IDENTIFYING PATHS TO SUCCESS: LEARNINGS ON BARRIERS AND DRIVERS TO DEMAND RESPONSE PROGRAM

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July 31, 2012

Overview of OPA and DR

- Who is the Ontario Power Authority (OPA)?
- Portfolio of conservation initiatives to meet provincial targets
- Suite of DR initiatives

C&I Sector

peaksaverPLUS	DR-1	DR-2	DR-3
• 180,000+ participants • ~100 MW	• New initiative • Voluntary commitment	• Daily contractual load shifting • 3 participants • 119 MW	• Contractual event-based • 490 contributors • 3 Aggregators • 400 MW

Why are we here?

- **Importance of knowing the customer**
  - What drives them to DR? What are there concerns?
  - Voluntary vs. contractual DR programs?
  - Does it vary by sector?
- **Share key insights on appropriate marketing messages**
  - What's important to THEM
- **Identify key barriers to participation**
  - So that YOU can address them
- **Highlight key recommendations from study**
  - Provide actionable insights for DR programming

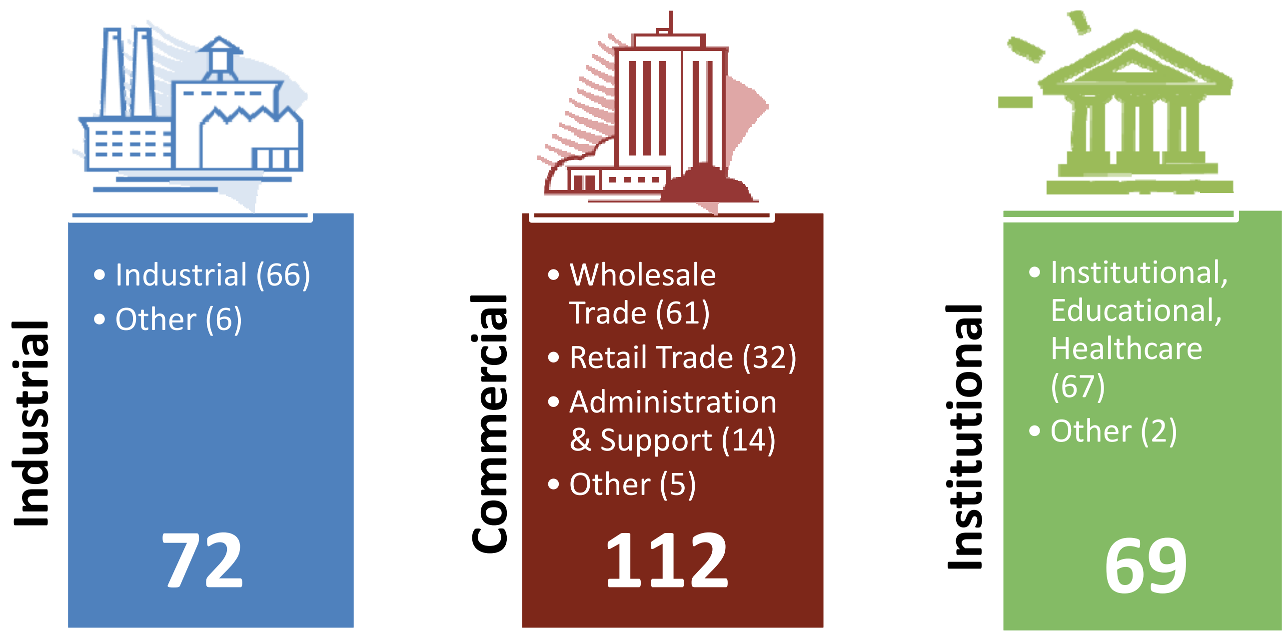
Origins and Objectives

- **Process evaluation for C&I DR Suite conducted by Opinion Dynamics Co.**
  - Key learnings and recommendations for current program processes
- **DR segmentation survey with 250+ non-participating customers in Ontario**
- **Objectives of study**
  - Examine the barriers and drivers to participation in contractual and voluntary DR programs
  - Characterize main sectors for customized marketing and outreach

First in Ontario!

Methodology

- **Targeted primary decision makers**
- **Completed a total of 253 non-participant interviews**



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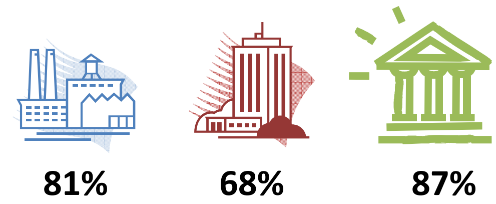
General Awareness

- **High awareness of DR programs**



- **Awareness and understanding of peak load is mixed**
  – Most could not determine overall load, but could name primary source of load
  – Consumption typically monitored through monthly bills only

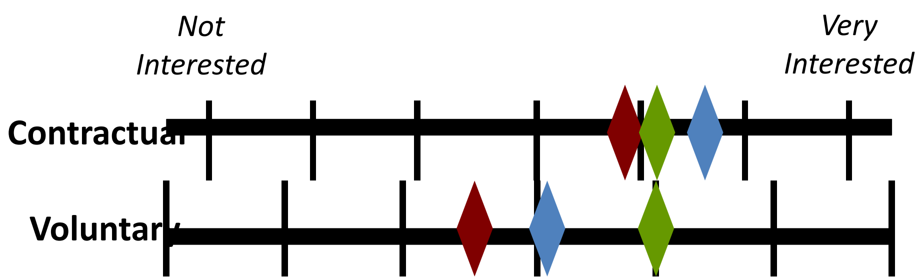
- **Monitoring of energy usage primarily done internally**

Interest in DR Programs by Sector

- **Higher preference for voluntary DR program**

Contractual	**25%**	**30%**	**35%**
Voluntary	**60%**	**55%**	**55%**
Neither	**8%**	**8%**	**6%**

