OPM.GOV

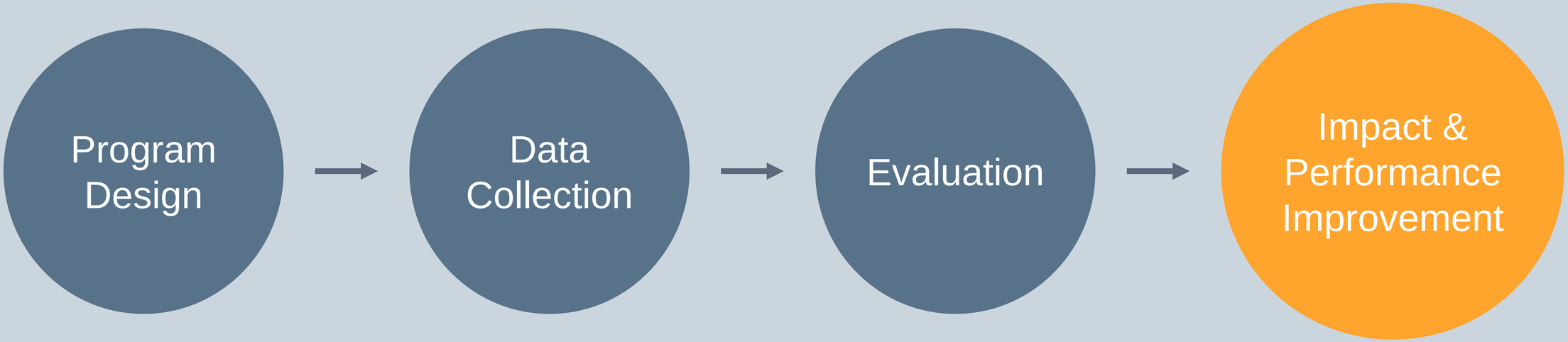
EVALUCON

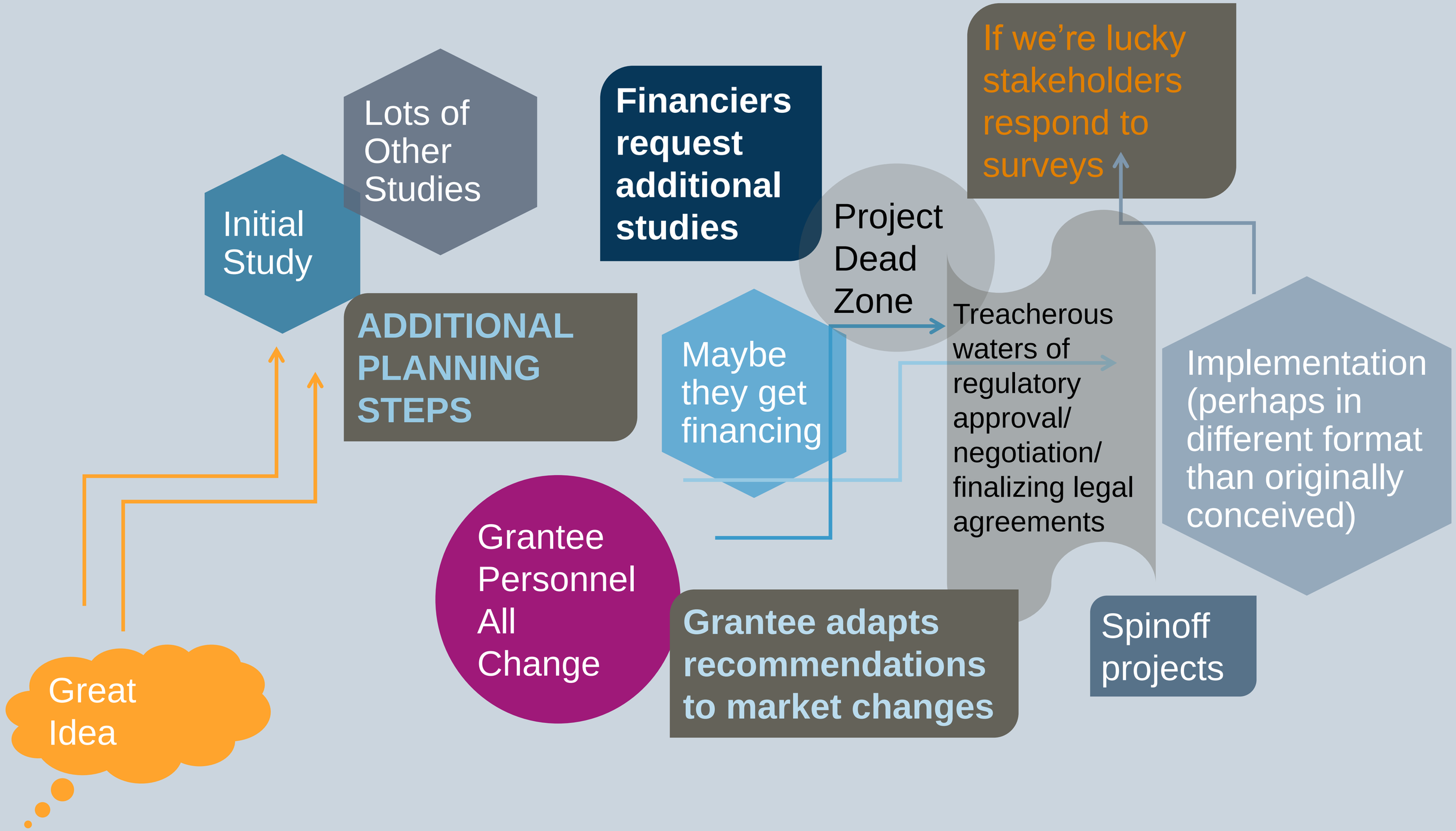
FEDERAL EMPLOYEE DEVELOPMENT

Data Visualization FOR IMPACT

US Trade & Development Agency

Why Visualize?


Program Design
Data Collection
Evaluation
Impact & Performance Improvement


Great Idea
Initial Study
Lots of Other Studies
ADDITIONAL PLANNING STEPS
Financiers request additional studies
Maybe they get financing
Project Dead Zone
If we're lucky stakeholders respond to surveys
Treacherous waters of regulatory approval/ negotiation/ finalizing legal agreements
Implementation (perhaps in different format than originally conceived)
Spinoff projects
Grantee Personnel All Change
Grantee adapts recommendations to market changes

