

Advancing Sustainable Purchasing in Japanese & US Local Governments

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**Sustainable Purchasing
Research Initiative**



About Me

Dr. Nicole Darnall
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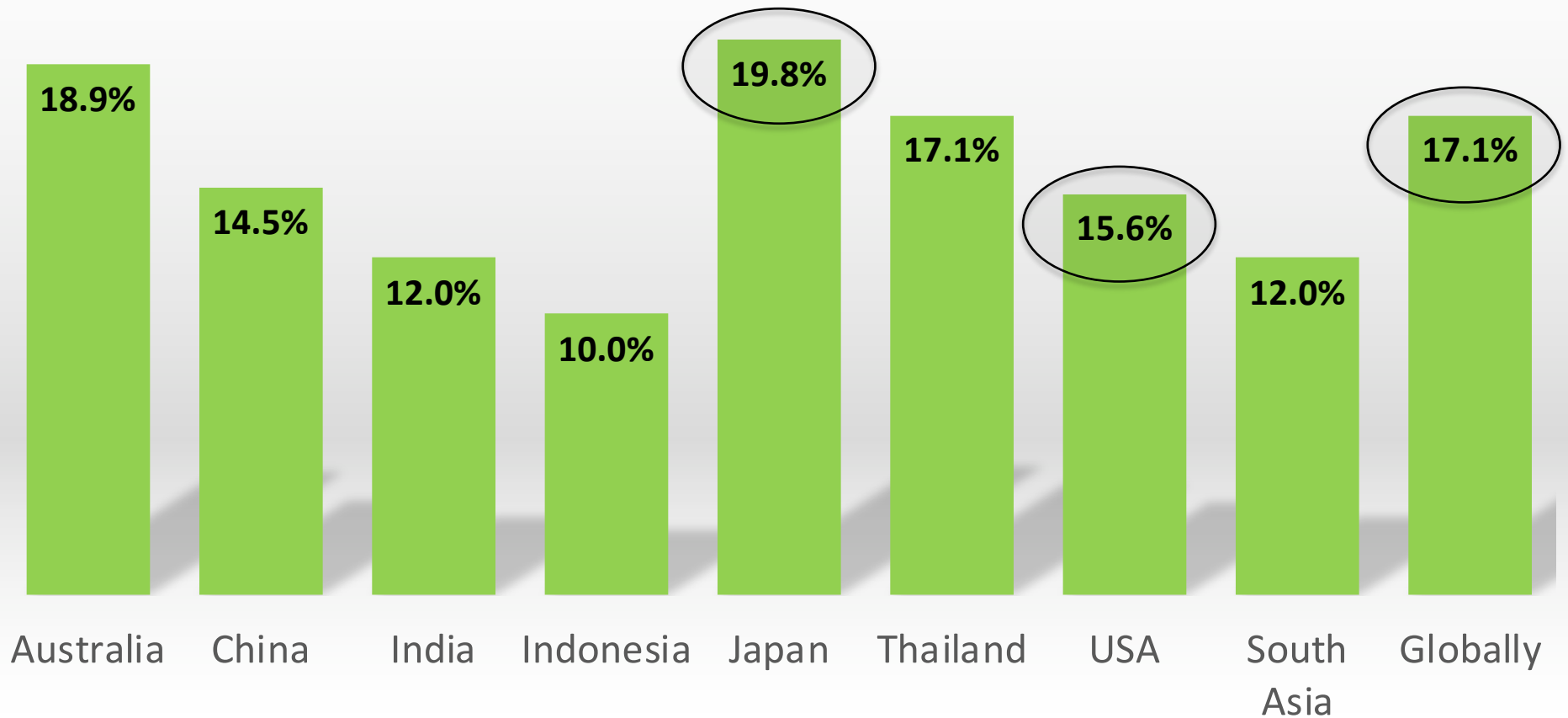


Research Institute for
Environmental Economics and Management

Visiting Scholar



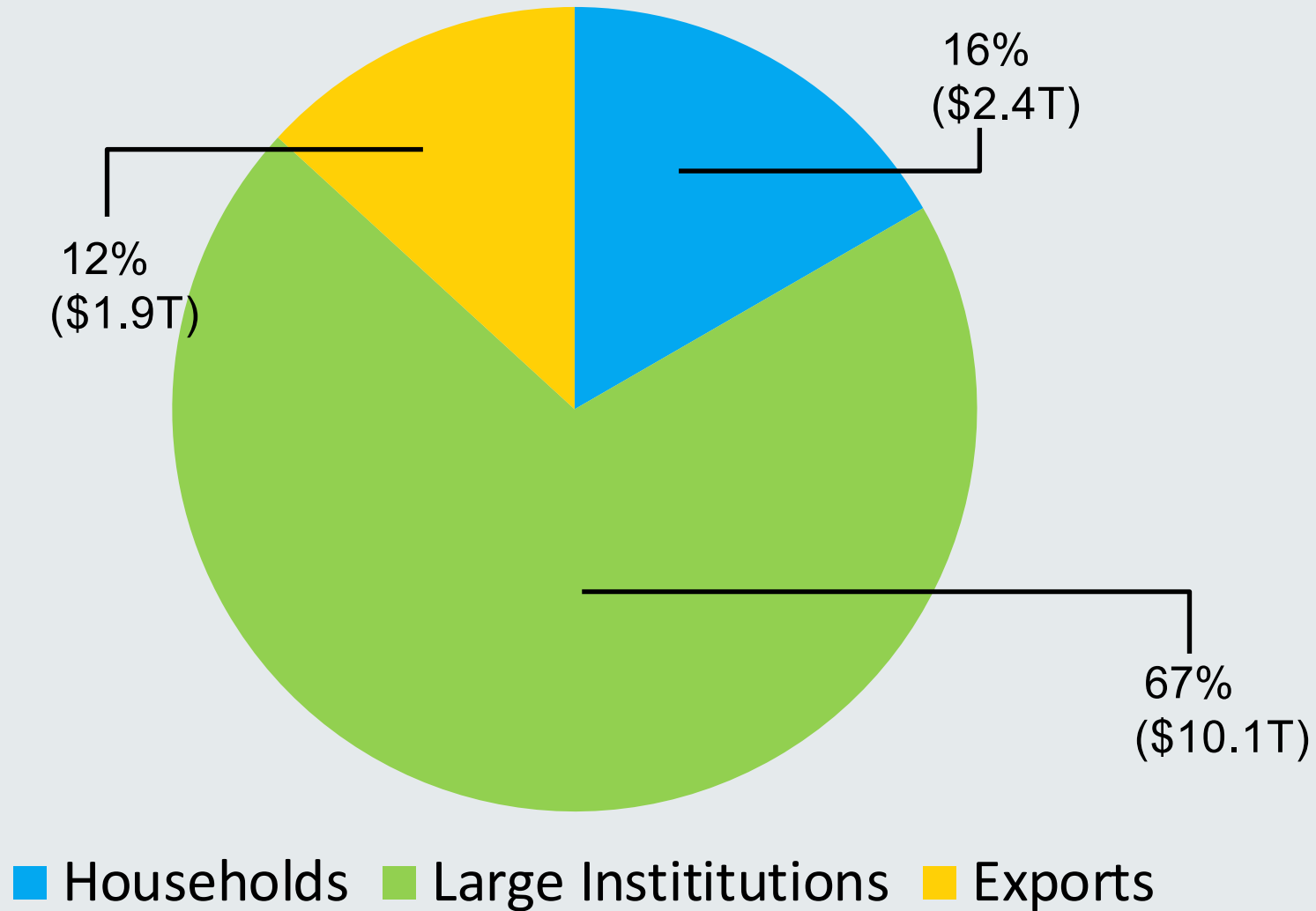
Public Sector Purchasing as % of GDP



Government is the largest buyer of goods across the globe

(World Bank Group, 2016)

U.S. Purchasing – % of Total (\$ Trillions)



Source: Sustainable Purchasing Leadership Council

Sustainable Public Purchasing (SPP)