- **Those who preferred contractual DR are significantly more interested in participation**



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Interest in DR Programs

Contractual	Voluntary
Higher incentives (78%)	Inability for off-peak operation(34%)
More motivation (21%)	Higher flexibility (30%)
Higher energy bills (7%)	Control (15%)

- **Customers interested contractual programs are driven by incentives**
- **Customers interested in voluntary programs want flexibility and security**

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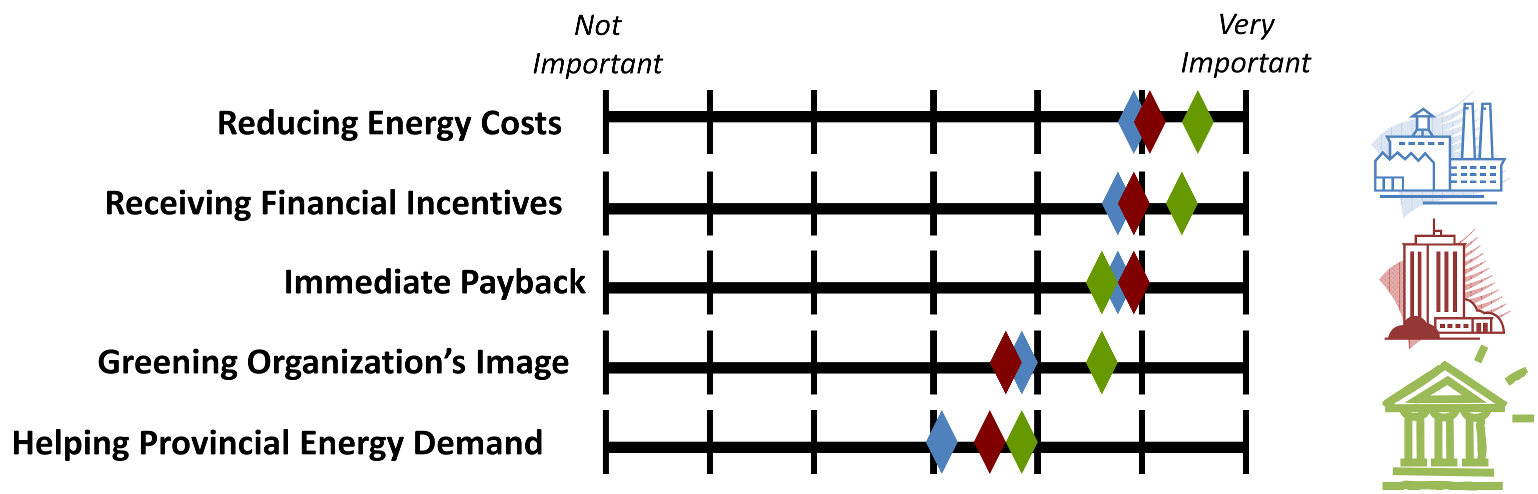
Motivations and Drivers – Messaging DR

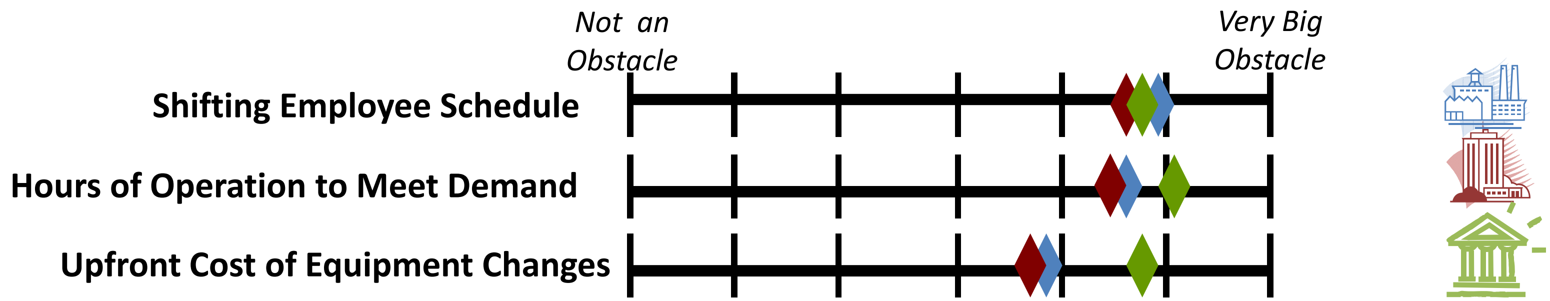
- **Appropriate marketing messages for DR**



