



## Barghest Building Performance Company Presentation

Confidential

## Using Big Data to drive optimization for industrial and commercial real estate sectors

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- BBP control solution can be retrofitted into any building
- Algorithm reducing energy consumption as a Service
- Solution includes installing equipment on site and supporting it from Singapore
- Client has no upfront cost, paying us a portion of the savings achieved
- Based in Singapore but following customers to other countries in the region
- Challenges faced and suggestions

## BBP Control system is retrofitted into any existing building



Processing controller  
with Display unit



Magnetic  
Flow Meter



Rh  
Sensor



Temperature  
Sensor



Digital  
Meter

sensor input  
converted to  
minute level  
adjustment of  
existing  
equipment



Control Valve



Chillers



VFD



Cooling Tower  
Fans



VFD



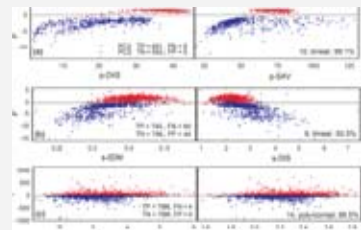
Pumps

# BBP uses site data and advanced analytics to deliver energy savings



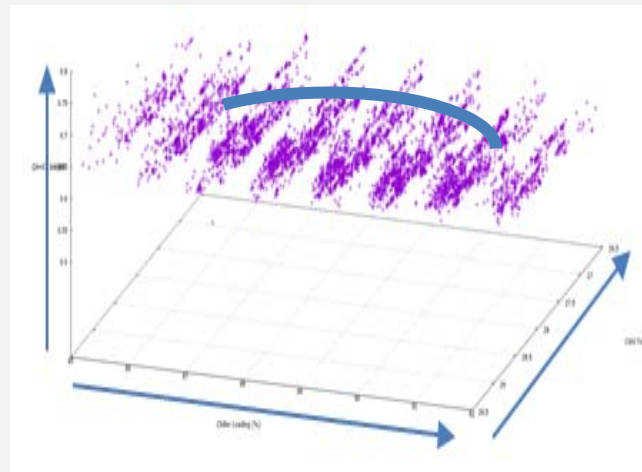
1

Vertically integrated data acquisition



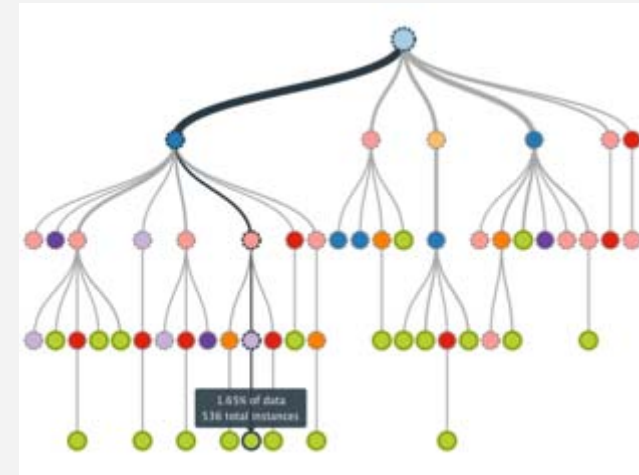
2

Complex Insight creation



3

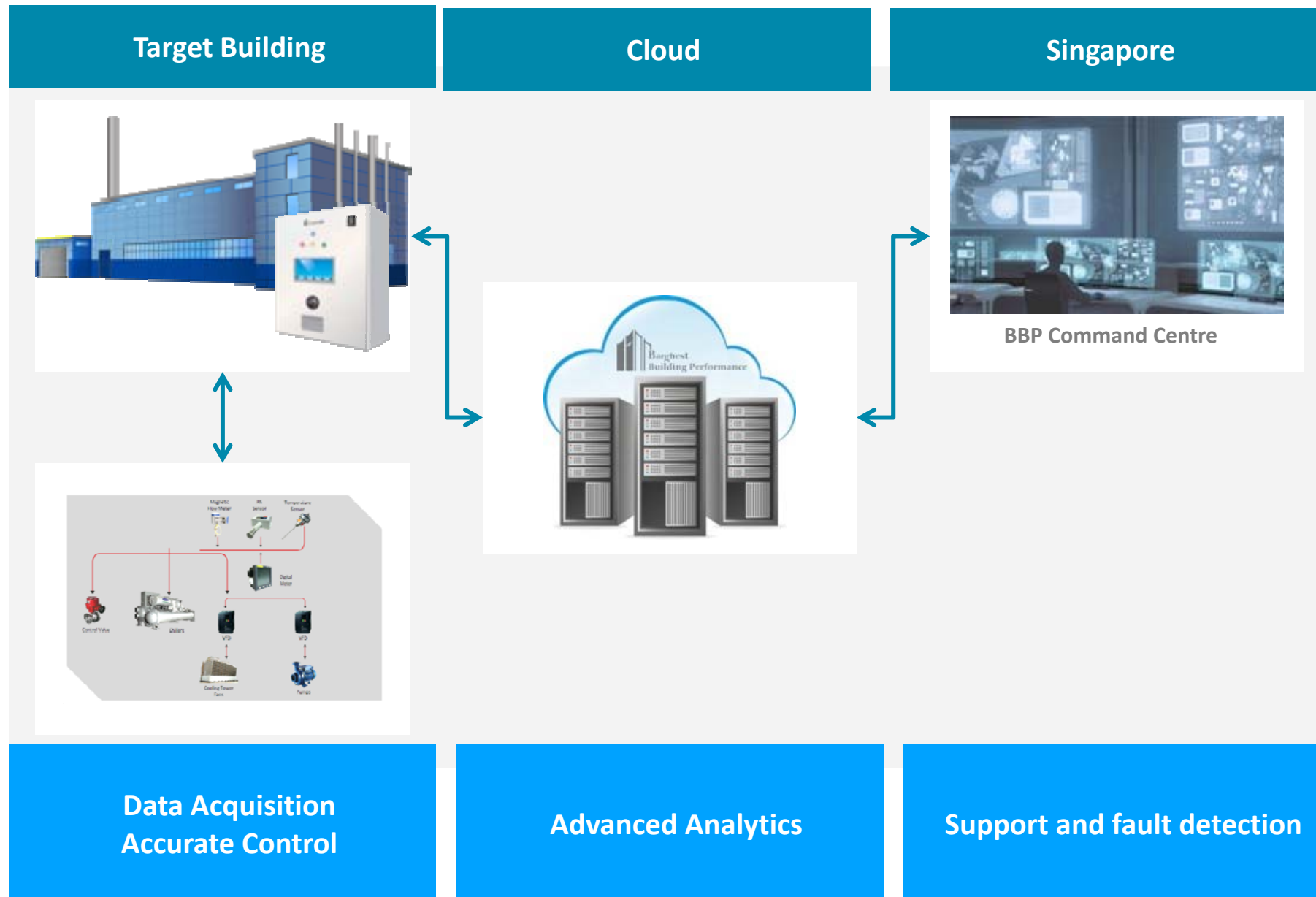
Change in control algorithm for lower energy consumption