**Introduces environmental & social
criteria into public sector purchasing
processes**

Impacts of SPP

Impacts of Product Use

Value Chain Impacts

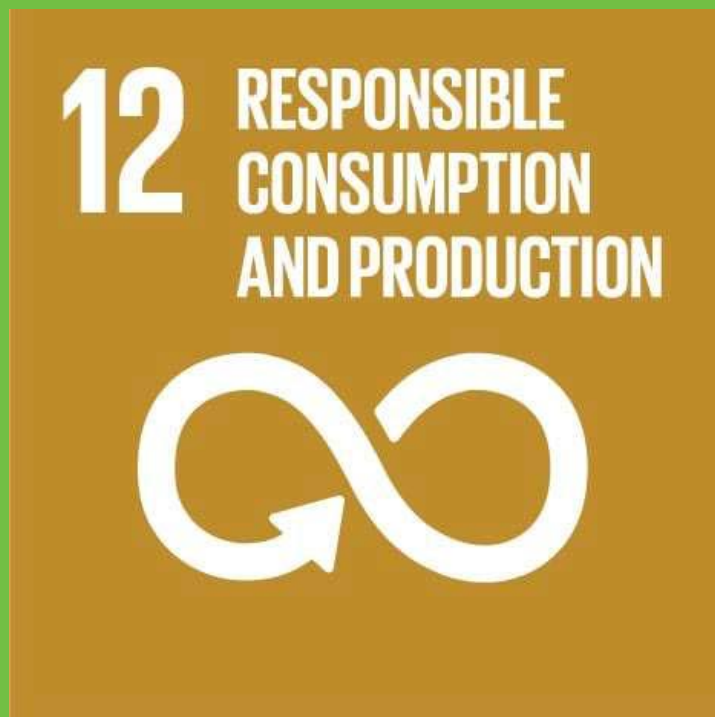
- Encouraging greater production of “green” products
- Influencing global supply chains
- Redirecting consumer markets



Government purchases have a carbon footprint **9x times that of buildings + vehicle fleets**

(U.S. General Services Administration, 2014)

United Nations SDGs



A low-angle, upward-looking photograph of several tall skyscrapers with glass facades, reaching towards a blue sky with light clouds. The perspective creates a sense of height and scale. The buildings are dark, and some windows are illuminated from within.

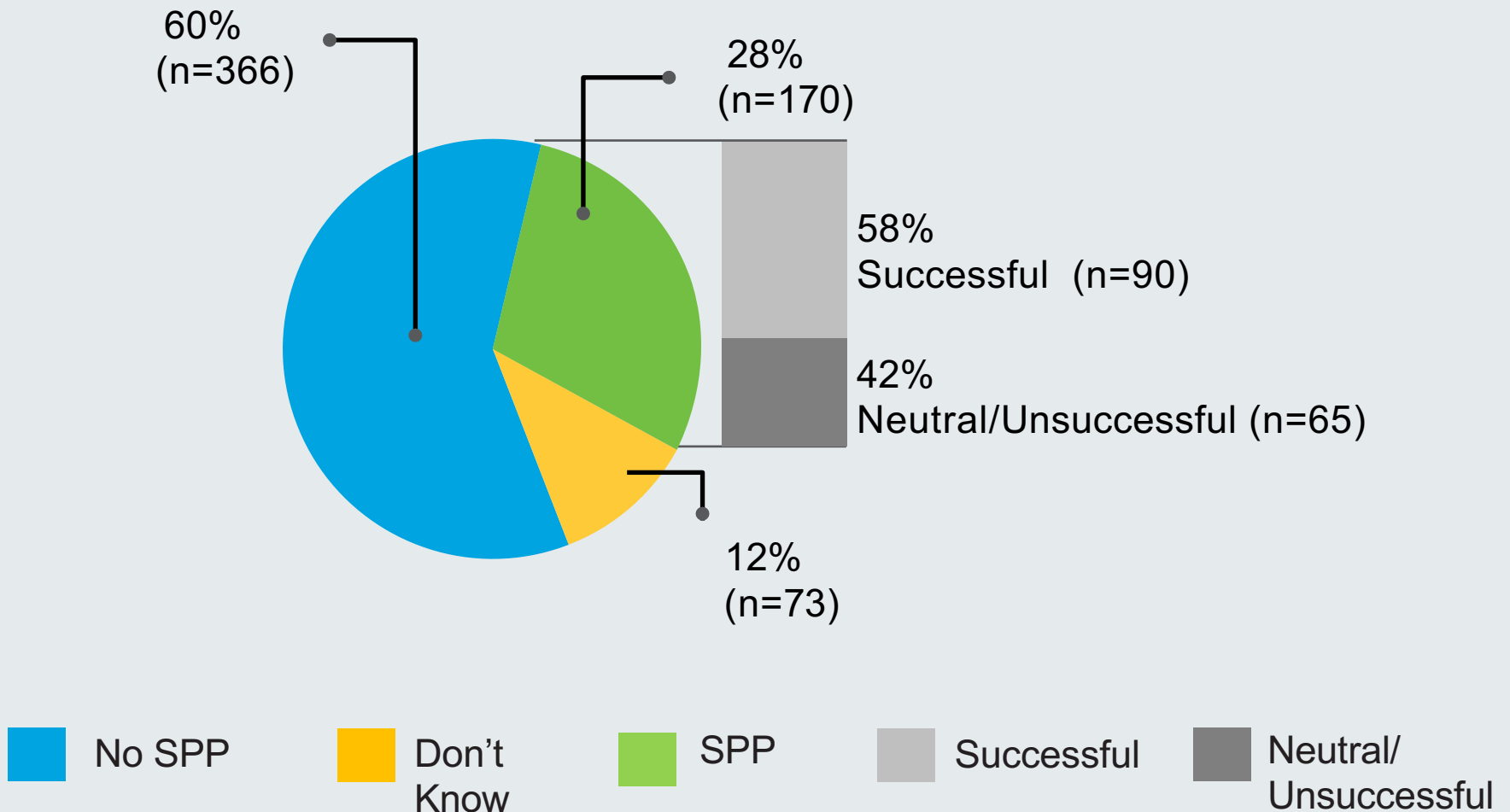
Cities as Innovators

400+ U.S. mayors pledged to meet goals of Paris Climate Agreement

U.S. Project Scope

- V. Kann Rasmussen Foundation
- 791 U.S. cities with $\geq 25,000$ residents
- Surveyed department directors
 - Finance
 - Environment
 - Public Works
- Data collection completed April 2017
- Outreach
 - Report
 - Blogs
 - Short articles in professional magazines
 - Social media campaign
 - Mail

U.S. SPP Adoption + Implementation Success



Local Governments' SPP Challenges:

1. Understanding SPP best practices
2. Disseminating information about SPP

*Do these challenges exist in
other countries?*

U.S. vs. Japan

- **U.S. implementation**

- No federal involvement, little state involvement
- Voluntary → inconsistent implementation

- **Japan implementation** (UNEP, 2013)

- National guidelines for local implementation
- All 47 prefectural governments required
- 2001 – MOE created green product database administered by Japanese Green Purchasing Network
- Inconsistent implementation at local level



Japan – Project Scope

- All 860 Japanese municipalities of $\geq 25,000$ residents
- Surveyed department directors
 - Finance
 - Environment
 - Municipal Engineering
- Data collection completed Jan. 2018
- Stakeholder **solutions** workshop Dec. 2018
 - Ministry of Environment
 - Japan Environment Association
 - Green Purchasing Network
 - Cities + Suppliers

Response Rates

U.S.

- **Surveyed 791 cities; 1,825 department directors**
 - n = 459 cities (58%) – at least one individual responded
 - **n = 616 department directors (34%)**
 - 48.2% finance directors
 - 36.5% public works directors
 - 15.3% environmental directors

Japan

- **Surveyed 860 cities; 2,578 department directors**
 - n = 778 cities (91%) – at least one individual responded
 - **n = 1,504 department directors (58%)**
 - 32.5% finance directors
 - 32.9% municipal engineering directors
 - 34.7% solid waste management environmental directors

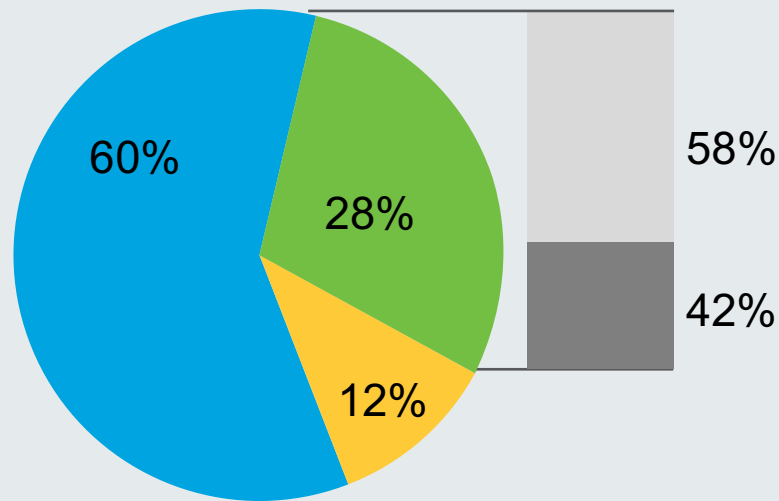
How does U.S. SPP compare to SPP in Japan?

Do the same challenges exist?