1

To distill the music from the noise

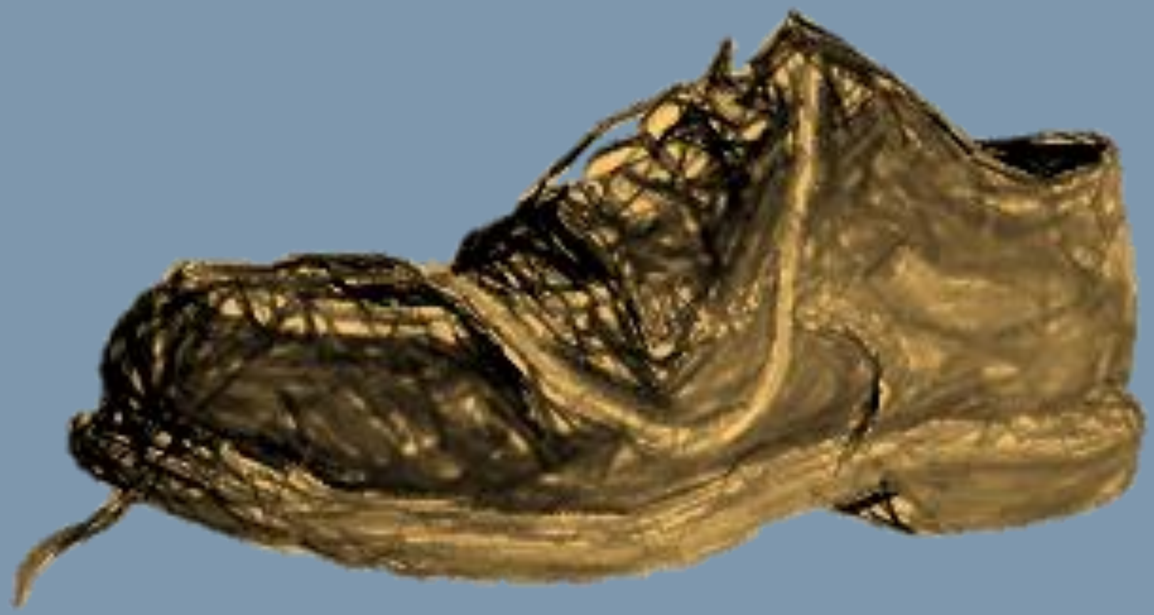
2

To ensure data integrity

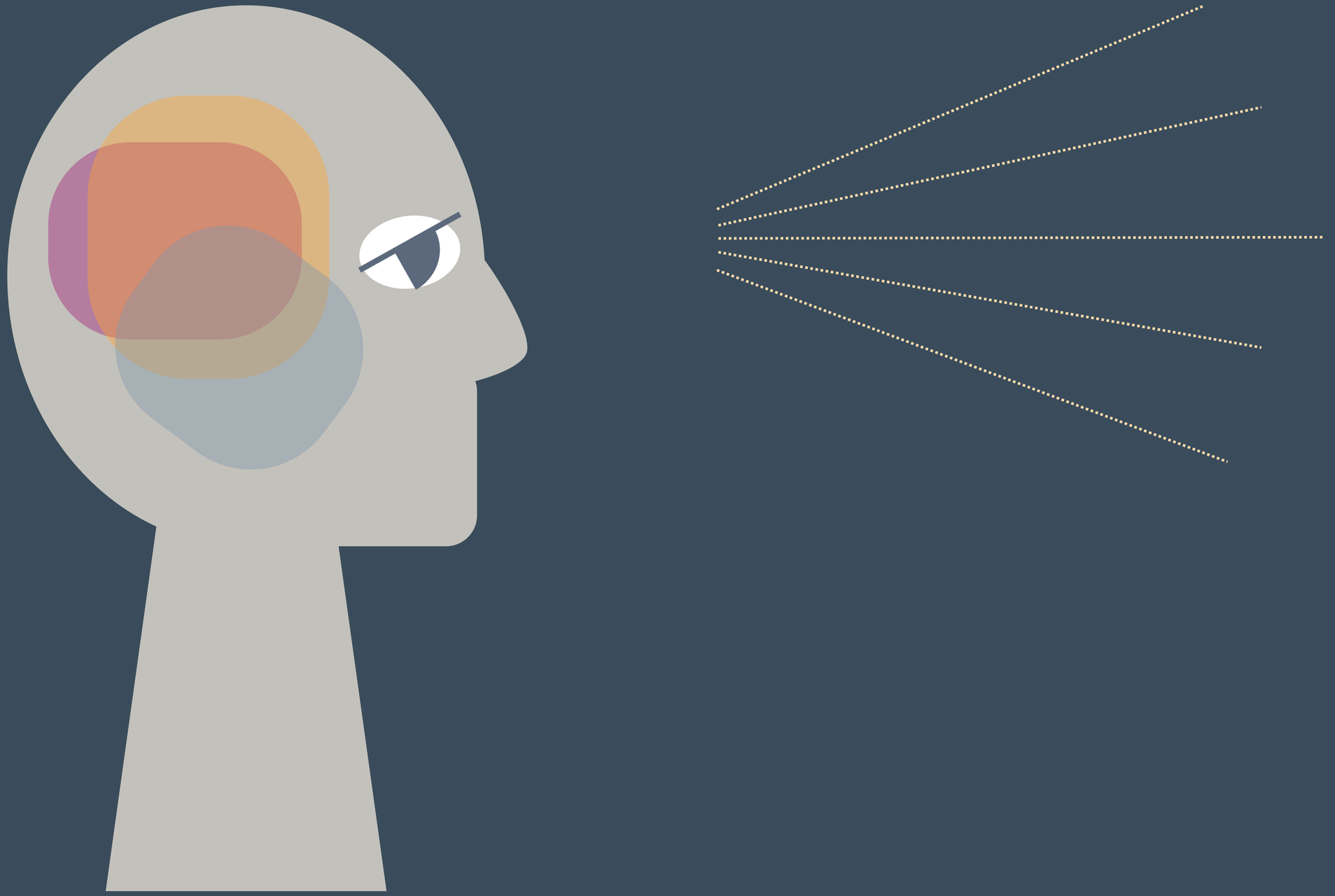
3

To enhance use and drive performance

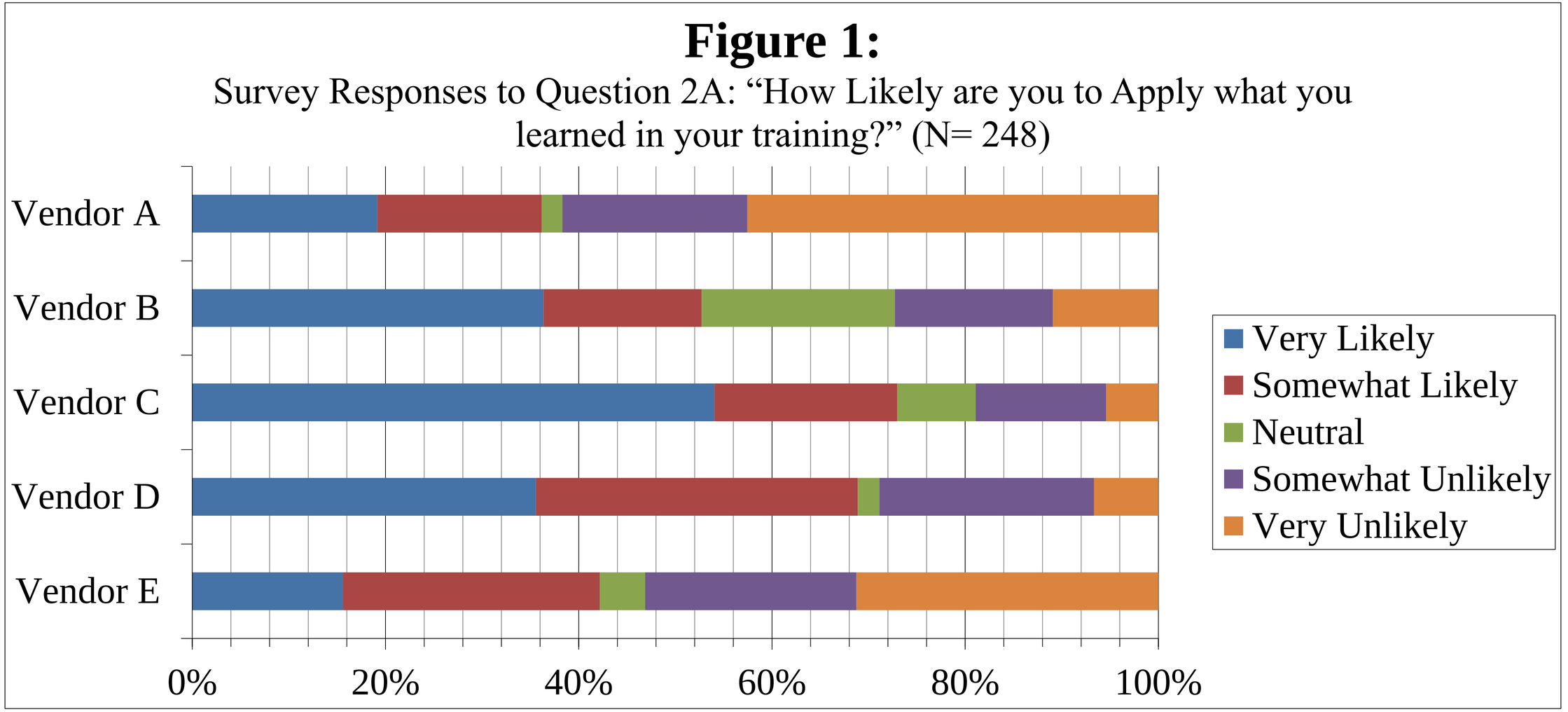
How can we visualize data on a shoestring budget?



Building Blocks



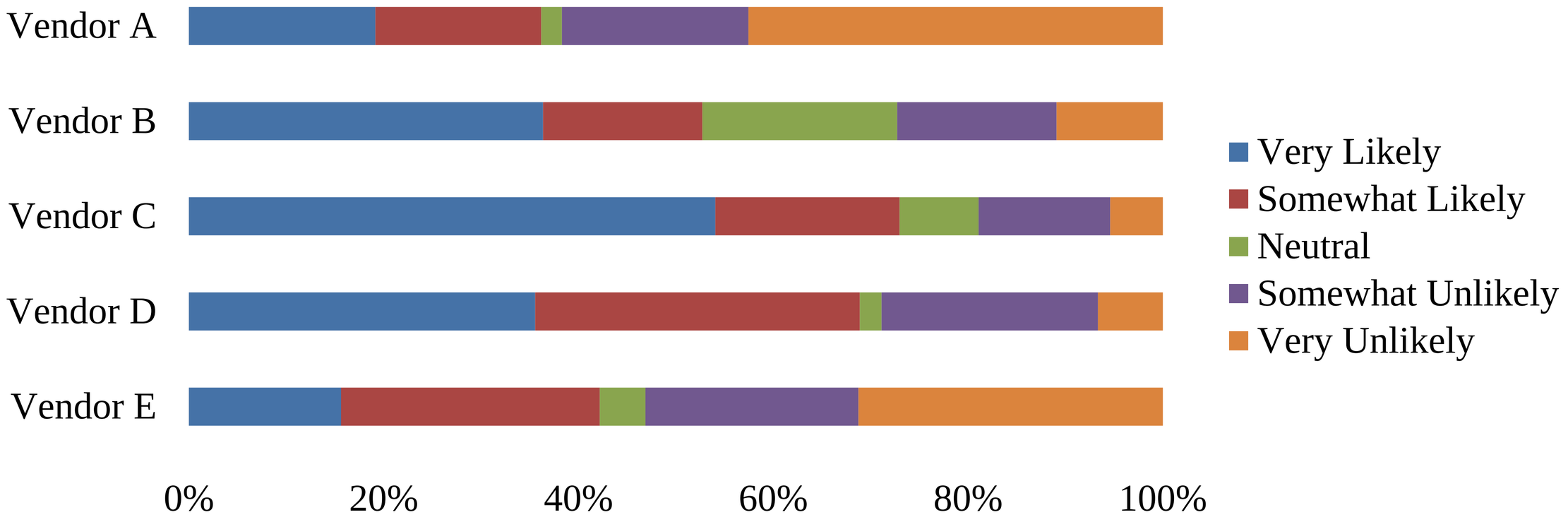
Building an Infogram: Step by Step



Remove Excess Lines

Figure 1:

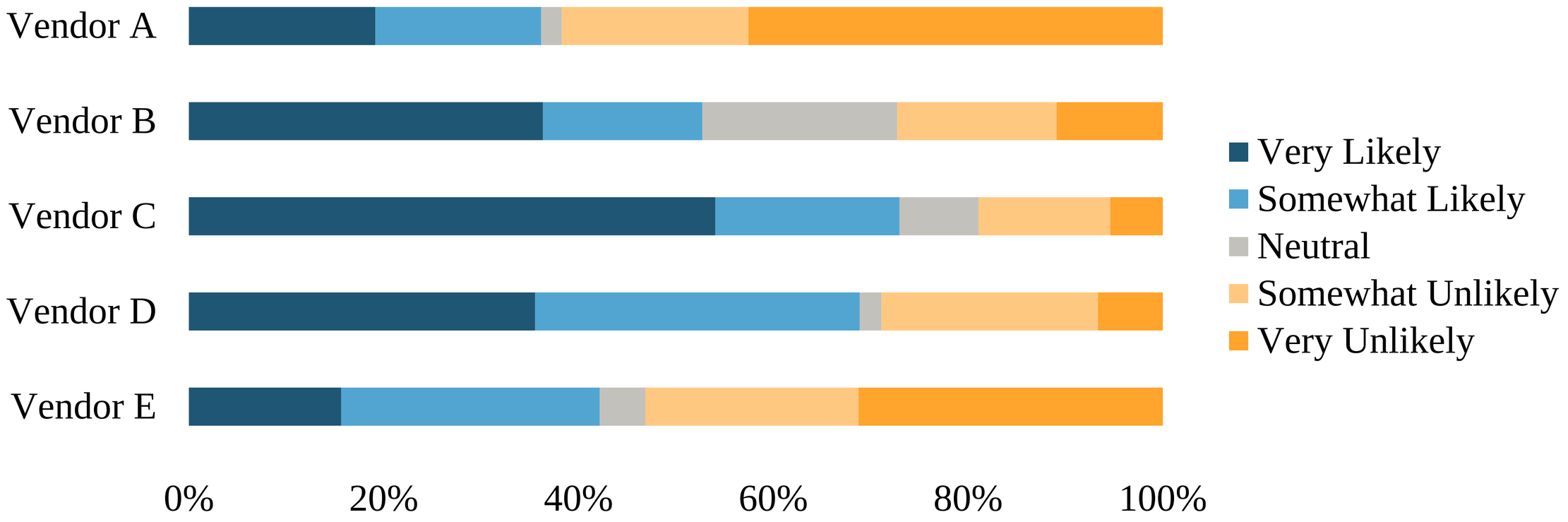
Survey Responses to Question 2A: “How Likely are you to Apply what you learned in your training?” (N= 248)