4

Closed loop analytics and control

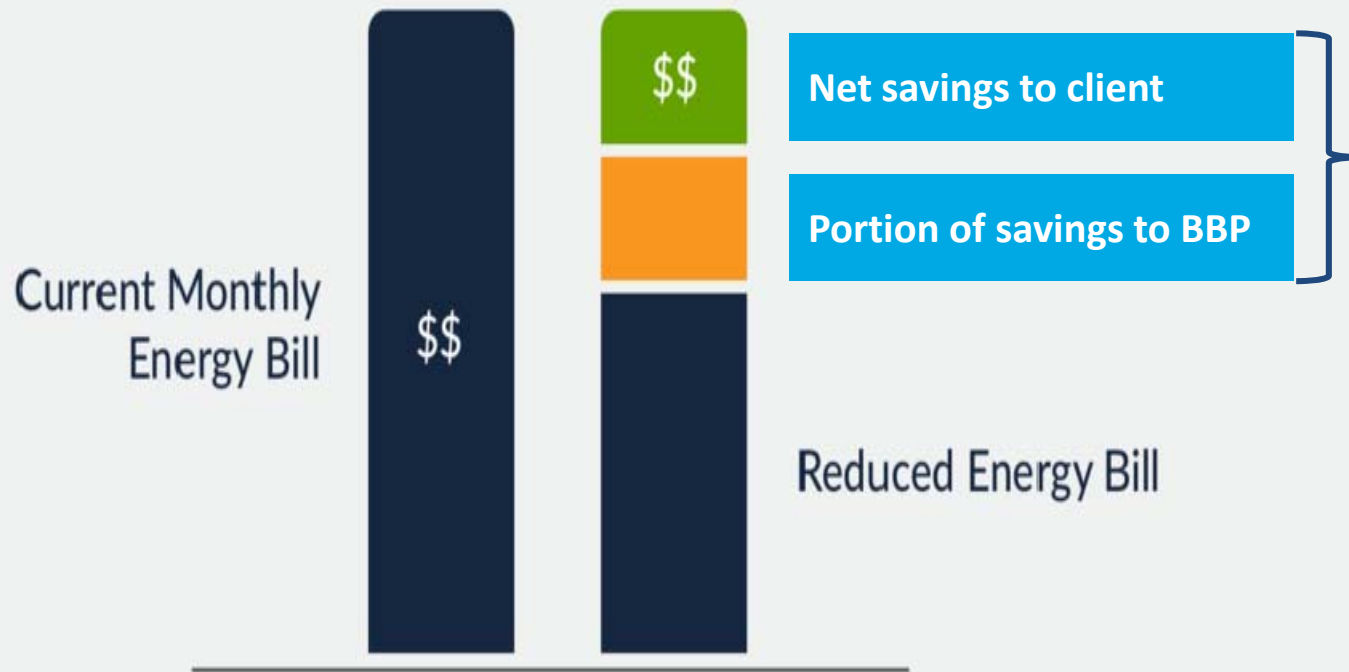
# Delivering the service requires resources on site, in the cloud and from Singapore



BBP offers its service without any upfront cost - Client pays a portion of energy savings achieved



## How Does It Work?



Savings  
calculated by  
independent  
third party



## Cloud supported setup allows for quick expanding in APAC region



■ Head quarter   ■ Offices   ■ Upcoming offices   ■ Discussions with clients



# Challenges in Techno-commercial sales process



## Challenges Faced

### Initial Presentation

- Multinational team creates visa challenges
- Business visa requirements for sales meeting – requiring letter of invitation from client – increases initial hurdle

### Site measurements

- Estimation of energy efficiency potential requires cross border transportation of equipment with unclear rules
- Only local contractors are allowed to perform physical measurement works on site – benefitting incumbents in each country and creating hurdle