VERY *preliminary results...*

SPP Adoption + Implementation Success

United States

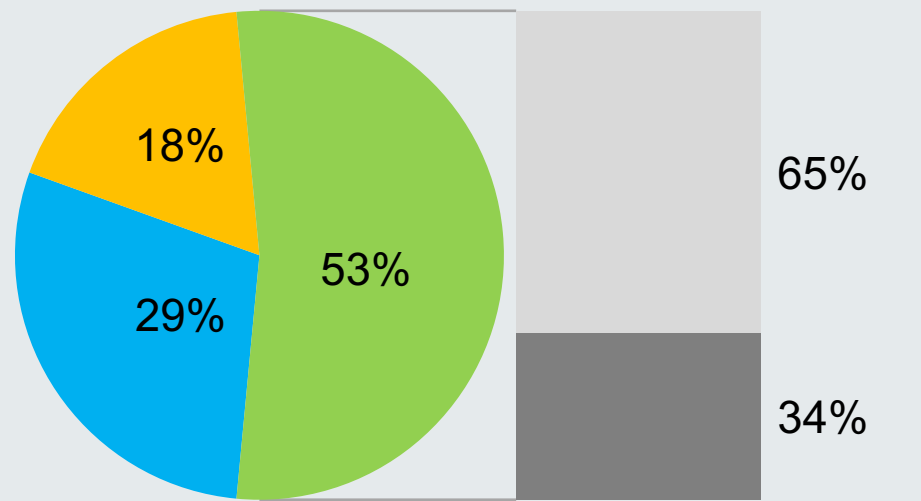


No SPP

Don't Know

SPP

Japan



Successful

Neutral/ Unsuccessful

Nearly 2x more SPP adoption in Japan

➔ *Only 7% greater implementation success*

➔ *~1/2 of Japanese cities have no SPP*

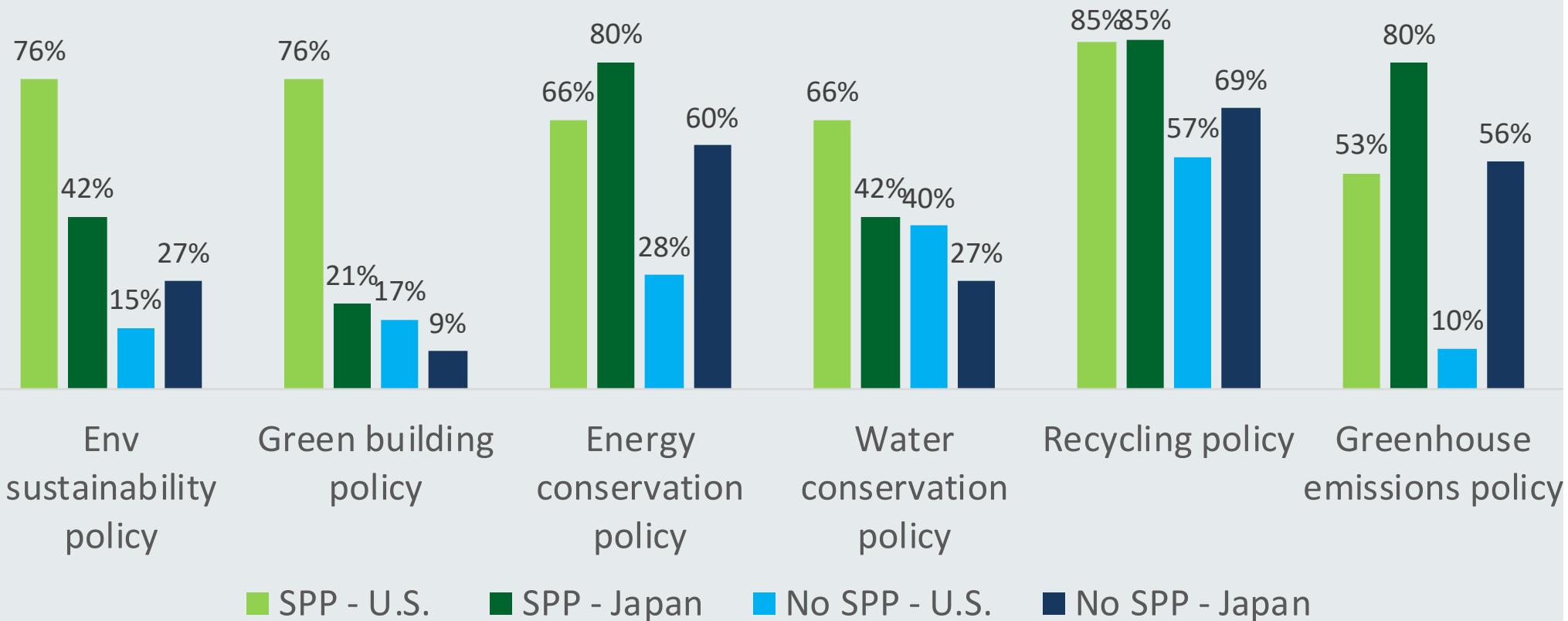


1. How do cities that adopt an SPP differ from nonadopters?

- A. Citywide complementary policies and practices
- B. Purchasing criteria
- C. Information access
- D. Leadership and resources
- E. Vendor roles

A. Complementary Policies

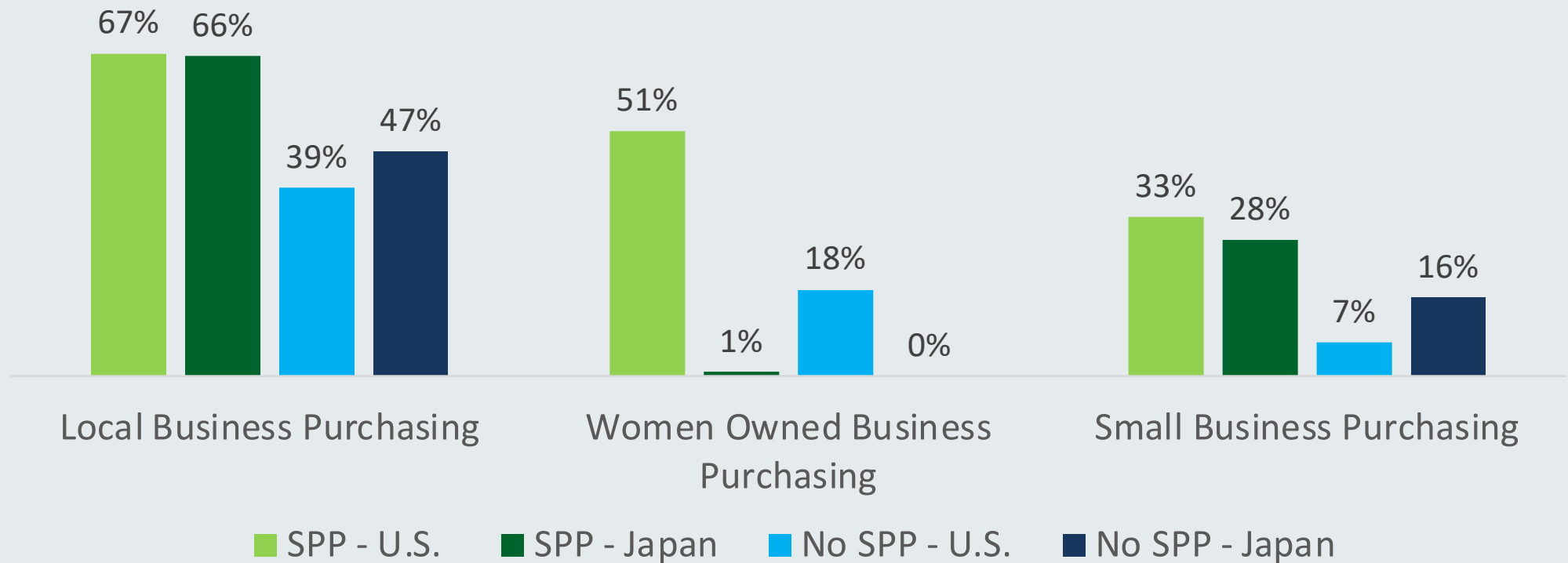
City Implementation of Complementary Environmental Policies



- **In both countries** – Cities with SPPs are more likely have other complementary policies
- **U.S.** – Cities with SPP, more likely to have env, green buildings, water conservation policies
- **Japan** – Cities with SPP, more likely to have energy conservation, GHG emissions policies