- **Similar trends observed for contractual vs. voluntary programs**

Barriers to Program Participation in DR

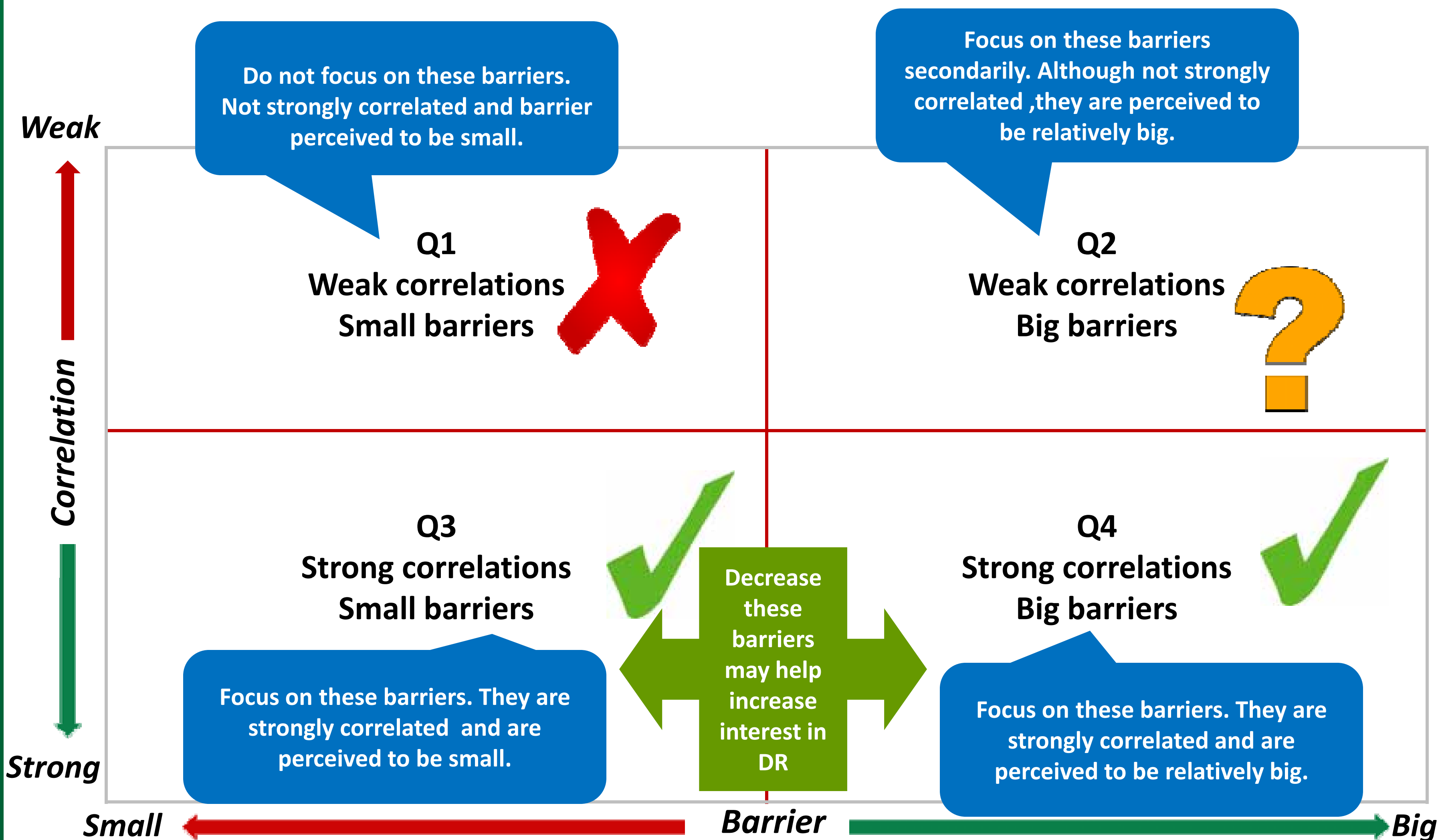
- **Respondents ranked possible obstacles that would prevent them from participating**
- **Key barriers include:**

