Demand Side Management –
Financing options

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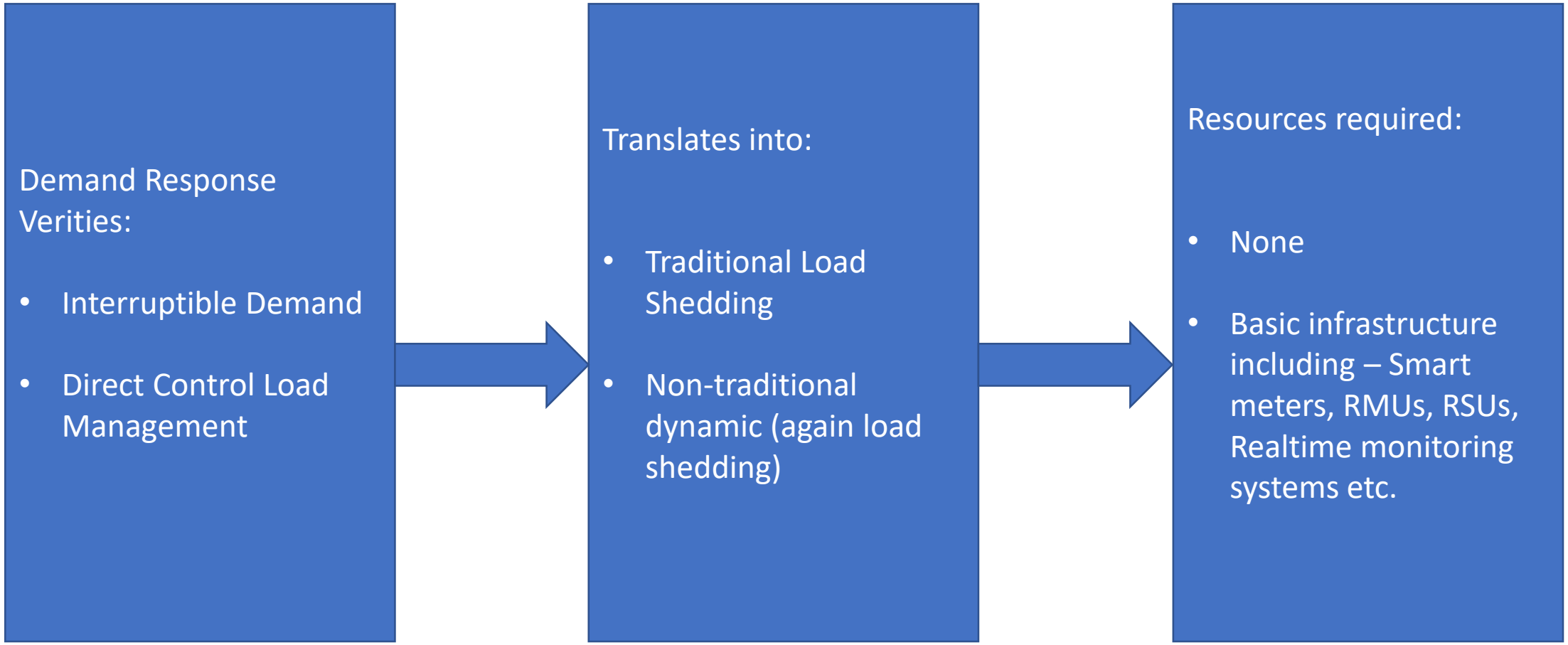
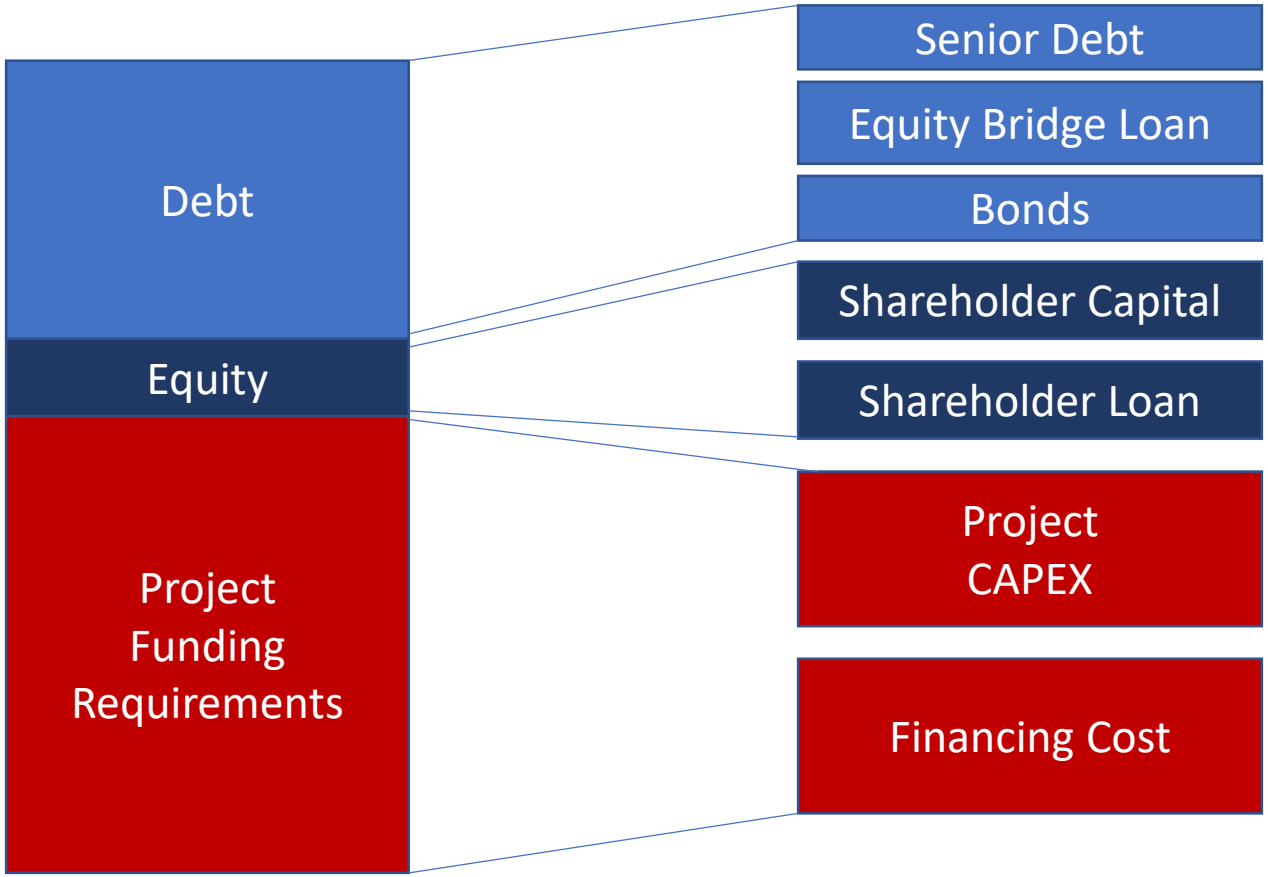
Demand Side Management (DSM)