Choose Meaningful Colors

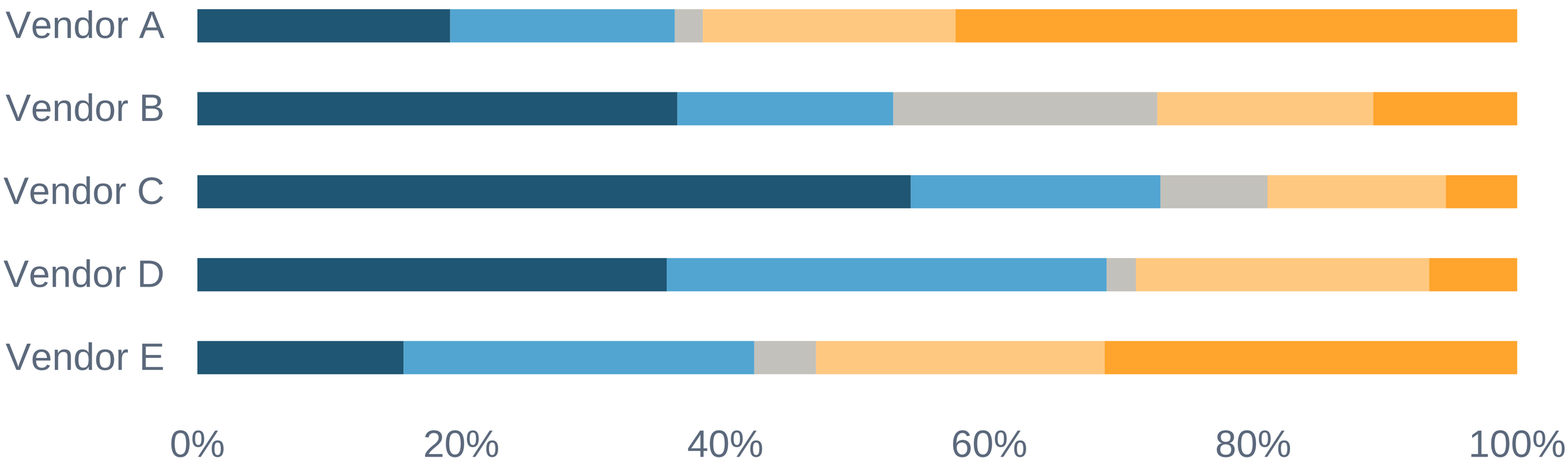
Figure 1:

Survey Responses to Question 2A: “How Likely are you to Apply what you learned in your training?” (N= 248)



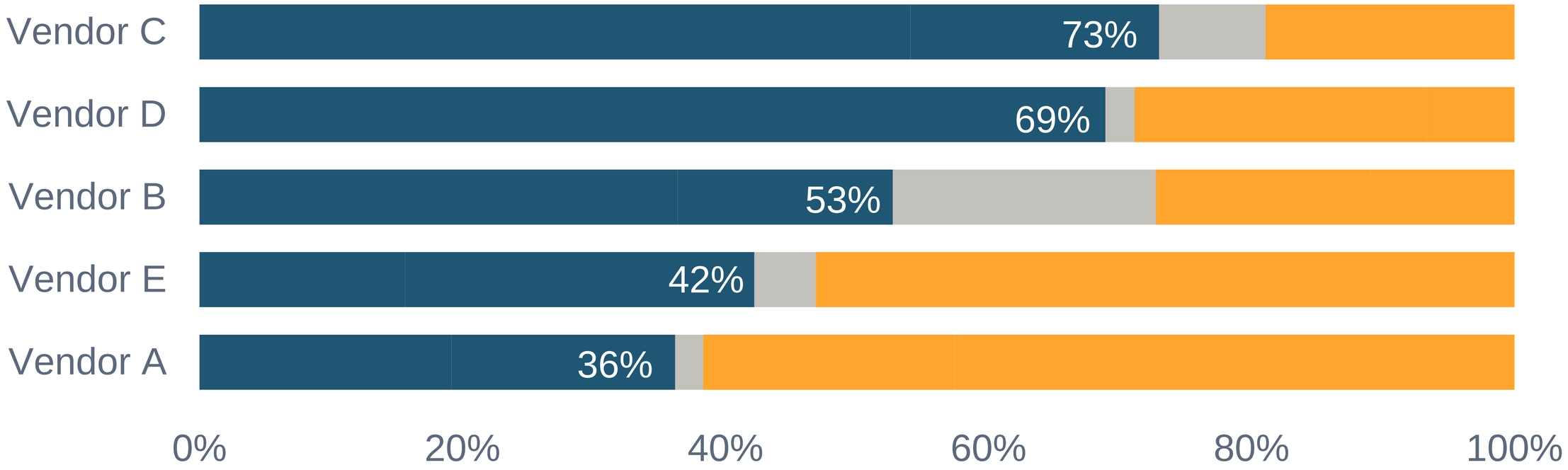
Tell the Story

Over half of those surveyed reported that they are likely or very likely to utilize the training they received. Vendor C achieved the highest rating, with over 73% of participants responding positively.



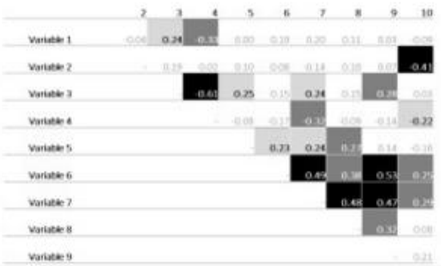
Simplify further, if needed

Over half of those surveyed reported that they are likely or very likely to utilize the training they received. Vendor C achieved the highest rating, with over 73% of participants responding positively.

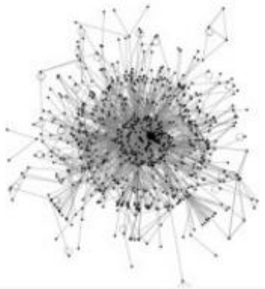


EMERY'S ESSENTIALS Chart Choosing Tool

ALL / SMALL MULTIPLES / COMPARING 2 OR MORE CATEGORIES / RANGES OR DISPERSION / PART TO WHOLE / DO-ABLE IN EXCEL / GEOGRAPHIC MAPS / RELATIONSHIPS / COLLAGES / QUALITATIVE / EXPLORATORY / CORRELATION / 1 POINT IN TIME / 2 POINTS IN TIME / 3+ POINTS IN TIME



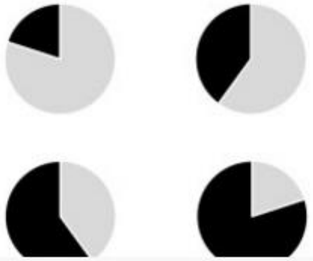
Heat Tables



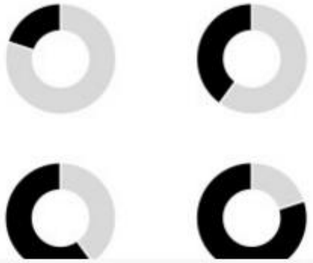
Social Network Map

Pie

Donut



Small Multiples Pie



Small Multiples Donut

Data Visualization Checklist

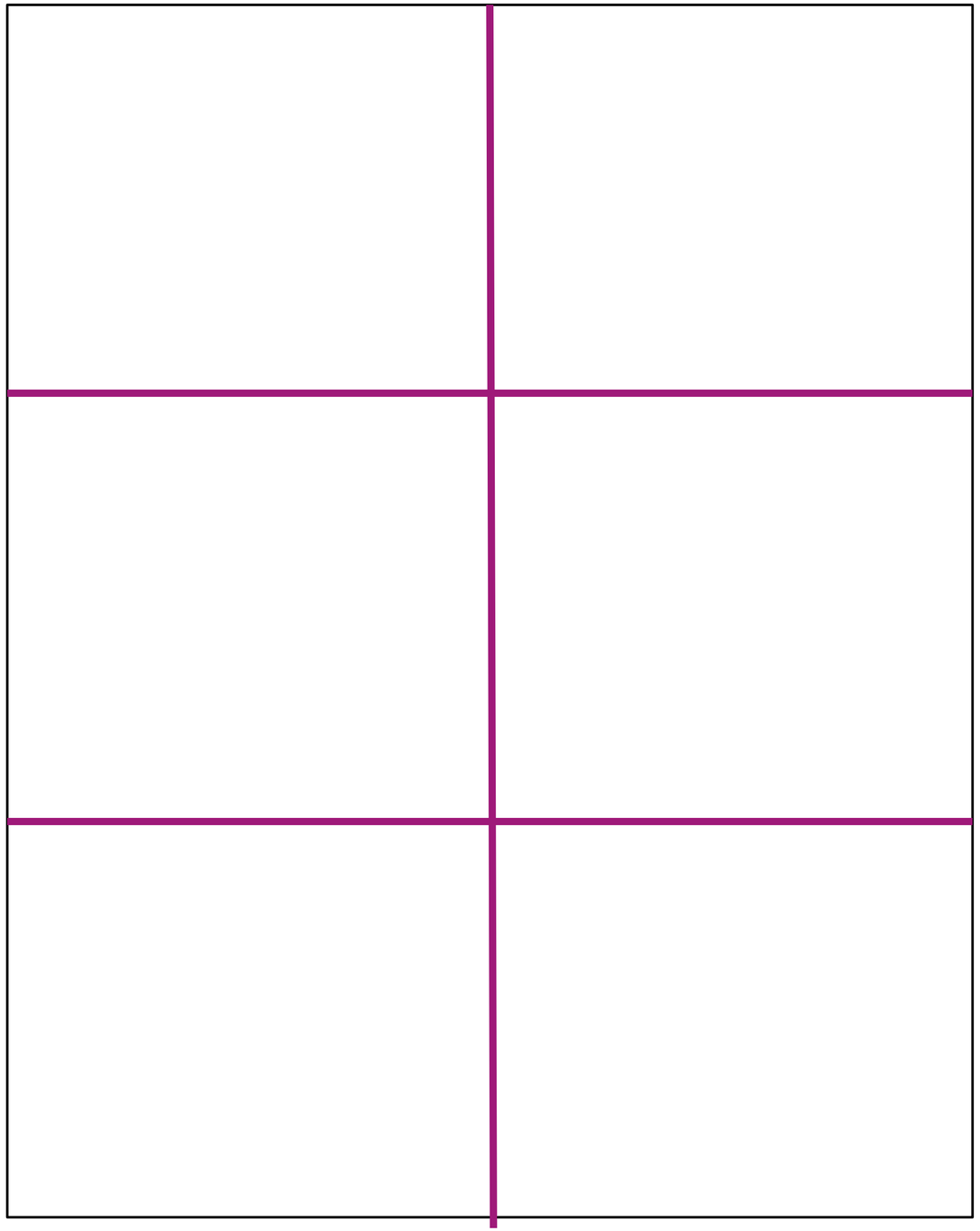
by Stephanie Evergreen & Ann K. Emery
May 2014