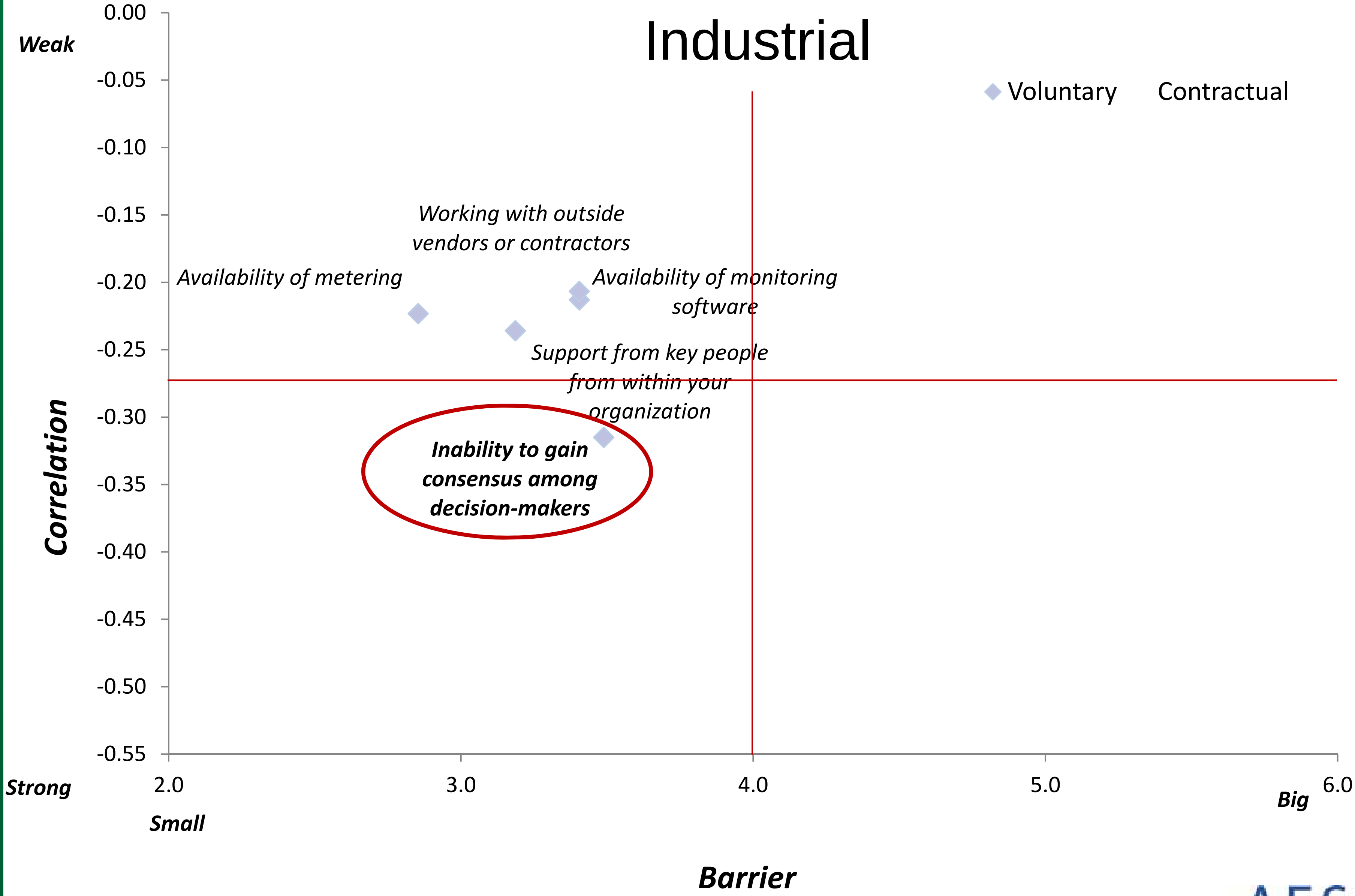


  - Institutional cited the greatest number of obstacles
  - Commercial indexed lower on barriers than other segments
  - Decision-making not cited as an important barrier

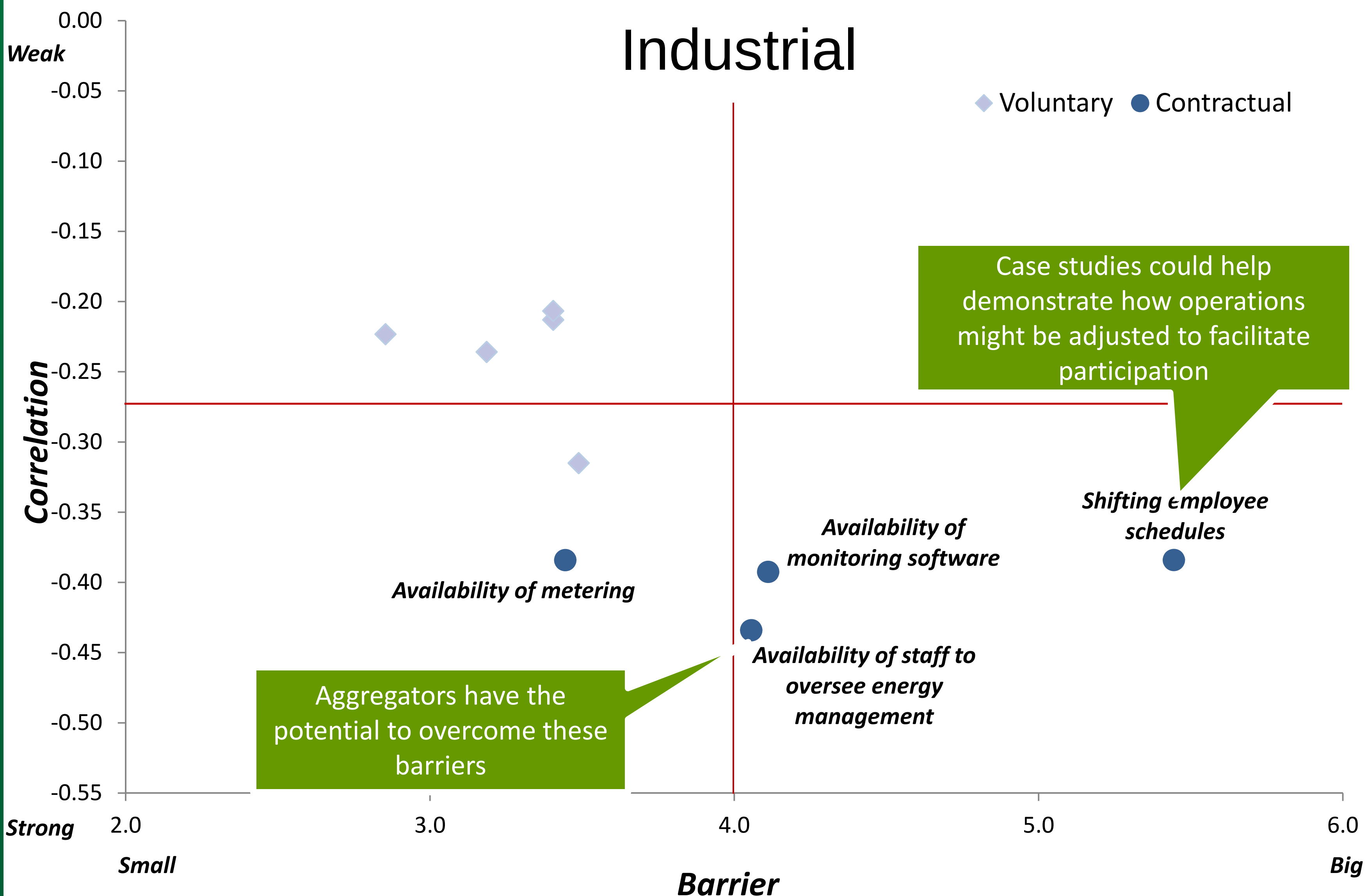
Correlation of Barriers and Program Interest

- **Barriers are strongly associated with program interest across all sectors**
- **However, particular barriers emerge by sector when correlated with program interest**
  - New barriers become meaningful for each sector
    - Identifies program development opportunities
  - Some barriers have strong negative correlations with program interest
    - The more they perceive great barriers, the less interested they are in participation
    - Barriers vary by program type and sector


Do not focus on these barriers. Not strongly correlated and barrier perceived to be small.
Focus on these barriers secondarily. Although not strongly correlated ,they are perceived to be relatively big.
Weak
Q1
Weak correlations
Small barriers
Q2
Weak correlations
Big barriers
Correlation
Q3
Strong correlations
Small barriers
Q4
Strong correlations
Big barriers
Decrease these barriers may help increase interest in DR
Focus on these barriers. They are strongly correlated and are perceived to be small.
Focus on these barriers. They are strongly correlated and are perceived to be relatively big.
Strong
Small
Barrier
Big