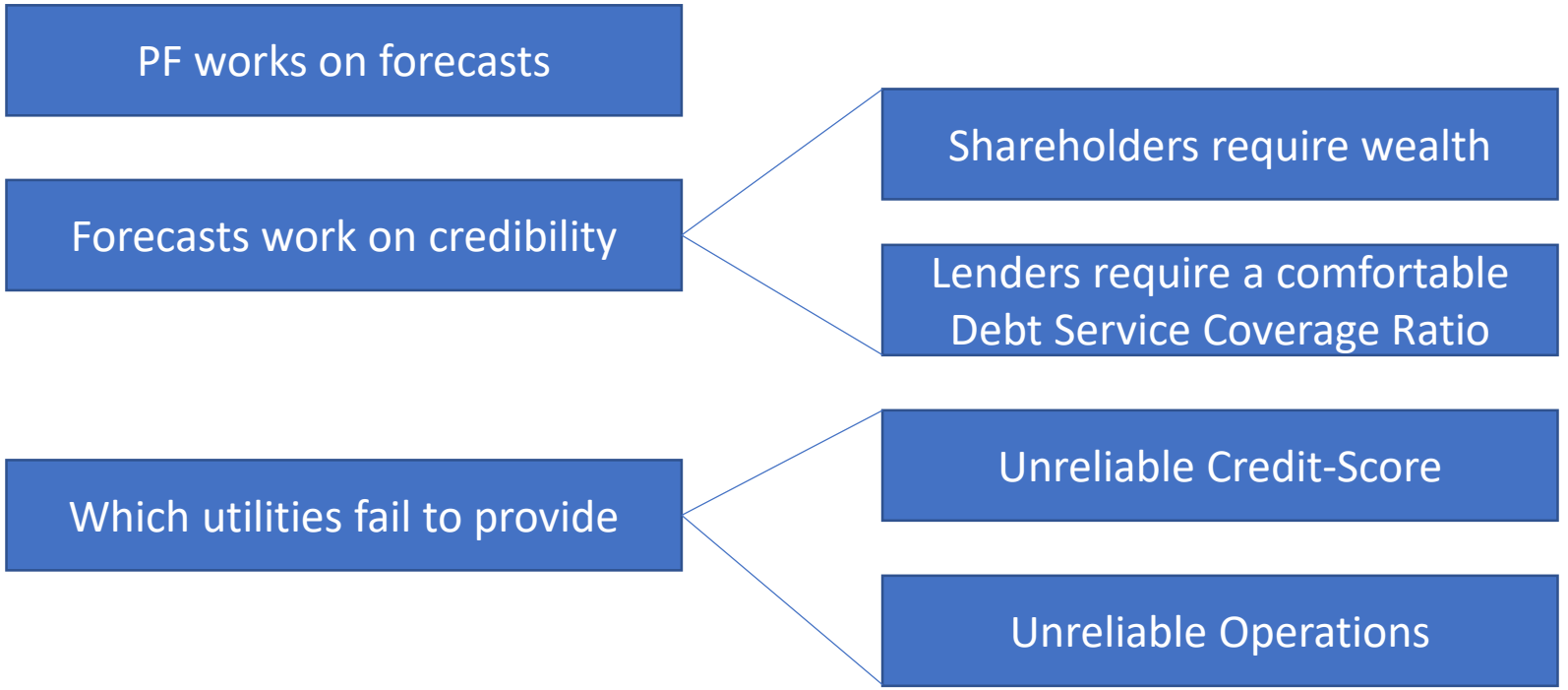


General Project Finance (PF)