A. Complementary Policies

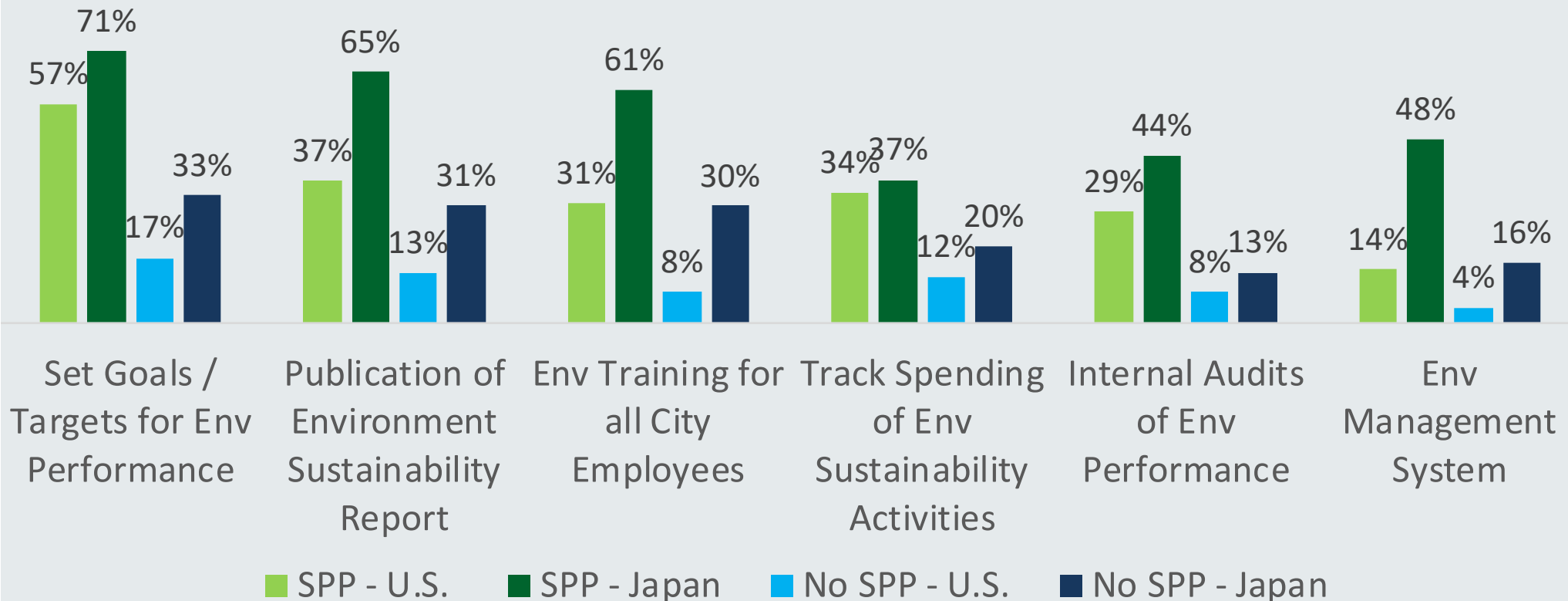
City Implementation of Complementary Social Policies



- **In both countries** – Cities with SPPs are more likely have other complementary policies
- **U.S.** – Cities with SPP, more likely to women owned purchasing policies
- **Japan** – Cities with SPP, similar to U.S. with respect to local business/small business purch.

A. Complementary Practices

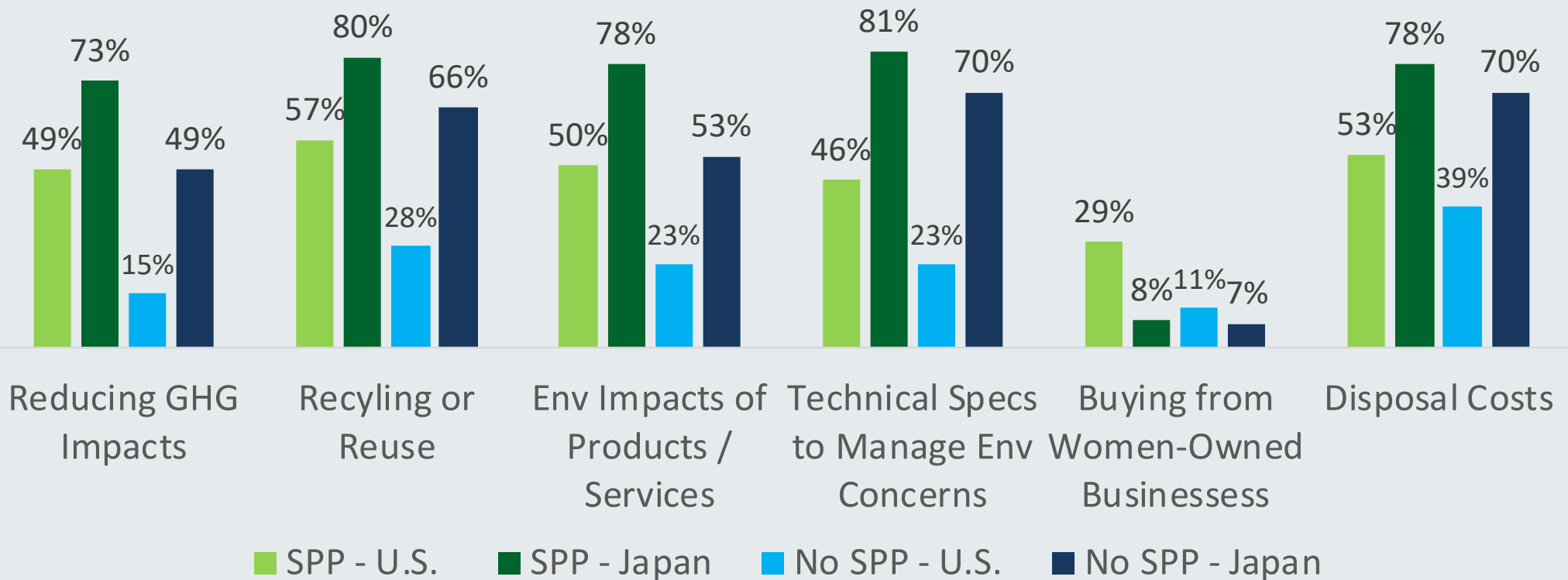
City Implementation of Complementary Environmental Practices



- **In both countries** – Cities with SPPs are more likely have other complementary practices
- **Japan** – Cities with SPP and without are more likely to have complementary env practices.

B. Purchasing Criteria

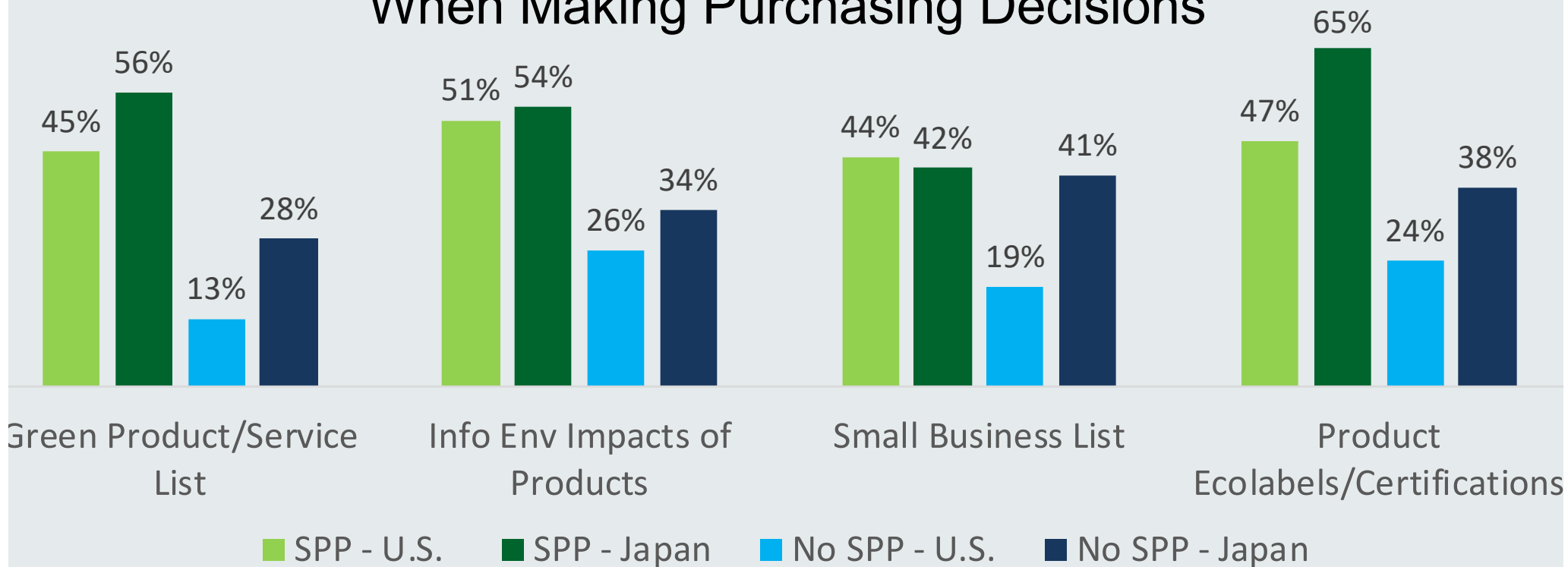
Importance of Department's Purchasing Criteria



- **In both countries** – Cities with SPPs are more likely have stronger focus on environmental and social purchasing criteria
- **U.S.** – Cities with SPP, LESS likely than Japan to state importance of env purchasing criteria, except social criteria