Industrial
Voluntary
Contractual
Weak
Strong
Correlation
0.00
-0.05
-0.10
-0.15
-0.20
-0.25
-0.30
-0.35
-0.40
-0.45
-0.50
-0.55
Working with outside vendors or contractors
Availability of metering
Availability of monitoring software
Support from key people from within your organization
Inability to gain consensus among decision-makers
2.0
3.0
4.0
5.0
6.0
Small
Big
Barrier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-0.50
-0.55
Strong
2.0
3.0
4.0
5.0
6.0
Small
Big
Barrier
Case studies could help demonstrate how operations might be adjusted to facilitate participation
Shifting employee schedules
Availability of monitoring software
Availability of metering
Availability of staff to oversee energy management
Aggregators have the potential to overcome these barriers

Commercial & Medium Size Business (n=112)

Own 60%⬇ Rents 37%⬆
Pays Bill 98% (n=41)

Square Footage*

Up to 50,000	47%
50,001 – 100,000	32%
100,001 – 300,000	14%
300,001 – 1,000,000	6%
1,000,000,000+	1%

Employees*

Up to 20	36%
21 – 50	27%
51 – 100	23%
101+	14%

NAICS Codes

42, 44, 45, 56

Contact with...

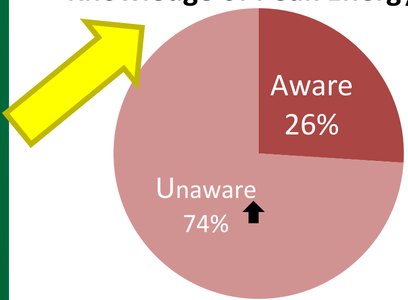
OPA	4%
Aggregator	5%

Outsources Energy Saving Management

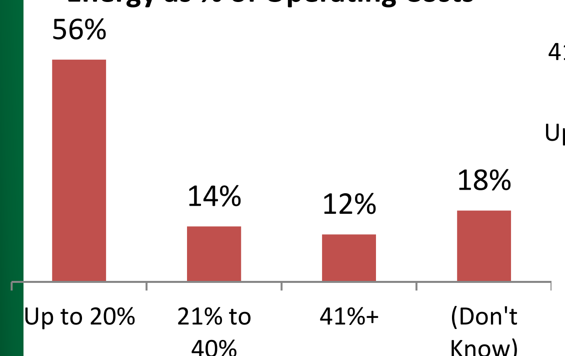
24%

Usage Profile

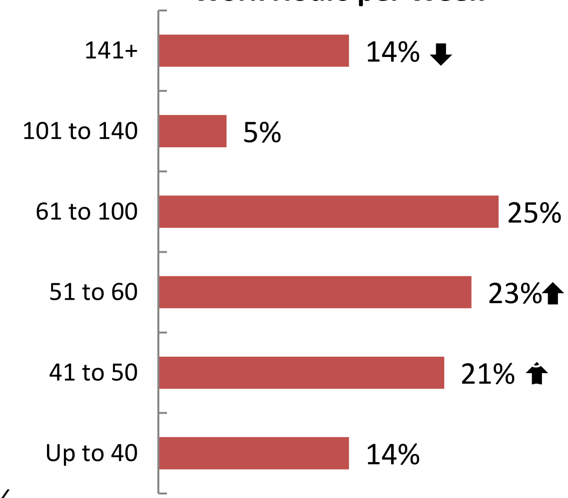
Knowledge of Peak Energy Load



Energy as % of Operating Costs



Work Hours per Week

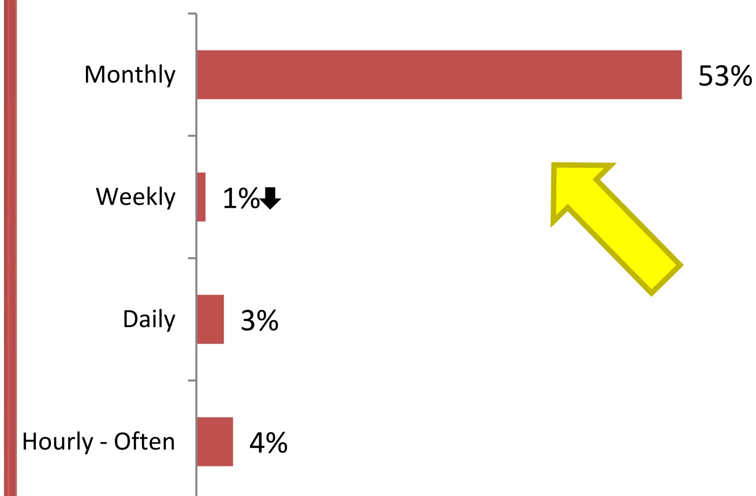


Load Shift Potential

Estimated Cut (n=94)	6%
Don't Know	16%

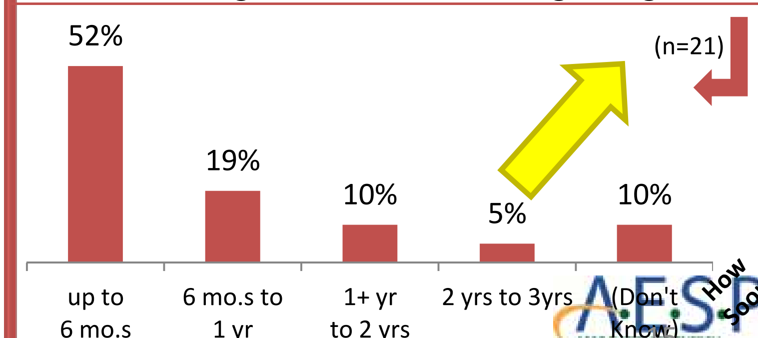
Monitoring of Energy Usage

Internal 60%⬇ **3rd Party** 9%⬇



Current Peak Action

Current Change 13% **Considering Change** 19%



Past 3 Years

Energy Efficiency Improvements	79%
Peak Actions	20%

Awareness of DR (n=75)

General Awareness	68%⬇
Past Participation	5%

Heard of OPA's DR Program

DR-1	9%⬇
DR-2	7%
DR-3	7%

* No Significance Testing Conducted

Recommendations from Study

- **Decision Making primary barrier to all interested sectors**
  - Collateral to help stakeholders “speak” to one another
  - Workshops to help promote and educate on DR program options
- **Greatest opportunity with Institutional**
  - Develop leadership “challenges” or “initiatives”
- **Assistance required in identifying load shifting opportunities**
  - Develop case studies and best practices
  - Must “see it for themselves” and learn from similar firms
- **Metering remains a barrier, but opportunities exists**
  - Consider meter payment options
    - Paid by aggregators; incurred cost by Program

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ANY QUESTIONS?