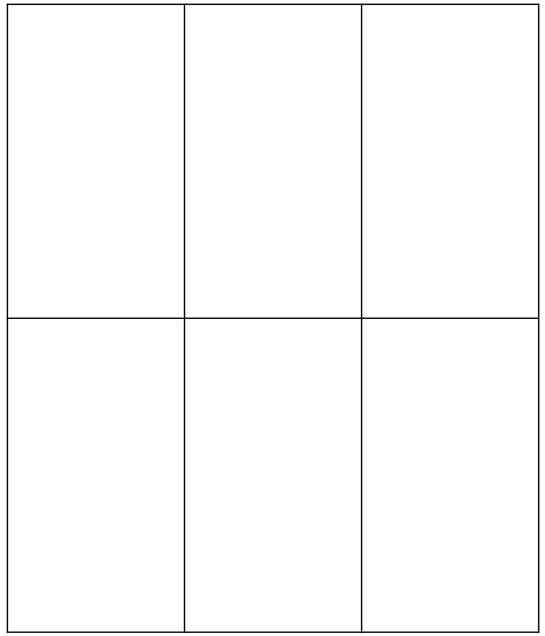
This checklist is meant to be used as a guide for the development of high impact data visualizations. Rate each aspect of the data visualization by circling the most appropriate number, where 2 points means the guideline was fully met, 1 means it was partially met, and 0 means it was not met at all. n/a should not be used frequently, but reserved for when the guideline truly does not apply. For example, a pie chart has no axes lines or tick marks to rate. Refer to the Data Visualization Anatomy Chart on the last page for guidance on vocabulary.

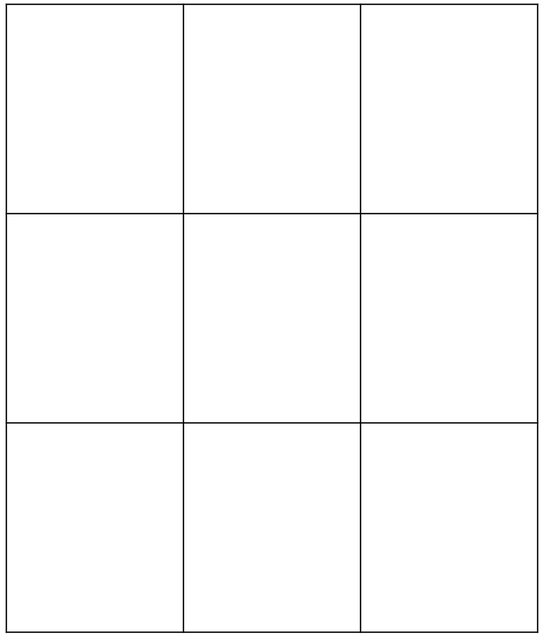
	Guideline	Rating
Text Graphs don't contain much text, so existing text must encapsulate your message and pack a punch.	**6-12 word descriptive title is left-justified in upper left corner** Short titles enable readers to comprehend takeaway messages even while quickly skimming the graph. Rather than a generic phrase, use a descriptive sentence that encapsulates the graph's finding or "so what?" Western cultures start reading in the upper left, so locate the title there.	2 1 0 n/a
	Subtitle and/or annotations provide additional information Subtitles and annotations (call-out text within the graph) can add explanatory and interpretive power to a graph. Use them to answer questions a viewer might have or to highlight one or two data points.	2 1 0 n/a
	Text size is hierarchical and readable Titles are in a larger size than subtitles or annotations, which are larger than labels, which are larger than axis labels, which are larger than source information. The smallest text - axis labels - are at least 9 point font size on paper, at least 20 on screen.	2 1 0 n/a
	Text is horizontal Titles, subtitles, annotations, and data labels are horizontal (not vertical or diagonal). Line labels and axis labels can deviate from this rule and still receive full points.	2 1 0 n/a
	Data are labeled directly Position data labels near the data rather than in a separate legend (e.g., on top of or next to bars or pie slices, and next to lines in line charts). Eliminate/embed legends when possible because eye movement back and forth between the legend and the data can interrupt the brain's attempts to interpret the graph.	2 1 0 n/a
	Labels are used sparingly Focus attention by removing the redundancy. For example, in line charts, label every other year on an axis.	2 1 0 n/a

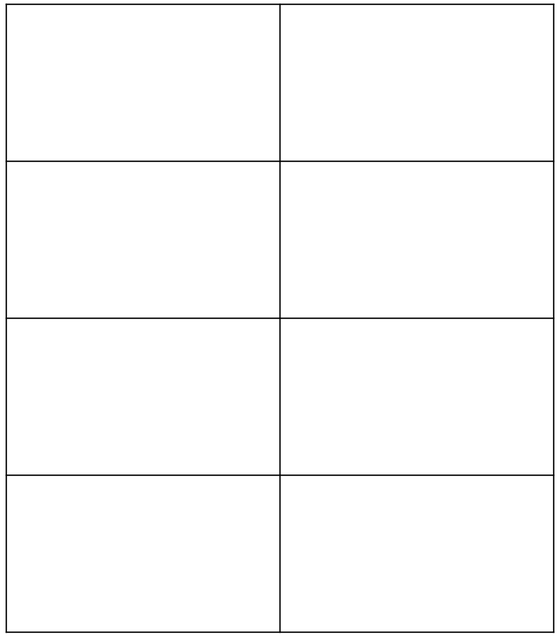
Infographics

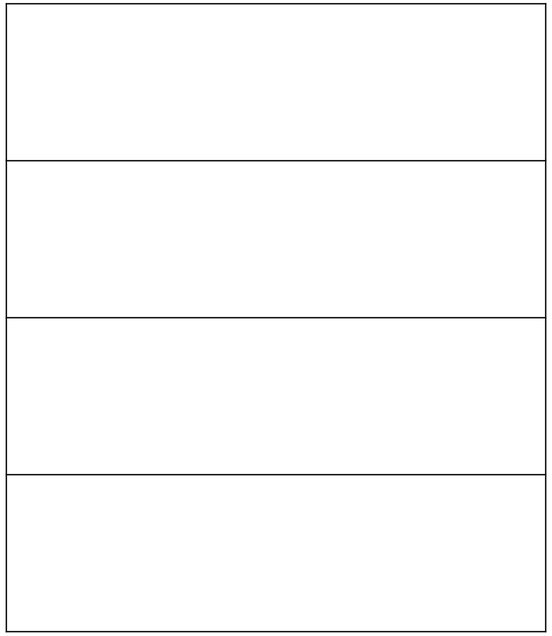
Use the grid to your advantage

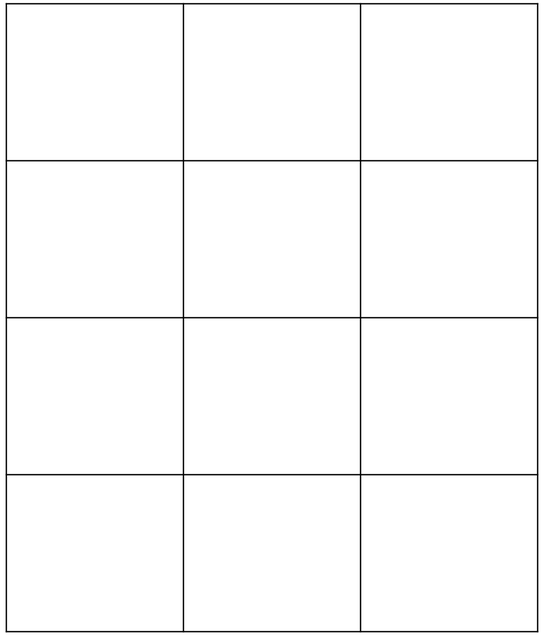


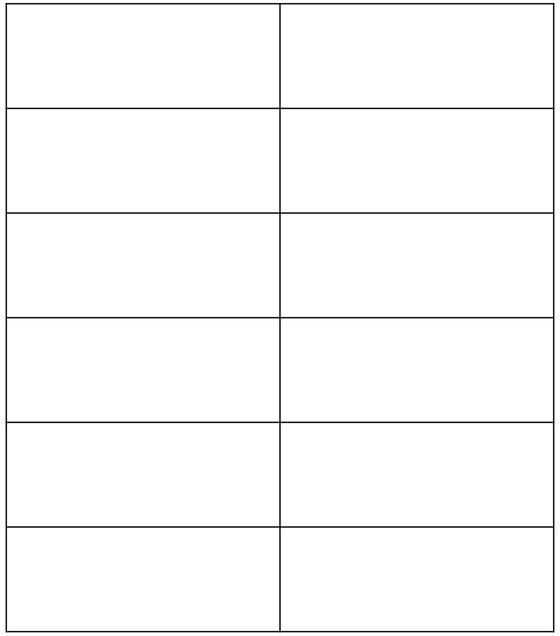




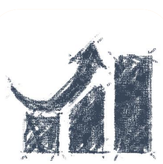








Sketch out your story

Power Africa		
Mission		
# Projects	# MW	# Homes
Growth 		
Investment 		$ Investment
		# jobs
Focus Areas		

Plug in your building blocks

Catalyzing U.S. Expertise to Power Africa

The U.S. Trade and Development Agency helps companies create U.S. jobs through the export of U.S. goods and services for priority development projects in emerging economies. USTDA links U.S. businesses to export opportunities by funding project planning activities, pilot projects, and reverse trade missions while creating sustainable infrastructure and economic growth in partner countries.

30

Projects

USTDA has provided critical project planning assistance for 27 Power Africa projects.