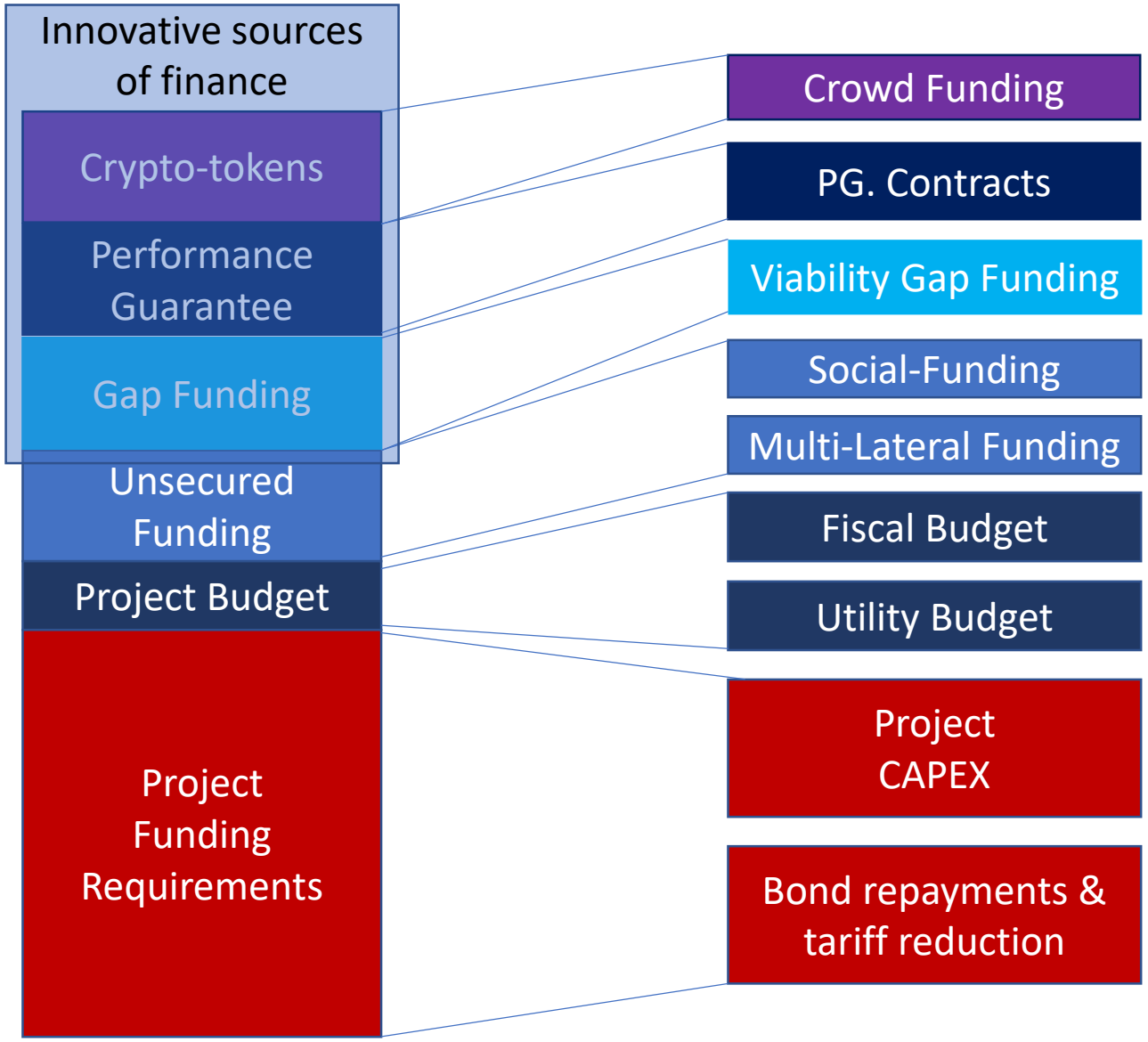


- Project Finance is an off-balance sheet transaction unlike corporate finance.
- Project is handled by a SPV. The Funding is provided based on a revenue forecast model.
- The projections do not rely on company's past performance. However, loans could only be secured by companies with good credit ratings.
- Primary sources of funds are Debt and Equity or a combination of the two forming a source matching the risk profile of the project

Why can’t PF mechanisms integrate with DSM



Advanced Finance For Utilities



- General Project finance fails to support utilities primarily due to reasons of repayment security.
- Fiscal and utility budgets are reserves kept aside for such projects. However, these do not suffice the project needs.
- The government/ financial institutions could provide a Gap funding to meet project costs. However these gap findings are capped.
- Social-funds from NPOs and NGOs are repayment free but often come in bits and pieces. Multilateral organizations like ADB and World Bank provide support to develop social infrastructure but require high level of project scrutiny.
- Infrastructure bonds are government/infrastructure institutions backed secured fundings, but these are limited and not always available.
- Crowd funding is one innovative option. The funding comes directly from people, who would like to be early investors in the project in return of some confidence in terms of tariff reduction

Case Study 1: Gap Funding

Problem Statement: "Shandong Energy Efficiency and Emission Reduction Project"

- Industrial sector consumed ¾ of energy
- Utilities were dependent on high carbon sources (consuming 340 million tsce p.a. increasing at 12.5% p.a. from 1995 to 2009)
- EE methods only existed for large industries
- Funding gap existed for EE initiatives for MSMEs

Expectations from the project:

- Build the knowledge and capacity of the provincial government to evaluate and assess risks for EE project investments
- Enable rollover of the ADB loan to support multiple batches of subprojects and leverage additional domestic investments
- Enhance governance and safeguard compliance

Solution Proposed:

ADB approved a financial intermediation loan of US$ 100 million in 2011 to finance the reduction of energy intensity and emissions from energy-intensive industries.

Executing agency:

Shandong Provincial Government

Financing Institution:

Asian Development Bank

Outcomes:

- Energy savings of 263,417 tsce p.a.
- Accumulated energy savings were almost 1.6 times the original target
- Due to financial intermediation loan, the project improved the capacity of the government in planning, investment, and management of energy conservation

Case Study 2: Crowdfunding

Problem Statement: German School Energy Efficiency Program

This school facility was built toward the end of the 19th century with a total area of 10,000 sq. meters. Currently this church-run institution serves 1,150 children and youths. The project focused on installing LED lighting in a new extension of 1,100sq. meter built in 2001, and the sports field. The project required a total investment cost of EUR 46,400.

Expectations from the project:

The project with a total investment cost of EUR 46,400 is expected to generate savings from reducing electricity costs for lighting by 71.46 % (or EUR 7,282.29 annually, not accounting for possible increases in energy prices) and from reduced maintenance costs.

Proposed Solution:

- The project is being executed by German Energy Service Company (ESCO).
- The ESCO sells the LED installation to the school through a lease purchase over 10 years with an annual payment of EUR 6,542.
- The ESCO received EUR 46,400 crowdfunded seven year loan with an approximate interest of 7% p.a.

Outcomes:

German crowdfunding platform, Bettervest has hosted more than 39 Energy Efficiency projects all of which have reached their funding targets. This is regarded as a major achievement in the crowdfunding industry. These projects varied from size of EUR 4.1 thousand to EUR 0.2 million. One of the projects involved replacing existing lighting system with LEDs at a school in Hungary

References to case studies

- https://development.asia/case-study/closing-industrial-energy-efficiency-financing-gap
- http://www.ieadsm.org/wp/files/2016-10-28-CF4EE-Feasibility-Study-final.pdf

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