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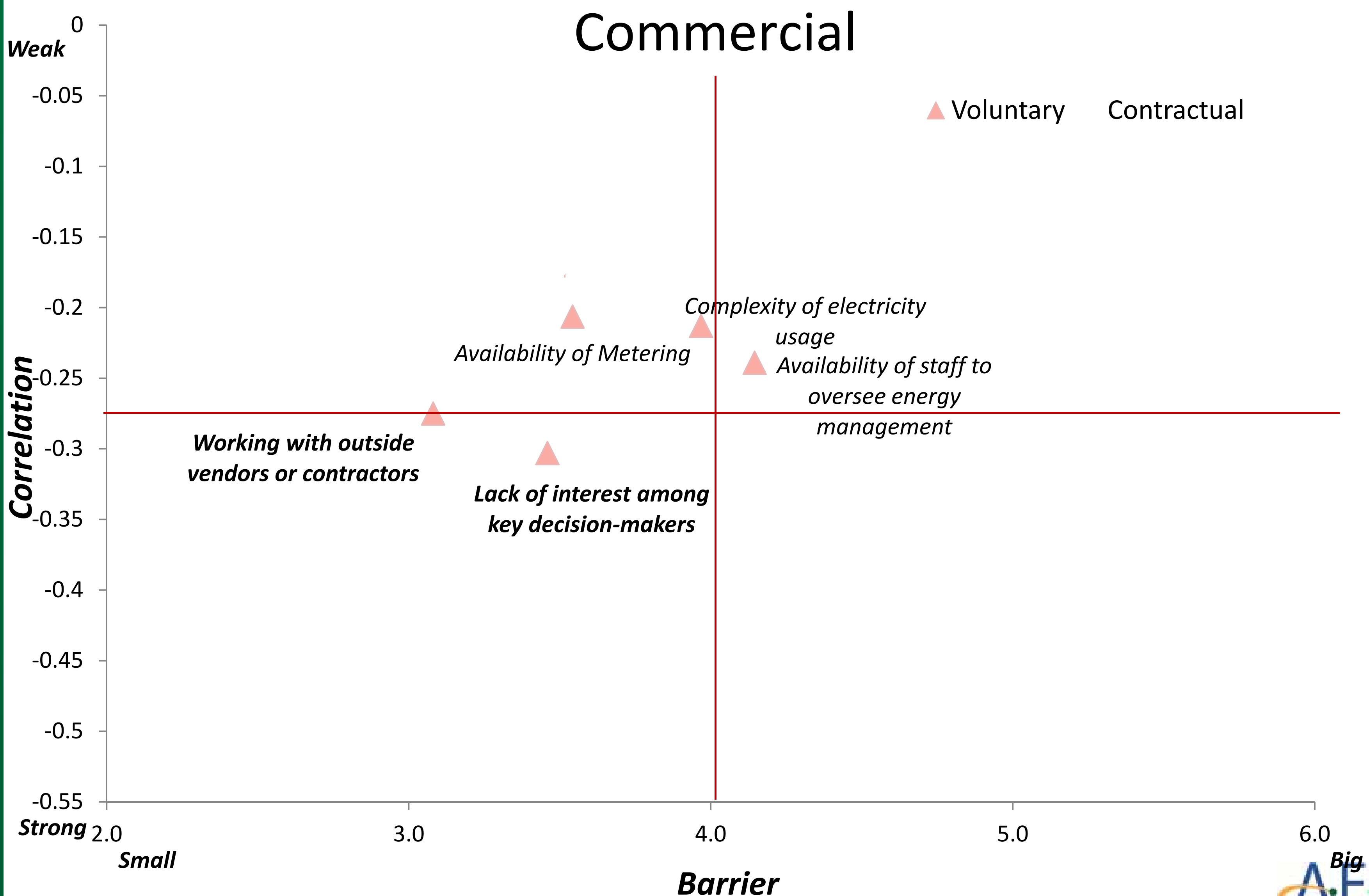
Additional Slides