660

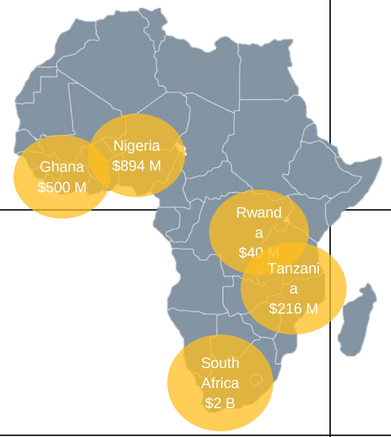
Megawatts

These projects will support over 660 MW of new renewable power generation.

1M+

Homes

Combined, these projects will supply electricity to an estimated 1.3 M homes.



$4.5 B

USTDA's investments will help leverage over $4.5 billion in financing from public and private sources.

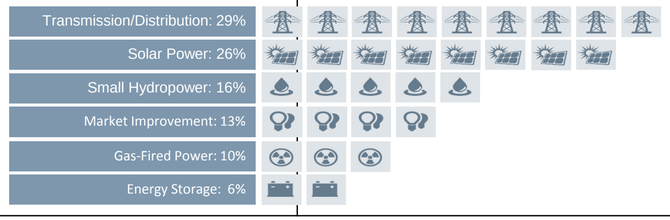
$2 B

These projects will help create over $2 billion in export opportunities.

11,000

If realized, these exports could support an estimated 11,000 jobs across the U.S.

USTDA's investments support all aspects of energy development and deployment, from new generation to grid modernization that supports higher efficiency and improved access.



U.S. Trade and Development Agency

Catalyzing U.S. Expertise to Power Africa

USTDA's Mission

The U.S. Trade and Development Agency helps companies create U.S. jobs through the export of U.S. goods and services for priority development projects in emerging economies.

30

Projects

USTDA is providing critical project planning assistance for 30 Power Africa projects

660

Megawatts

These projects will support over 660 MW of new low-carbon power generation

1M+

Homes

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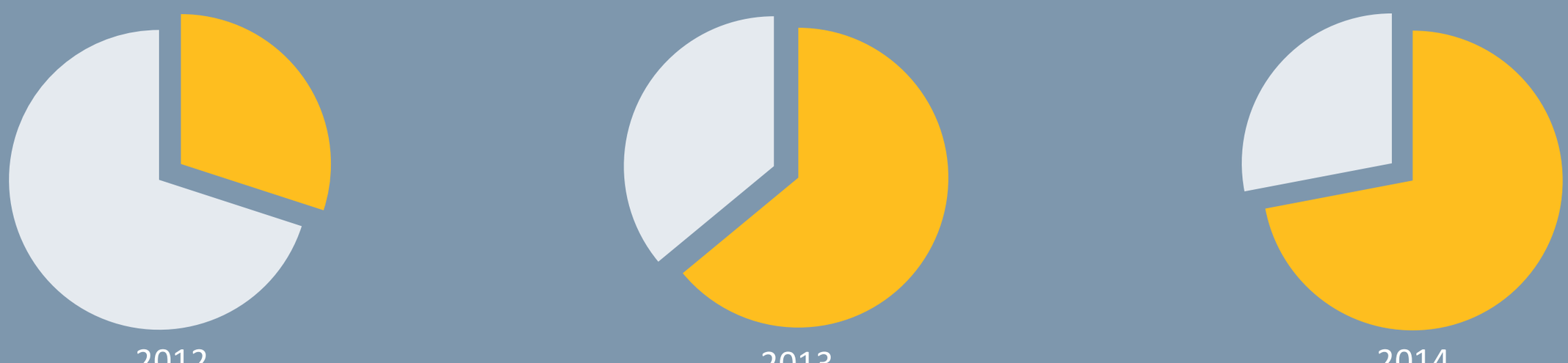
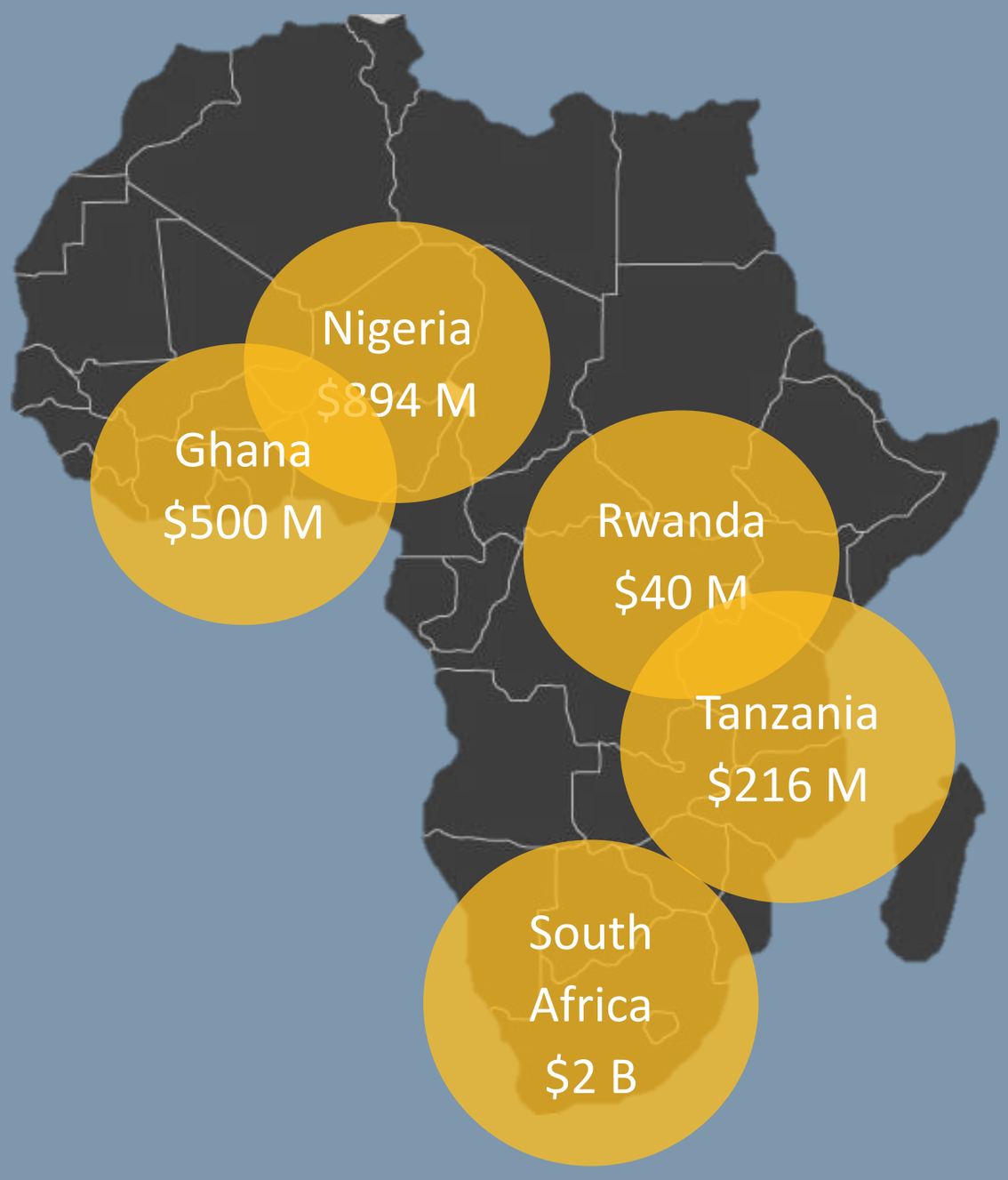
Through Power Africa, USTDA nearly tripled its funding for power projects:





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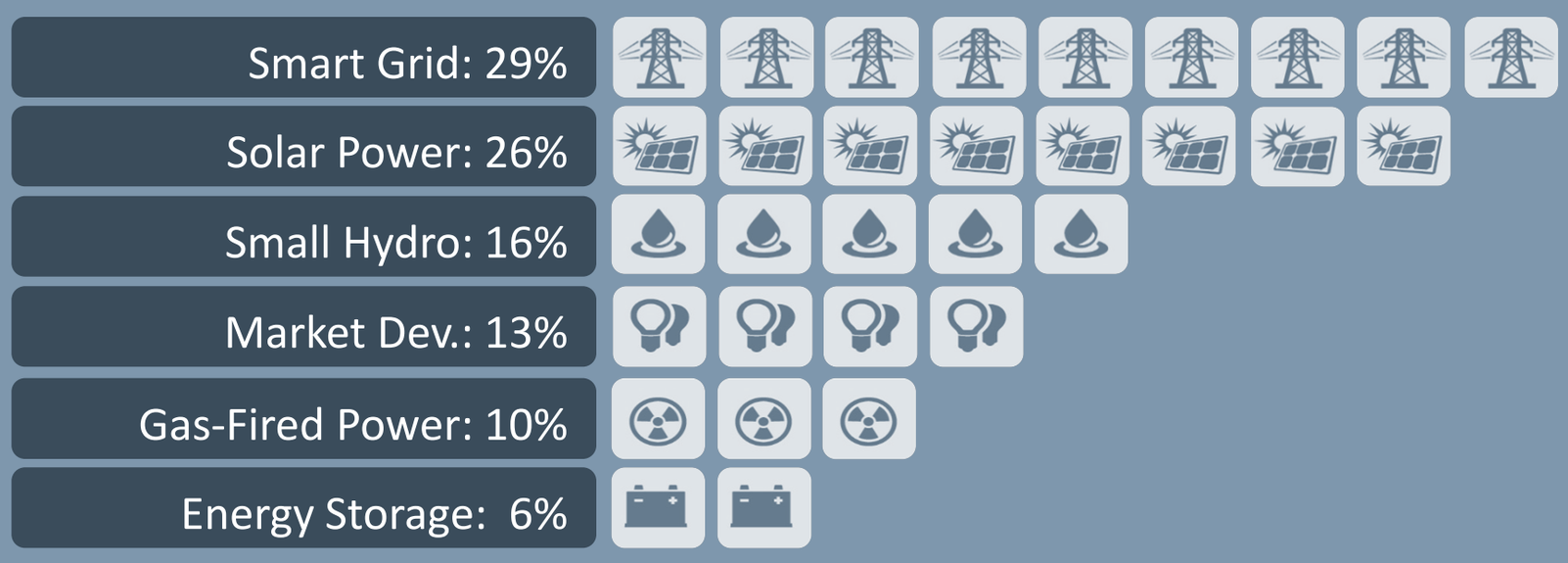