### Contract negotiation

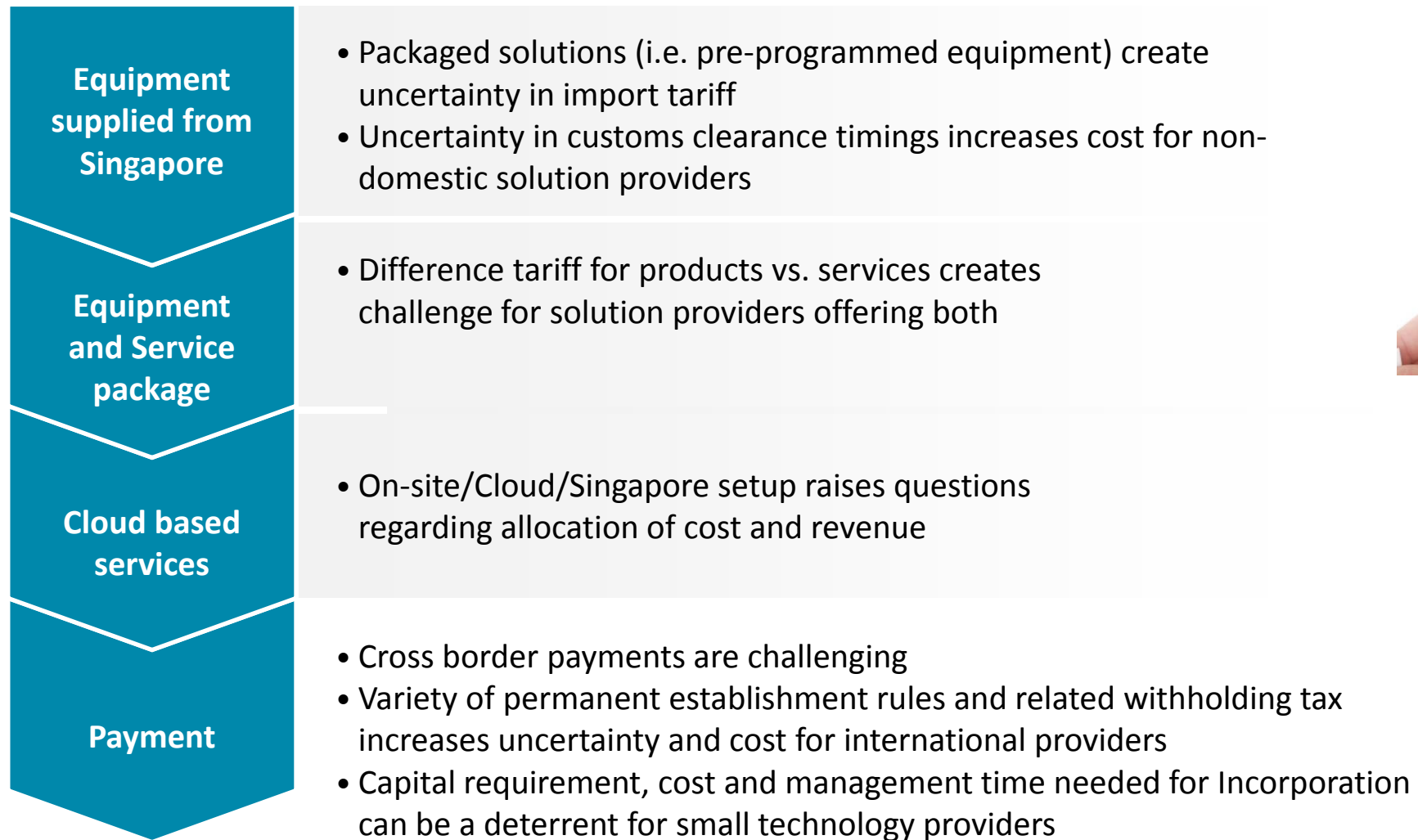
- Location of Contract signing has tax implications





## Challenges in solution delivery

### Challenges Faced



# Suggestions for simplifying expansion of environmental technology in APAC region



## Suggestion

- Single Accreditation for products and services
- Transparent Rules and Regulations for Permanent Establishment; and Sufficient grace period before entry into force of new rules / regulations
- To address complexity in tariff for purchase of goods and services - Mandate Customs Authorities to practice Advance Rulings
- Ease of setting up local entities

## Example for Singapore



- IE Singapore as a Single source of information and regulation
- Uniformity of GST and import tariff
- Low capitalisation requirement
- No limits for foreign ownership

<https://vimeo.com/216146689>