C. Information

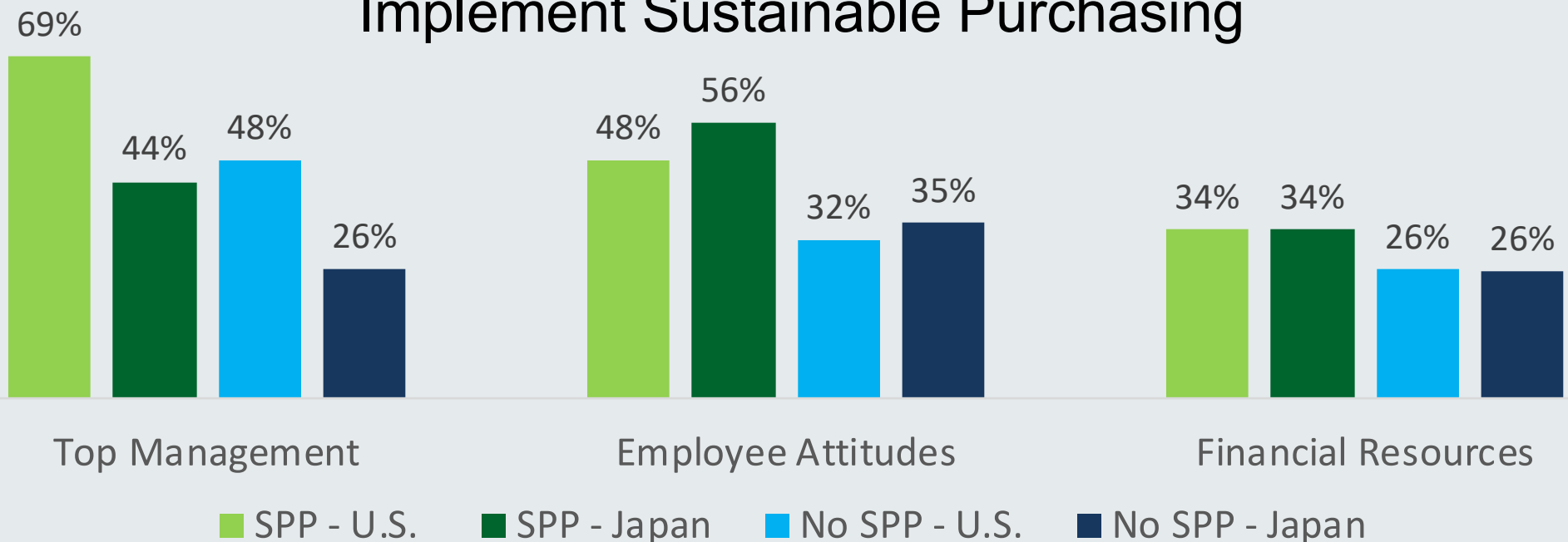
Information Sources Available to Departments When Making Purchasing Decisions



- **In both countries**
 - Cities with SPPs are more likely have greater access to information
- **Japan** – Cities more likely to have access to information, especially for Green Product/Service Lists, Product Ecolabels/Certifications

D. Leadership & Resources

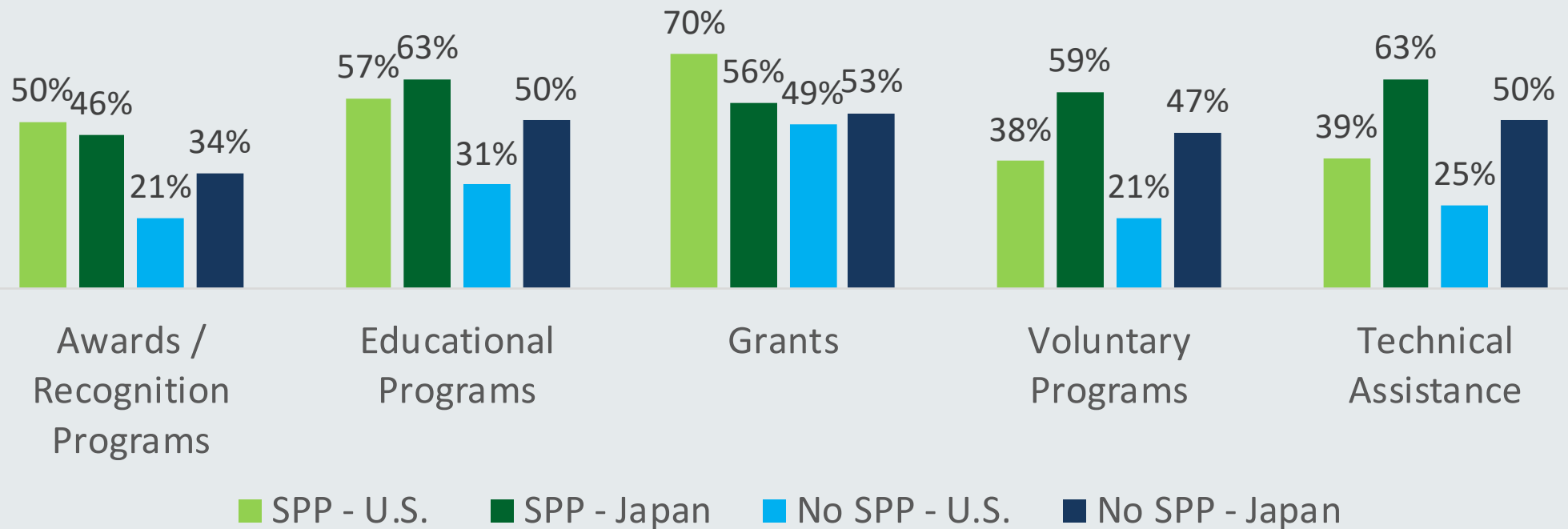
Facilitators of Department's Ability to Implement Sustainable Purchasing



- **In both countries**
 - Cities with SPPs more likely have greater leadership and resources
 - Financial resources are important, but top management + employee attitudes matter more
- **U.S.** – Cities with SPP, more likely to report importance of top management
- **Japan** – Cities with SPP more likely to report importance of overall employee attitudes

D. Leadership & Resources

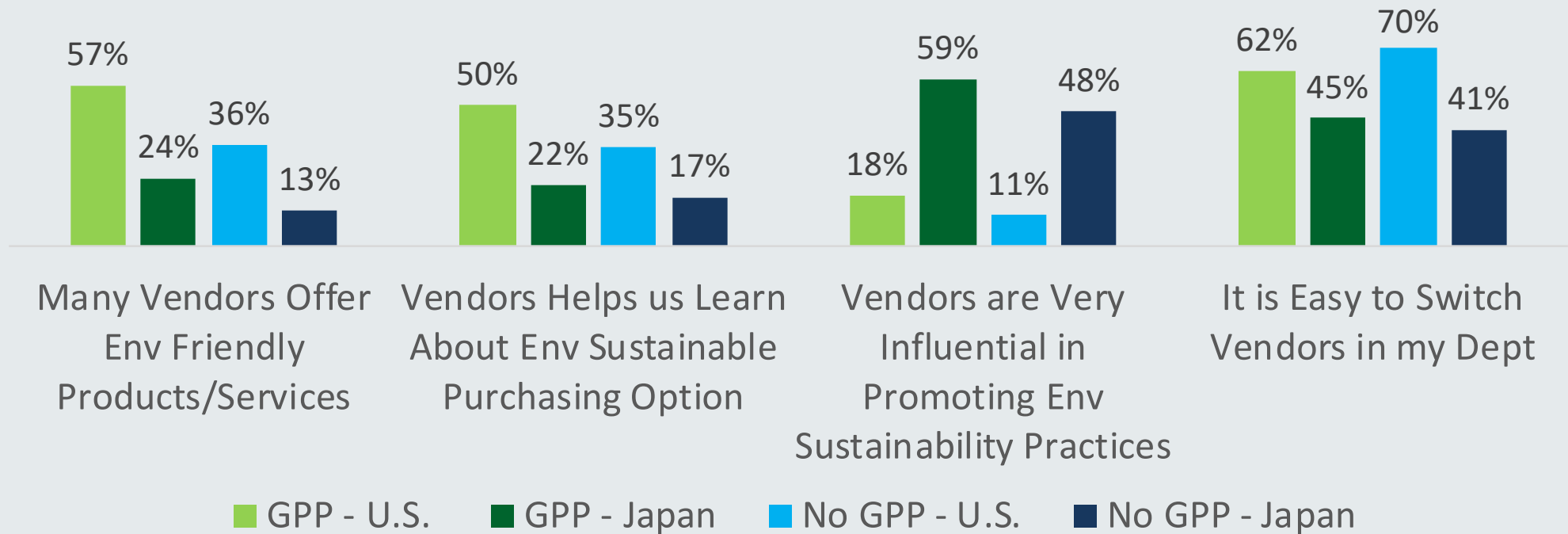
Importance of Federal-National/State-Prefecture Resources to Promoting City-Level Environmental Sustainability