Catalyzing U.S. Expertise to Power Africa

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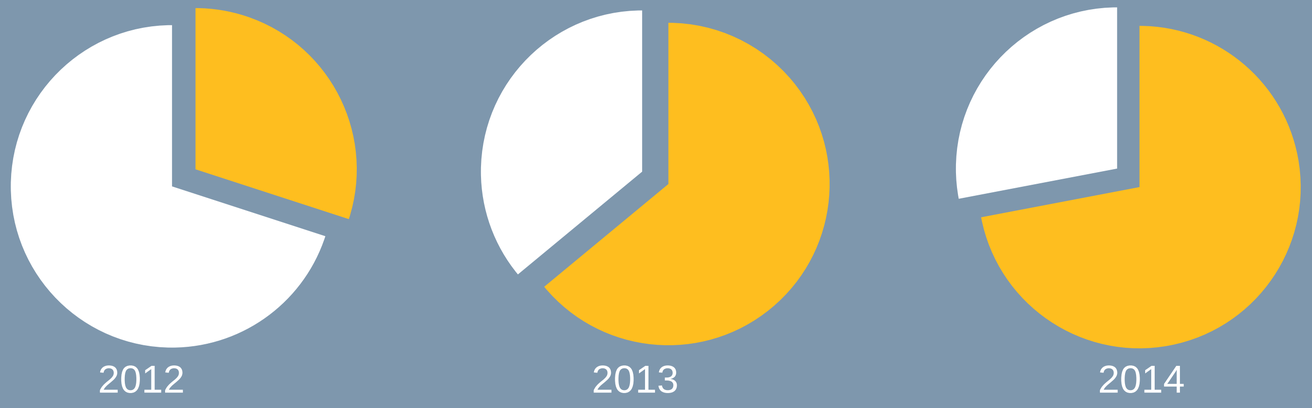
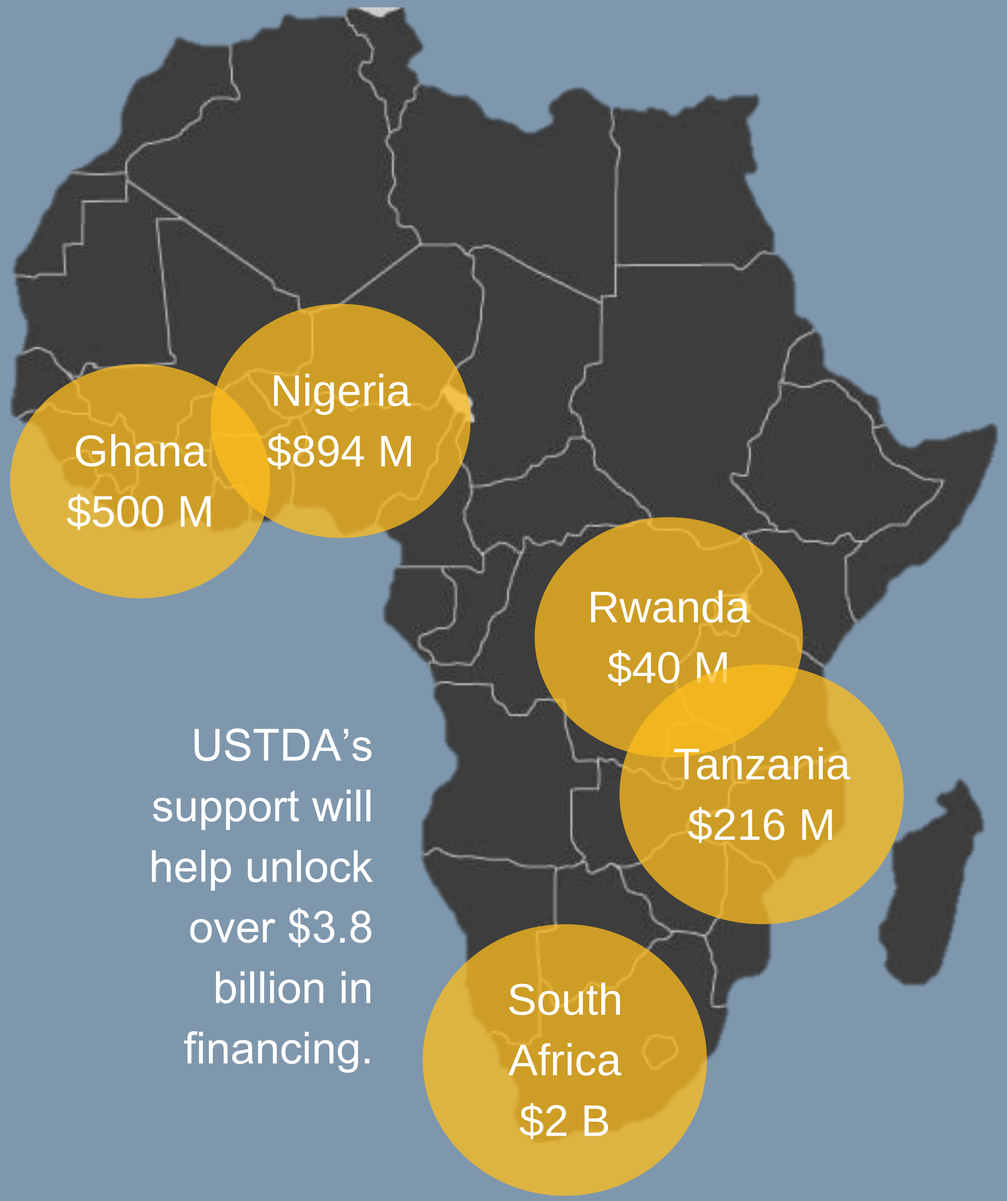
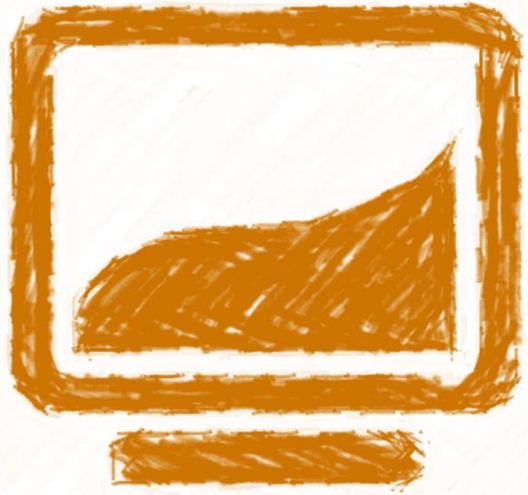




USTDA's support will help unlock over $3.8 billion in financing.

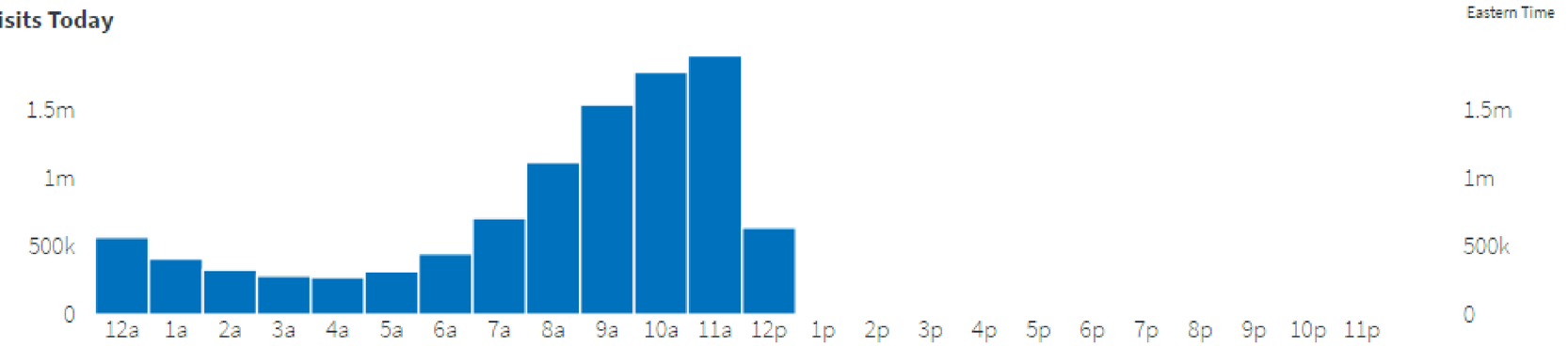
Dashboards



219,815

people on government websites now

Visits Today



Visits in the Past 90 Days

There were **2.04 billion** visits over the past 90 days.

Devices

desktop	57.8%
mobile	36.2%
tablet	6%

Based on rough network segmentation data, we estimate that **less than 5%** of all traffic across all agencies comes from US federal government networks.