Commercial
Voluntary
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0
Weak
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Strong
Correlation
Availability of Metering
Complexity of electricity usage
Availability of staff to oversee energy management
Working with outside vendors or contractors
Lack of interest among key decision-makers
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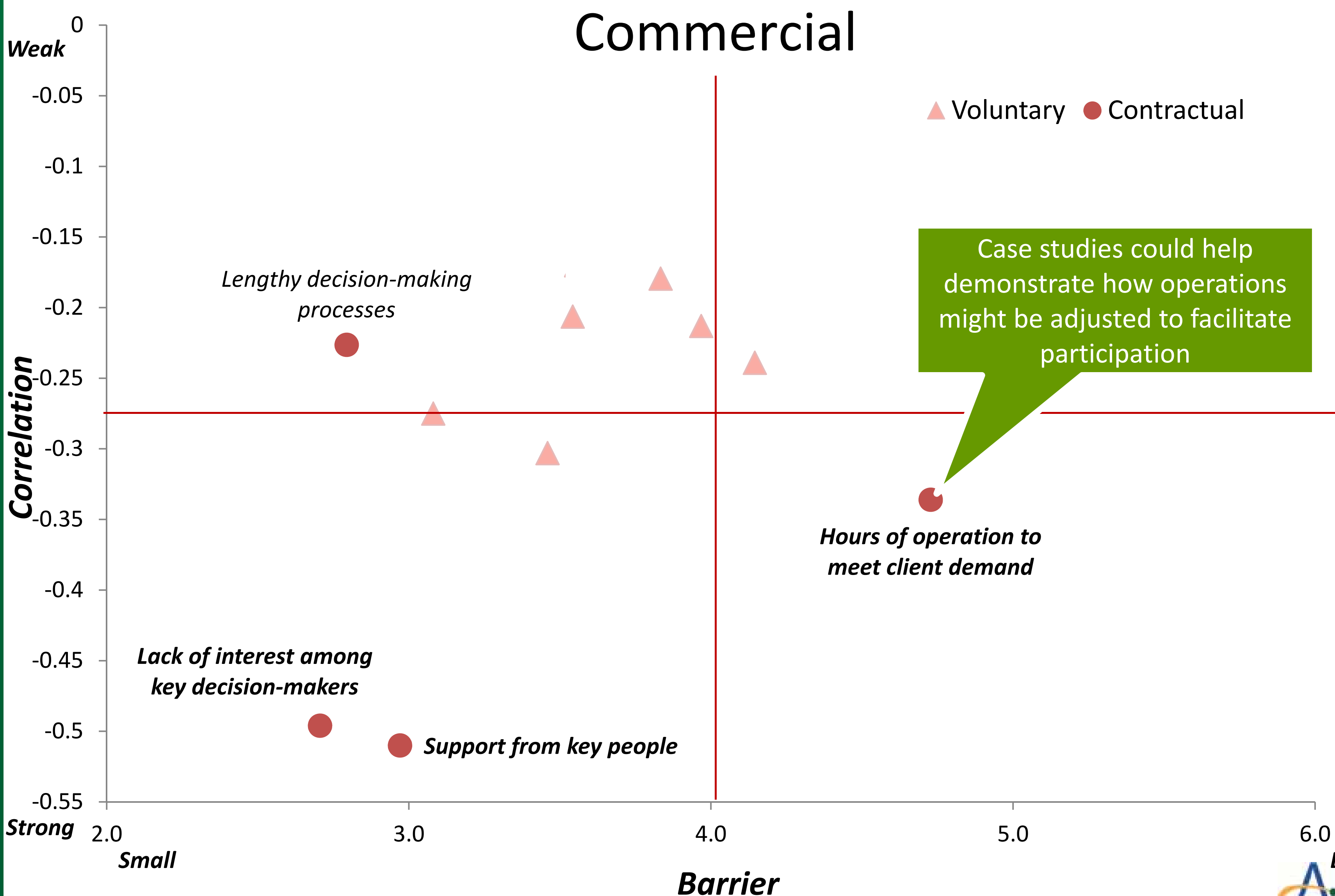
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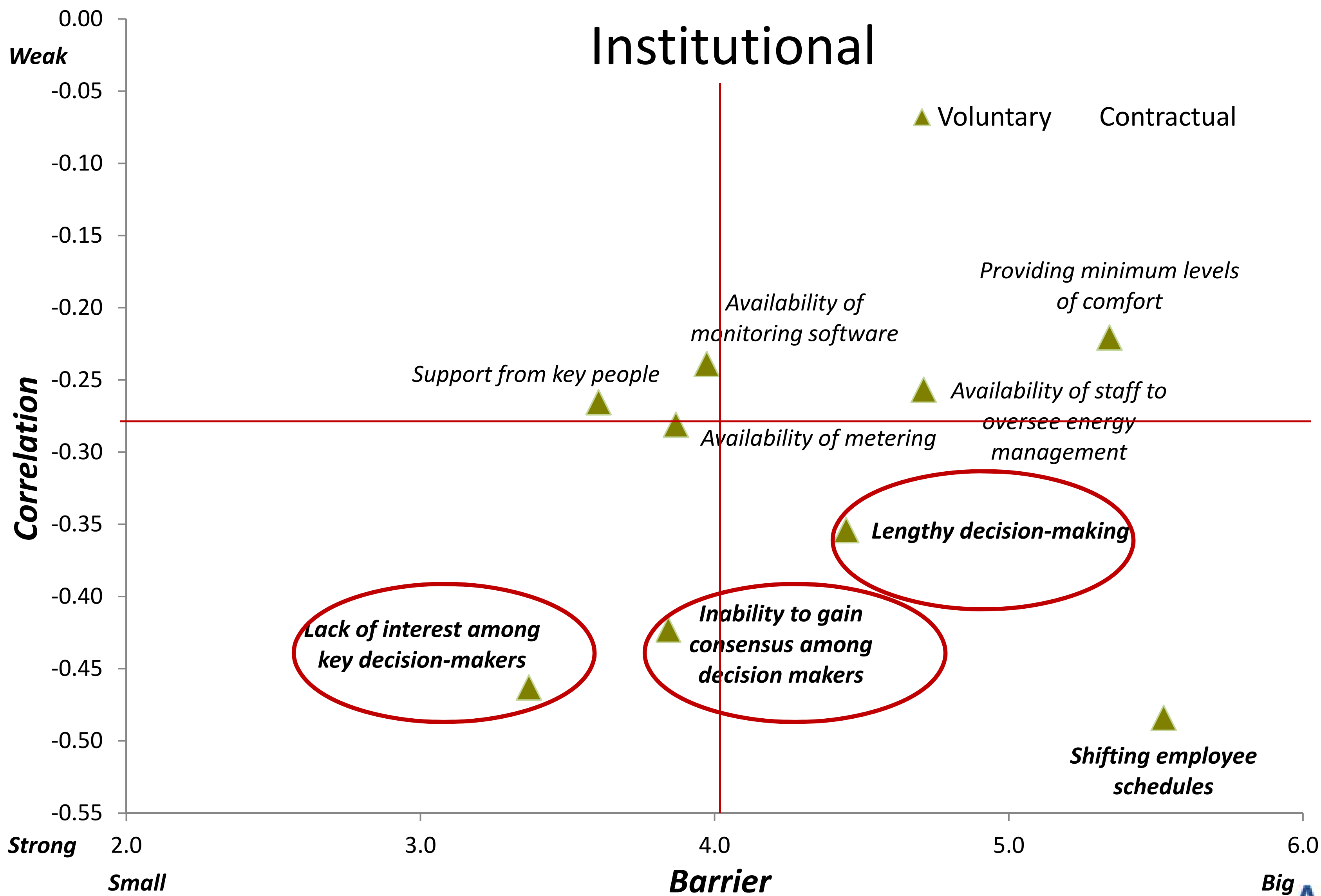
Barrier
Small
Big
2.0
3.0
4.0
5.0
6.0
Lengthy decision-making processes
Hours of operation to meet client demand
Lack of interest among key decision-makers
Support from key people
Case studies could help demonstrate how operations might be adjusted to facilitate participation