- **In both countries** – cities with SPP, higher level government resources are more important for promoting environmental sustainability
- **U.S.** – Cities with SPP, grants matter more
- **Japan** – Cities with SPP, voluntary programs & tech. assistance matter more

E. Vendors

Vendor Roles



- **In both countries** – Cities with SPP, vendors' important role helping them address sustainability
- **Japan** – Cities with SPP, vendors are more influential in promoting env. Sustainability practices

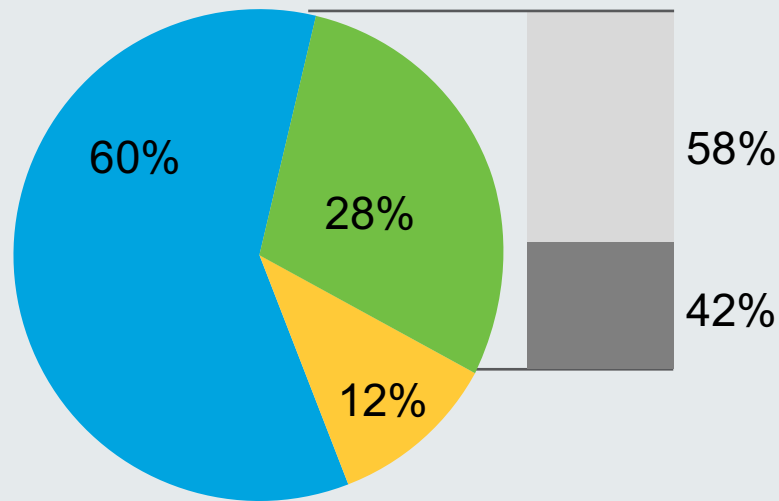
Where SPP Adopters and Nonadopters are Similar Across Both Countries...

- Department importance of purchasing criteria related to:
 - Product price
 - Execution of pre-existing contract agreements
 - Performance requirements
 - Technical specifications in managing purchase complexity
 - Lifecycle costs in department's purchasing decisions
- Department rules
- Department commitment to innovation

**But adopting SPP does not mean
that it will be successful at reducing
environmental impacts...**

SPP Adoption + Implementation Success

United States



No SPP

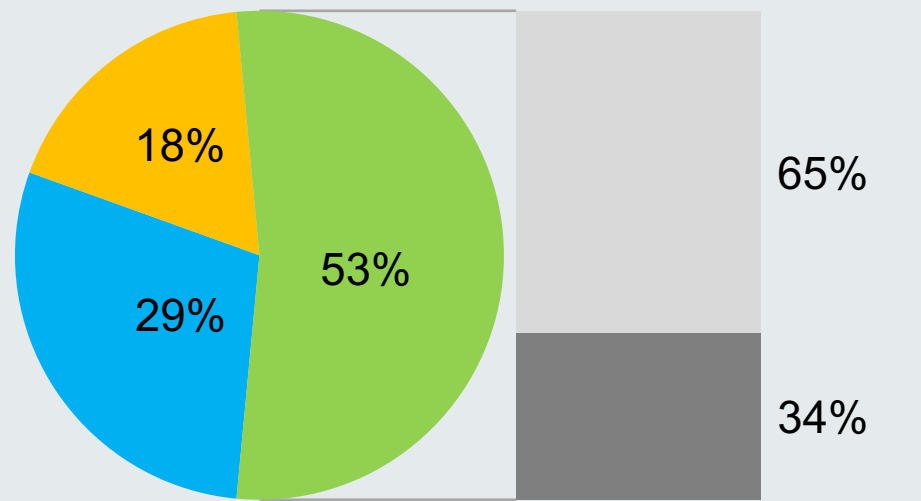


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SPP

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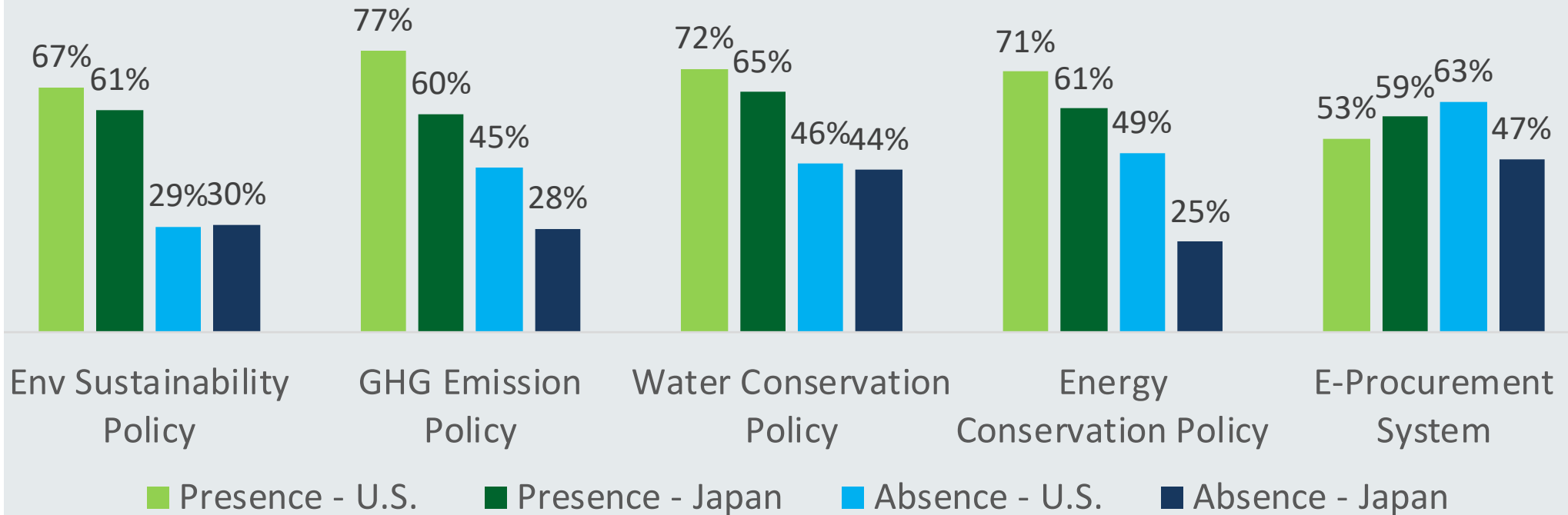


2. What Factors Are Associated With Sustainable Purchasing Success?

- A. Citywide complementary policies and practices
- B. Information access
- C. Leadership and resources
- D. Vendor roles
- E. Innovation culture

A. Complementary Policies

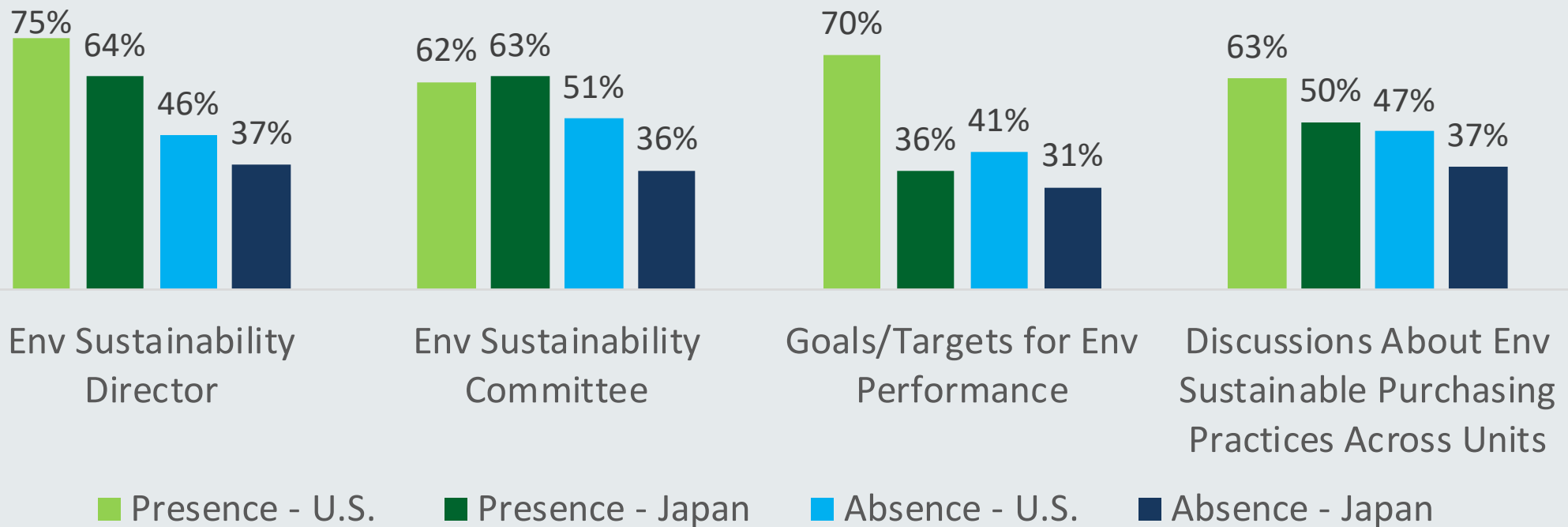
Probability of Successful Implementation of SPP, Given City Policies