Browsers

Chrome	43.1%
Safari	25.3%
Internet Explorer	16.8%
11.0	14.1%
7.0	1.1%
9.0	0.6%

Operating Systems

Windows	49.2%
7	27.8%
10	15.3%
8.1	3.5%
XP	1.2%
Vista	0.8%
8	0.6%

Top Pages

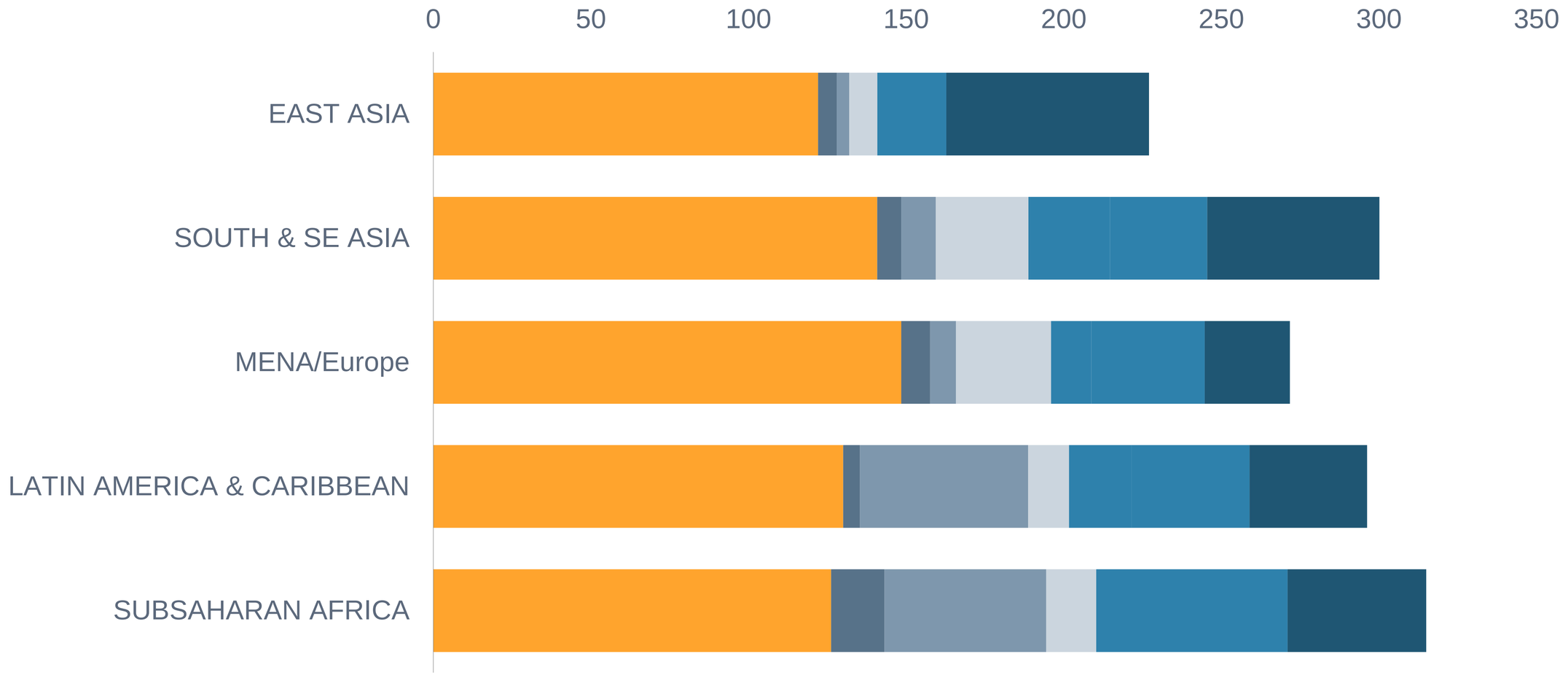
Now | 7 Days | 30 Days

*People on a **single, specific page** now. We only count pages with at least 10 people on the page. Download the full dataset.*

Welcome | USPS	3,096
myUSCIS - Case Status	1,936
USPS Tracking®	1,541
National Weather Service	945
my Social Security	890
USPS.com® - Create Shipping Labels	836
The United States Social Security Administration	805
Latest Earthquakes	701
Internal Revenue Service	645
Application Manager	617
USPS Mobile Web	616
Social Security Administration | Sign in / up	602
USAJOBS - The Federal Government's Official Jobs Site	561
USAJOBS - Sign Out	551
Welcome to Get Transcript	539
Home - eBenefits	493
Welcome to Direct Pay!	463
USPS.com® - USPS Tracking®	460
My HealtheVet - The Gateway to Veteran Health and Wellness	446

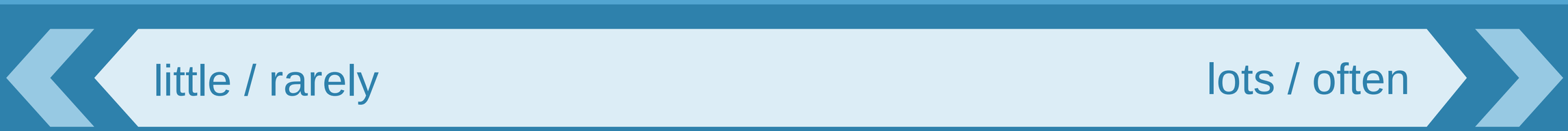
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Activity Title	Activity Number	Activity Type	Region	Country	Actionable Proposal Received	FS TA Sole Sourced	Rejected Terminated	DM Travel Started	DM DS Draft FR Received	DueDilgence Started	DueDilgence Completed	DAYS: Proposal to DD Started	Days: DD Started to DD Completed	Project Review
2	YEDAS Second Stage Smart Grid Implementation for Power Distribution	201521001A	Feasibility Study	MIDDLE EAST, NORTH AFRICA &	TURKEY	18-Sep-13	NO	N/A	21-Feb-14	15-Apr-14	6-Jun-14	25-Jun-14	188	14	9-Oct-14
3	VOC Emission Reduction Pilot Project		Feasibility Study	EAST ASIA	CHINA	22-Nov-13	Yes		N/A						
4	HFC Emissions Reduction Project	201461018A	Technical	EAST ASIA	CHINA	18-Nov-13	Yes	N/A	N/A	N/A	9-Jan-14	12-May-14	39	88	30-May-14
5	Flight Delay Management	201461012A	Technical	EAST ASIA	CHINA	9-Dec-13	Yes	N/A	N/A	N/A	24-Jan-14	19-Feb-14	35	19	21-Feb-14
6	U.S.-China Aviation Cooperation Program Phase XI	201561015A	Technical Assistance	EAST ASIA	CHINA	30-Jan-15	Yes	N/A	N/A	N/A	4-Mar-15	23-Mar-15	24	14	21-Apr-15
7	General Aviation and Business Aviation Development Project	201461013A	Technical Assistance	EAST ASIA	CHINA	6-Dec-13	Yes	N/A	N/A	N/A	24-Jan-14	19-Feb-14	36	19	21-Feb-14
8	Cybersecurity Innovation Center	201421005B	Feasibility Study	MIDDLE EAST, NORTH AFRICA &	ROMANIA	21-Nov-13	Yes	N/A	N/A	19-Feb-14	27-Jan-14	14-Mar-14	48	35	21-Mar-14
9	U.S.-China Aviation Cooperation Program Phase X	201461014A	Technical Assistance	EAST ASIA	CHINA	2-Jan-14	Yes	N/A	N/A	N/A	24-Jan-14	19-Feb-14	17	19	21-Feb-14
10	Performance Based Navigation (ADSB and GBAS) Implementation		Feasibility Study	MIDDLE EAST, NORTH AFRICA &	KAZAKHSTAN	2-Jan-14	NO	12-Mar-14	2-Nov-13	21-Jan-14	14-Jan-14	N/A	9		N/A
11	U.S.-ACEF Solafrica 100MW CSP	201411004A	Feasibility Study	SUBSAHARAN	SOUTH AFRICA	28-Aug-13	NO	N/A	N/A	23-Nov-13	4-Nov-13	13-Jan-14	49	51	5-Dec-13
12	U.S.-ACEF Ample Solar CSP Projects	201411005A	Feasibility Study	SUBSAHARAN	SOUTH AFRICA	28-Aug-13	Yes	16-Jan-15	N/A	21-Oct-13	4-Nov-13	7-May-14	49	133	5-Dec-13
13	Mercury Emissions Reduction	201461011A	Feasibility Study	EAST ASIA	CHINA	25-Jul-13	Yes	31-Mar-14	N/A	N/A	26-Nov-13	6-Feb-14	89	53	11-Feb-14
14	Green Data Center Feasibility Study and Pilot Project	201461010A	Feasibility Study	EAST ASIA	CHINA	17-Mar-13	Yes	N/A	N/A	N/A	3-Jan-14	6-Feb-14	210	25	11-Feb-14
15	Cement Production DE-Nox Technologies	201461019A	Feasibility Study	EAST ASIA	CHINA	25-Jul-13	Yes	N/A	N/A	N/A	22-Jan-14	11-Jun-14	130	101	17-Jun-14
16	Valle de Cauca Demand Side Management Pilot Power Project	201451009A	Feasibility Study	LATIN AMERICA & CARIBBEAN	COLOMBIA	11-Dec-13	Yes	N/A	N/A	N/A	10-Dec-13	24-Jan-14		34	24-Jan-14
17	Batys-Transit Power Generation	201421014A	Feasibility Study	MIDDLE EAST, NORTH AFRICA &	KAZAKHSTAN	31-Dec-13	NO	N/A	N/A	N/A	31-Jan-14	14-Mar-14	24	31	21-Mar-14
18	Clean Energy For Telecom Towers	201431002A	Feasibility Study	SOUTH & SE	INDIA	1-Feb-13	Yes	N/A	1-Feb-13	2-Jul-13	28-May-13	25-Jun-13	83	21	5-Jul-13
19	Africa Business Development Manager Contract Option Year Two	201111024C	Technical Assistance	SUBSAHARAN AFRICA	REGIONAL SUBSAHARAN	21-Nov-13	Yes	N/A	N/A	N/A	N/A	N/A			N/A
20	Regional Manager for Asia Contract Option Year Two	201131024A	Technical Assistance	SOUTH & SE ASIA	REGIONAL SOUTH & SE ASIA	2-Oct-13	NO	N/A	N/A	N/A	N/A	N/A			N/A
21	Business Development Manager, PSC Contract Funding	201411007A	Technical Assistance	SUBSAHARAN AFRICA	REGIONAL SUBSAHARAN	23-Jan-14	NO	N/A	N/A	N/A	N/A	N/A			N/A
22	Personal Services Contractor, Beijing	201361010A	Technical	EAST ASIA	CHINA	21-Feb-13	NO	31-Jul-14	N/A	N/A	N/A	N/A			N/A
23	IDIQ Contract Energy Sector	201391004A	Technical	Worldwide	REGIONAL	27-Aug-13	NO	N/A	N/A	N/A	N/A	N/A			27-Aug-13
24	Air Quality Management Program EPA Transfer Funds	201461002A	Technical Assistance	EAST ASIA	CHINA	17-Jun-13	NO	N/A	N/A	N/A	N/A	N/A			N/A
25	Anti-Monopoly Law Program Phase III Reimbursable Agreement	201361024B	Technical Assistance	EAST ASIA	CHINA	1-May-13	NO	N/A	N/A	N/A	N/A	N/A			N/A
26	FY 2014 Program Expenses for USTDA East Asia Beijing Office	201461004A	Technical Assistance	EAST ASIA	REGIONAL EAST ASIA	1-Dec-12	NO	N/A	N/A	N/A	N/A	N/A			N/A
27	Plasma WTE		Feasibility Study	MIDDLE EAST, NORTH AFRICA &	TURKEY	2-Jan-14	NO		N/A	N/A					
28	Renewables Integration		Feasibility Study	MIDDLE EAST, NORTH AFRICA &	JORDAN	4-Dec-13	NO		N/A	N/A					
29	Solar Steam Augmentation		Feasibility Study	MIDDLE EAST, NORTH AFRICA &	JORDAN	1-Nov-13	NO		9-Dec-13	28-Jan-14					
30	GETCO Renewable Power Integration Project	201431004A	Technical Assistance	SOUTH & SE ASIA	INDIA	1-Feb-13	Yes		1-Feb-13	2-Jul-13	13-Jul-13	25-Aug-13	116	30	21-Nov-13
31	High Reliability Freight Wagon		Technical	SOUTH & SE	INDIA	19-Jan-14	NO	31-Jul-14	27-Apr-13	9-Sep-13	31-Jan-14	2-Apr-14	10	44	29-Apr-14
32	Provision 2 Body Scanner System Pilot Project	201531006A	Technical Assistance	SOUTH & SE ASIA	INDIA	1-Dec-13	Yes	N/A	2-Sep-13	20-Jan-14	13-Jan-14	10-Apr-14	31	64	22-Jan-15

East Asia achieves the quickest timeline, with an average of 230 days from proposal to grant finalization. Across all regions, proposal review takes the longest period of time.



