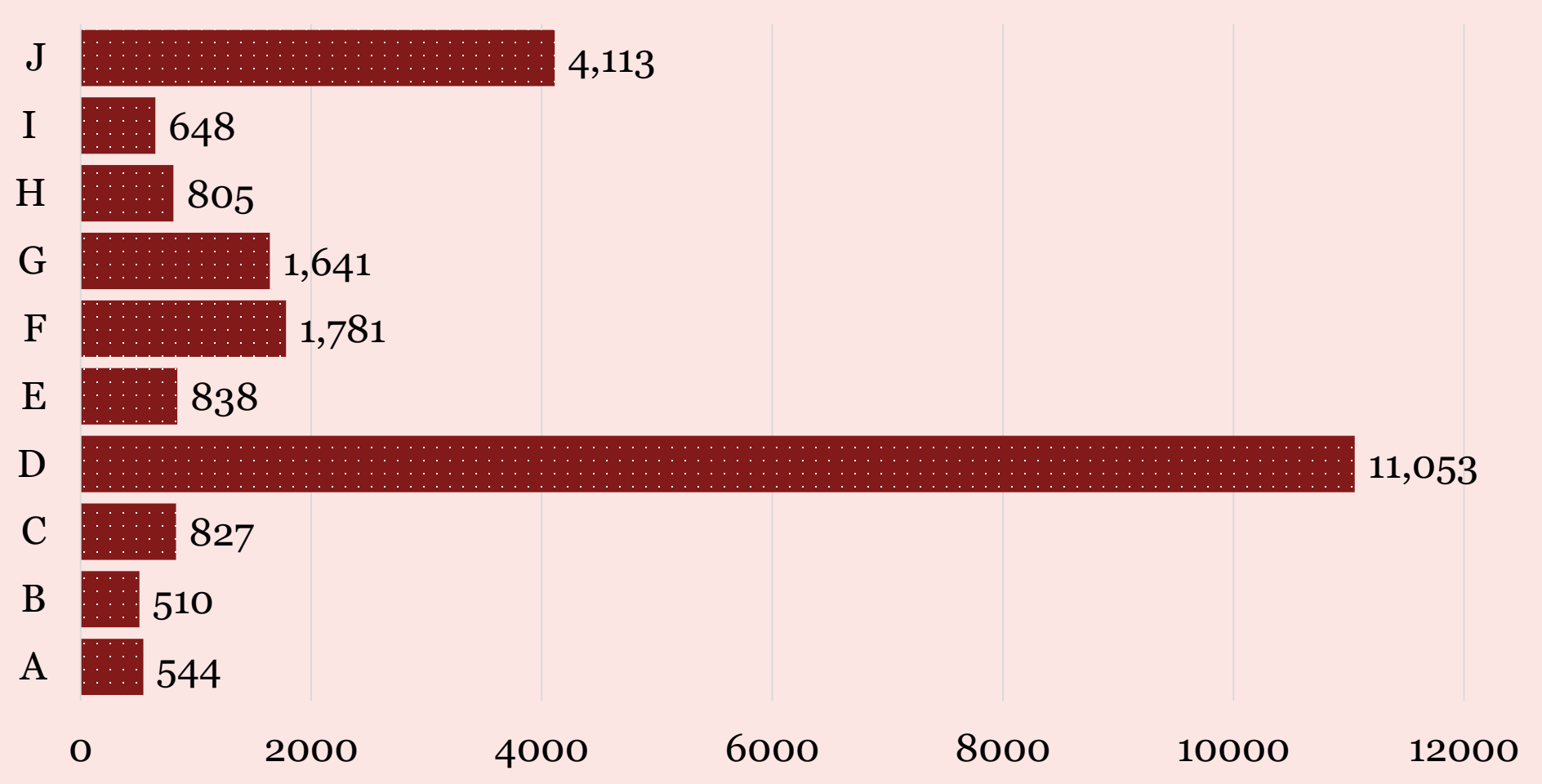
Energy and water saving potential identified (%)



	A	B	C	D	E	F	G	H	I	J
Energy saving	9.4%	8.6%	21.7%	10.3%	21.7%	17.0%	12.1%	18.5%	9.3%	3.9%
Water saving	10.4%	4.2%	28.0%	18.7%	13.4%	4.4%	45.8%	7.1%	4.8%	5.9%

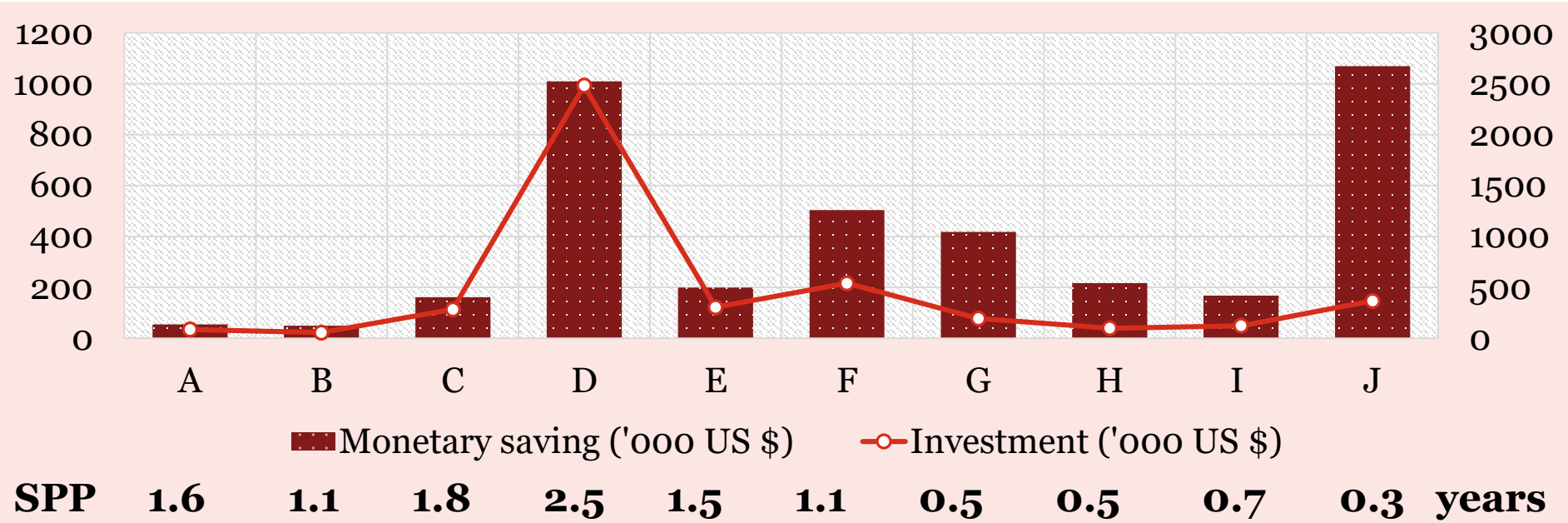
Average Saving	Agrochemical	Cables	Cement	Food & beverages	Mining
Energy	8.9%	21.7%	10.3%	15.5%	9.4%
Water	5.1%	28.0%	18.7%	28.8%	5.3%

GHG Reduction Potential (tCO_2 equivalent)



Investment potential and monetary saving

Investment proposed: US $ 4.53 million
Monetary saving potential: US $ 3.85 million



SPP	**1.6**	**1.1**	**1.8**	**2.5**	**1.5**	**1.1**	**0.5**	**0.5**	**0.7**	**0.3**	**years**

Implementation prioritization

No investment measures → Payback less than 1 years → Payback less than 3 years → Payback more than 3 years

Thanks!