- **In both countries** – Cities' complementary policies more strongly linked with SPP success
- **U.S.** – Cities' complementary policies more strongly linked with SPP success (except for E-procurement)

A. Complementary Practices

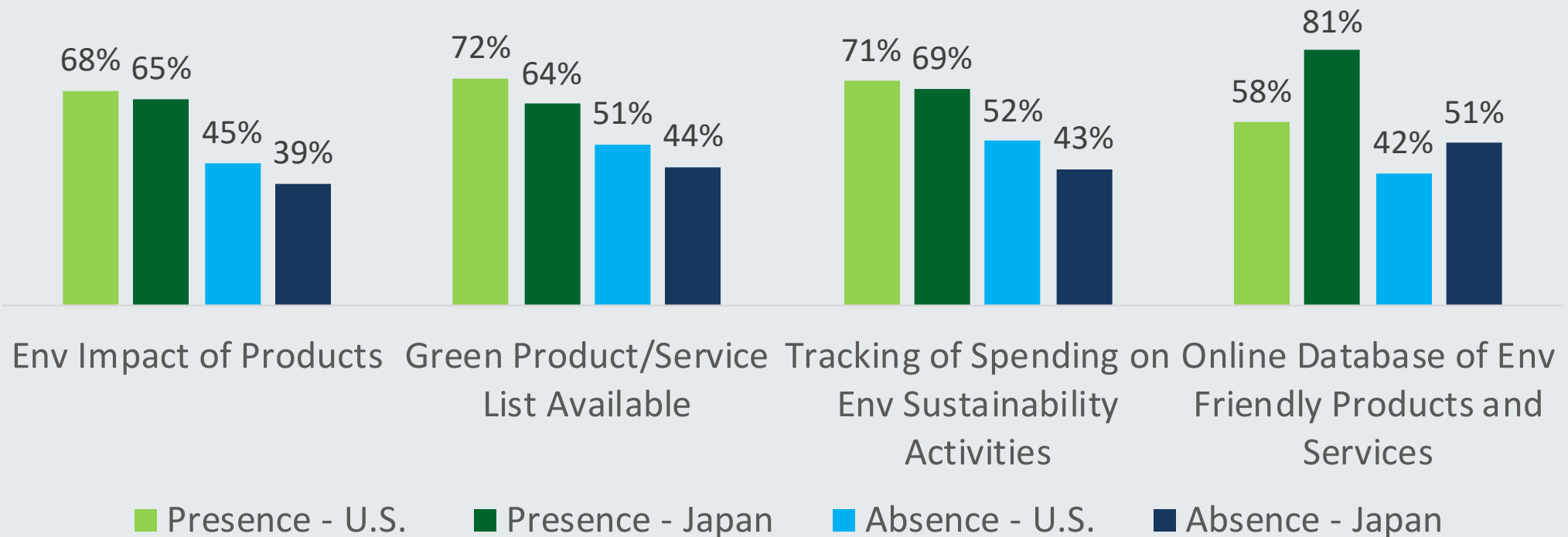
Probability of Successful Implementation of SPP, Given City Practices



- **In both countries** – Cities' complementary policies more strongly linked with SPP success
- **U.S.** – Cities' complementary practices tend to be more strongly linked with SPP success

B. Information Access

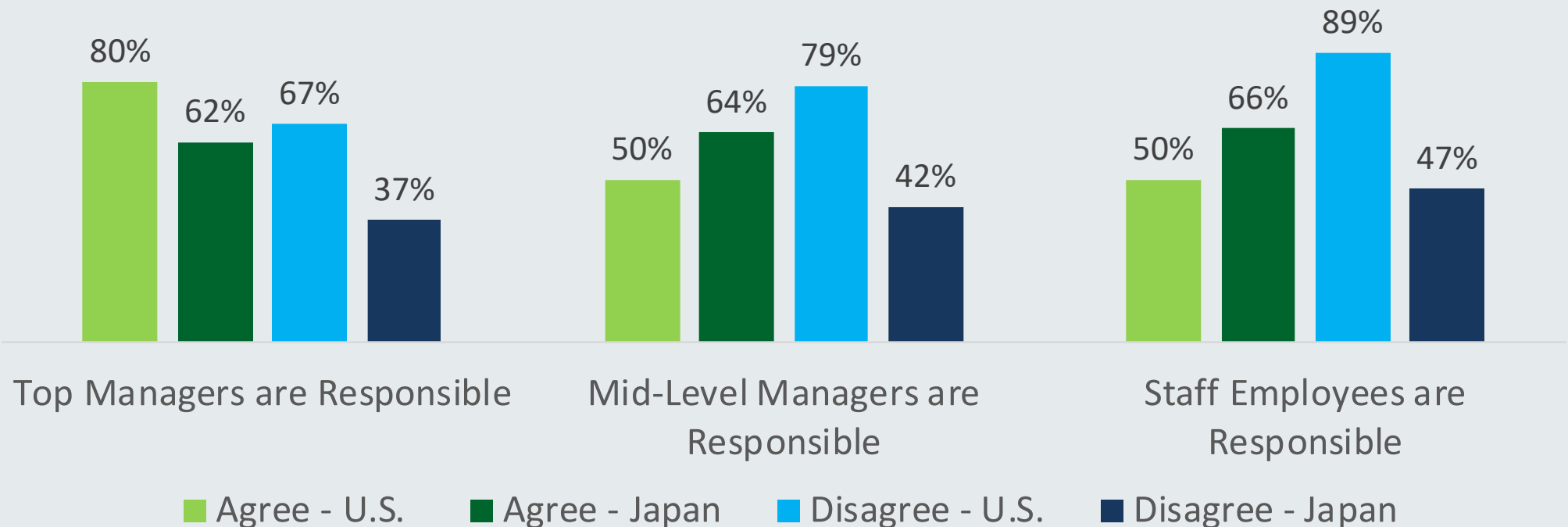
Probability of Successful Implementation of SPP, Given Access to Types of Information



- **In both countries** – Cities' information access more strongly linked with SPP success
- **Japan** – Cities' with access to an online database more strongly linked with SPP success

C. Leadership & Resources

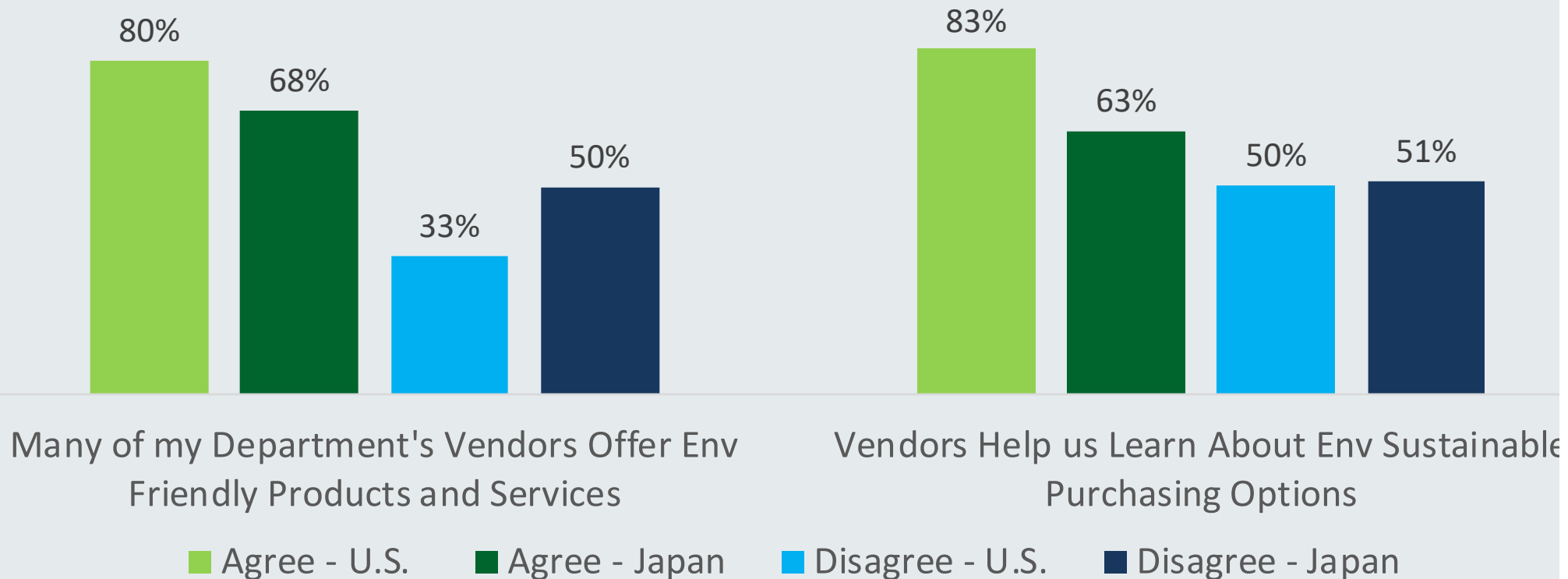
Probability of Successful Implementation of SPP,
Given Director's Perception of Locus of Responsibility