Institutional
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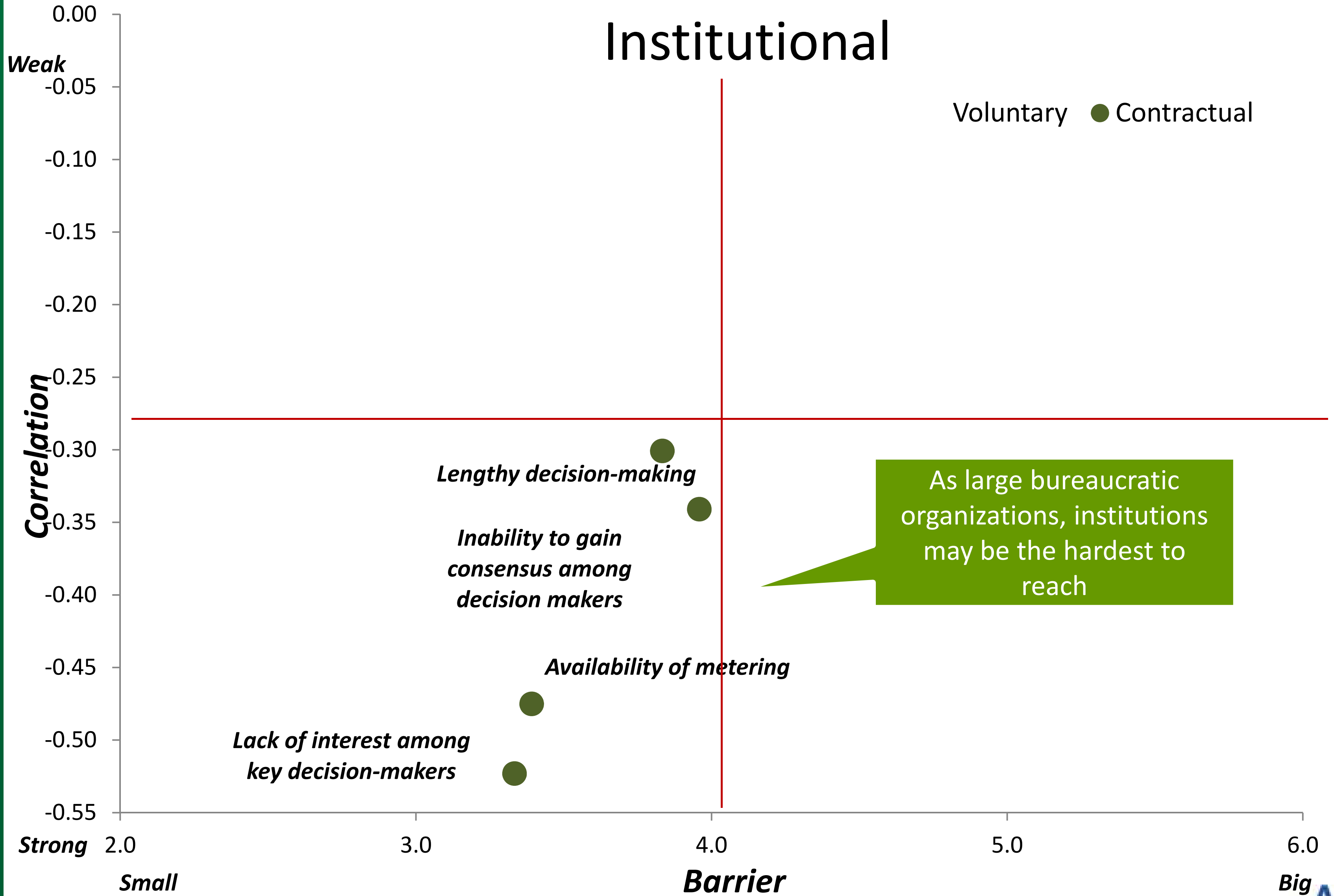
-0.45
-0.50
-0.55
Strong
Correlation
2.0
3.0
4.0
5.0
6.0
Small
Barrier
Big
Providing minimum levels of comfort
Availability of monitoring software
Support from key people
Availability of staff to oversee energy management
Availability of metering
Lengthy decision-making
Lack of interest among key decision-makers
Inability to gain consensus among decision makers
Shifting employee schedules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6.0
Small
Barrier
Big
Lengthy decision-making
Inability to gain consensus among decision makers
Availability of metering
Lack of interest among key decision-makers
As large bureaucratic organizations, institutions may be the hardest to reach

Save the Date

Oct. 15-17, 2012 — AESP's Fall Conference
Long Beach, CA

Jan. 28-31, 2013 — AESP's 23rd National Conference & Expo
Orlando, FL

Apr. 29-May 1, 2013 — AESP's Spring Conference
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