- **U.S.** – top level managers strongly linked to SPP success than mid-level managers or staff
- **Japan** – all three levels of employees are important to SPP success

D. Vendors

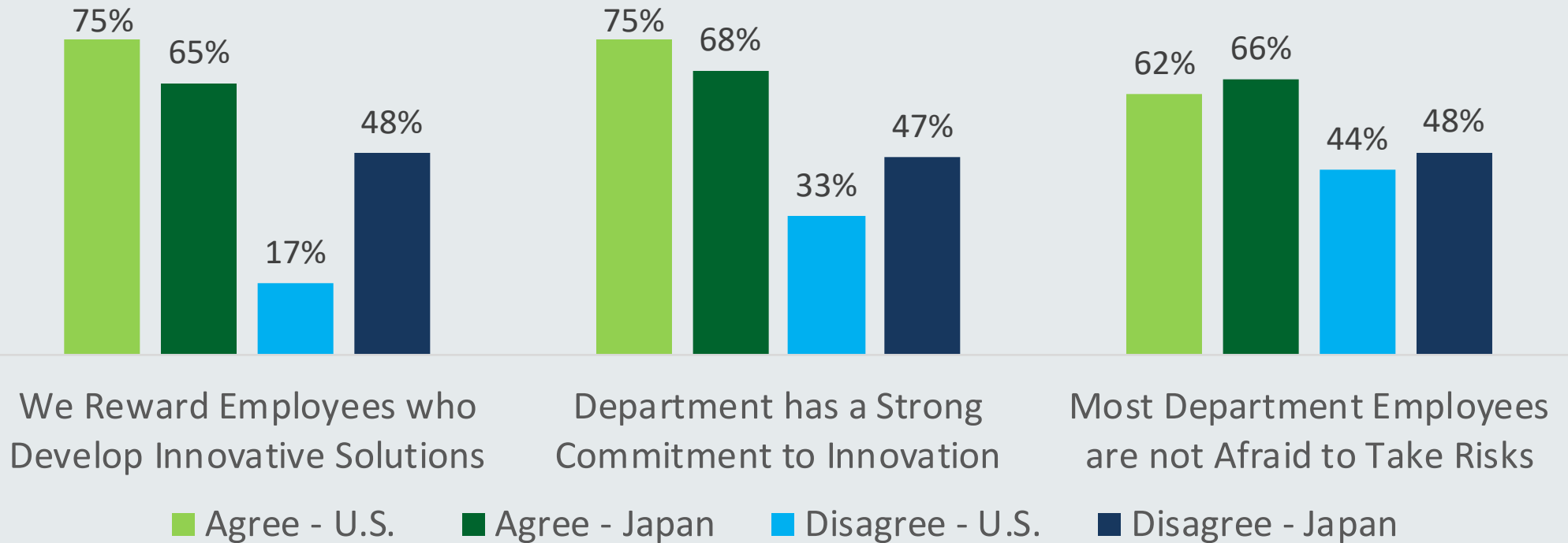
Probability of Successful Implementation of SPP, Given Director's Perception of Vendor Roles



- **In both countries** – vendor collaboration more strongly linked with SPP success
- **U.S.** – successful SPP implementation more strongly related to vendor roles

E. Innovation Culture

Probability of Successful Implementation of SPP,
Given Director's Perception of Department's Innovation Culture



- **In both countries –**
 - Innovation culture strongly linked with SPP success
 - Smaller differences across countries

For both countries, what is not related with SPP implementation success?

- Department rules
- Department importance of purchasing criteria related to:
 - Product price
 - Execution of pre-existing contract agreements
 - Performance requirements
 - Technical specifications in managing purchase complexity
 - Lifecycle costs in department purchasing decisions

VERY preliminary findings:

SPP adoption in Japan is greater

**More similarities across countries
than differences**

Cities that **adopt SPP** have more:

- A. Citywide complementary policies and practices
- B. Purchasing criteria
- C. Information access
- D. Leadership and resources for SPP
- E. Collaborative vendor relationships

Cities with **successful SPPs** have:

- A. Citywide complementary policies and practices
- B. Information access
- C. Leadership and resources
- D. Collaborative vendor relationships
- E. Innovation culture

Original question:

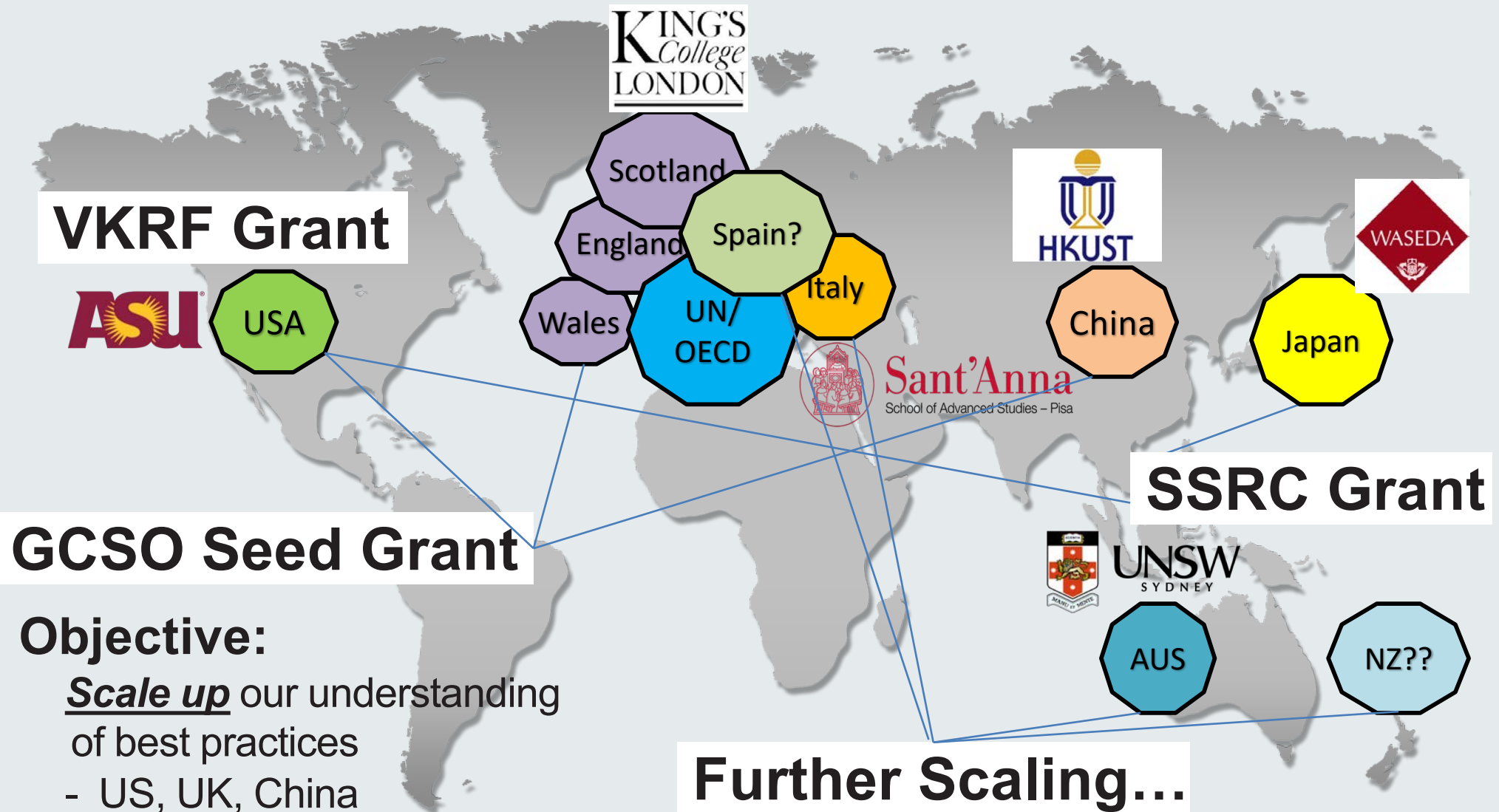
How does U.S. SPP
compare to SPP in Japan?

*Much work to still do comparing these
countries...*

Follow-up question:

*Do the same patterns exist
elsewhere?*

Expanded Collaborations



Additional Information

Visit: spa.asu.edu/SPRI

Questions?

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