How much data?

How often do you need to refresh?



static reports

conditional formatting

pivot charts

software & custom solutions

LOGIC MODEL: Business Objective: Build capability within the leadership pipeline for sustained organizational success					Target Population: Employees, Supervisors, Managers, Executives		
Major resources needed to run the program	What you will do with the resources	Changes/impacts that occur because of program activities			What will show you're getting there? You should have baseline data for each method used		
		Immediate Level 2 (p.31-32,122-123)	3 months out Level 3(p.53, 96-97)	1 year Level 4 (p. 33-46, 53)			
Inputs	Activities	Short-term Outcomes	Intermediate Outcomes	Long term Outcomes	Outputs Level 1 (p.88-93)	Evaluation Methods (p. 20, 33-46)	Evaluation Tools (p. 33-46)
Program budget Facilities # full time staff # part time staff Office Supplies Technology Other: External Factors (p. 80): Laws/Regulations Other supporting programs Political environment Organizational culture Assumptions (facts or conditions you assume to be true) Other:	Establish leadership commitment Conduct stakeholder meetings (e.g. senior leaders, managers, employees, subject matter experts) Provide Training to Supervisors, Managers & employees • OPM suite of engagement courses (ILT, WBT, & web application) Review EVS results Develop an Acton Plan Develop an agency-wide engagement strategy Other:	Changes in Learning (p. 31-32, 50): New knowledge Increased skill Increased awareness Increased commitment Increased confidence Changed attitudes, opinions or values Changed motivation or aspiration Changed perspective Other:	Critical Behaviors: Increased collaboration/sharing of best practices within and across agencies Increased transparency Increased manager-employee interaction Increased employee advocacy Increased use of rewards Increased employee/group acknowledgement Changed policies Changed practices Drivers of Transfer (P. 52) Opportunity to apply new knowledge Reinforcement(mentoring, discussion groups, practice) Encouragement (OTJ observation, feedback, coaching) Reward (acknowledgement of changed behavior) Monitor (dashboard, surveys) Other:	Changed Conditions: Employee (increased satisfaction, increased engagement, increased retention, decreased EEO complaints) Work Environment (better work products, more innovative ideas, more creative solutions, compliance with laws, improved communication, inclusive work group practices, greater coordination among groups; improved EVS scores) Organization (reduced waste, decreased costs, increased efficiency, increased collaboration with other organizations, better overall health of the organization) Other:	# of participants who completed training % participant satisfaction # of Events # of cohorts # of mentoring sessions # of coaching sessions # of workshops # of networking events Meetings Attended # of committee meetings # of stakeholder meetings # of focus groups Resources Developed # of brochures # of newsletters # of training modules # of reports Other:	Interviews with senior leaders/employees Track $ spent on rewards Track # of non-monetary rewards/recognition On-the-job observations of progress Monitor employee engagement scores Monitor # of EEO complaints Track customer satisfaction scores Monitor quality of work products Track employee retention rates Survey leaders/employees 3, 6 and 12 months after the program	Checklist/L3 Survey Team meeting reports Accounting records Tracking sheet Checklist Employee Viewpoint Survey/Agency survey Agency EEO office Customer survey Manager survey/customer survey HR system L3/L4 survey

Inputs	Outputs	Outcomes

Top Line Results Inputs	Outputs	Outcomes
Historical Comparison		
Breakdown/By Dept.		

Top Line Results Inputs Costs	Outputs # Trained	Outcomes % Applying what they learned
Historical Comparison		
Breakdown/By Dept.		

Top Line Results **Inputs** Costs	**Outputs** # Trained	**Outcomes** % Applying what they learned
Historical Comparison Direct costs & person hours	# Completed/Certified % Satisfied	Increased Retention Surveys - Productivity, Use, Effectiveness
Breakdown/By Dept.		

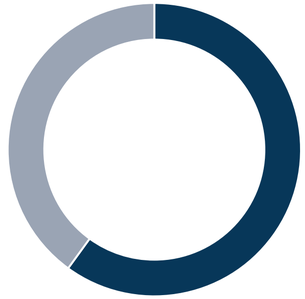
Cost

$631,794

Trained

358

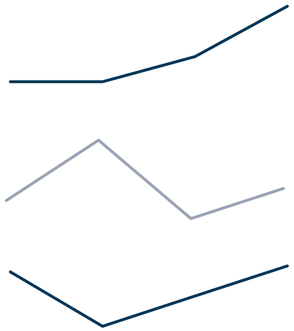
% Applying what they learned



298 Completed

114 Certified

76% Satisfied



Applied Use

Effectiveness

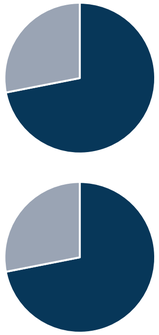
Productivity

Retention

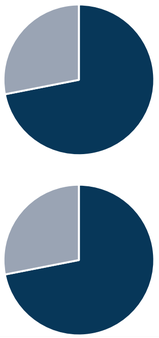
Dept. A

Dept. B

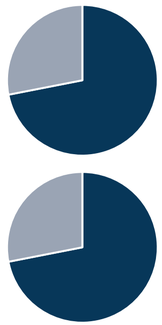
% Completed



% Effectiveness



% Applied Use

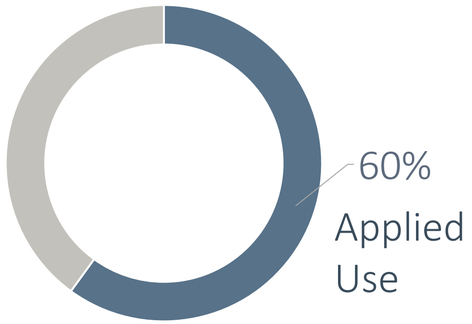


$631,794

Total Cost FY2016

358

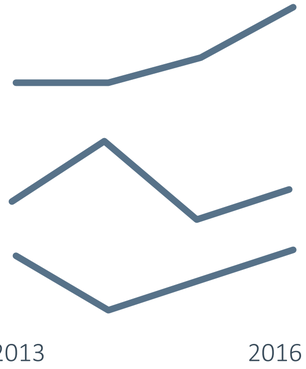
Total Number Trained FY2016



298 Completed

114 Certified

76% Satisfied



Applied Use

Effectiveness

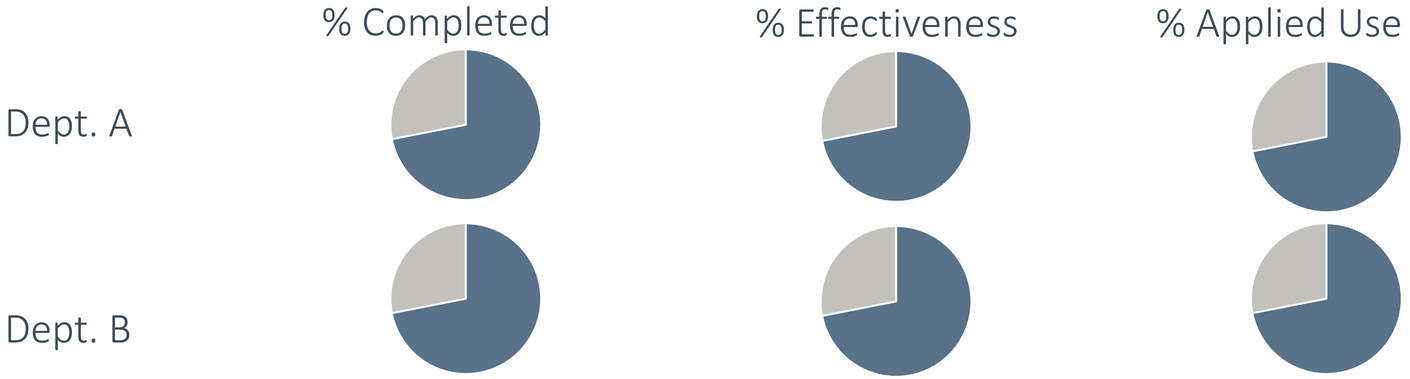
Productivity

Retention

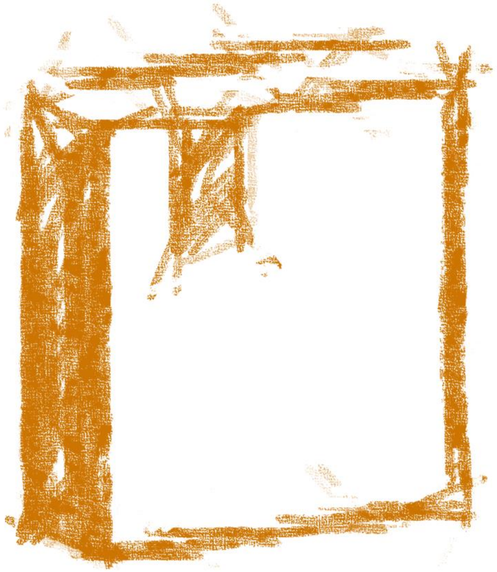
% Completed

% Effectiveness

% Applied Use



Better Reports



Where we started:

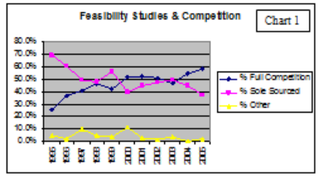
TRENDS IN SELECTION PROCEDURES 1995-2005

The two most common methods for selecting a feasibility study contractor are sole-sourcing and full competition. ***Sole-sourcing*** refers to situations in which a U.S. company is awarded a contract without a competitive bidding procedure. This selection process usually occurs when the host country/grantee has determined that a particular U.S. company is best suited to perform the study or when a U.S. company has submitted a proposal for a project after having made a significant prior investment in the project. In sole-source situations, USTDA generally requires cost sharing and success fee agreements with the U.S. contractor and sometimes from the grantee as well.

Full competition refers to situations for which an announcement is issued (usually on www.fedbizopps.gov) and the host country/grantee chooses from among the bidding companies. These projects are likely to be public sector projects brought to USTDA by the host country. ***Other forms*** of contractor selection include methods such as short listing, limited competition, host country competition and multilateral development bank competition. These methods are seldom used and therefore will not be the focus of this paper.

As seen in Chart 1, the percentage of feasibility studies that were sole-sourced has decreased overall since the mid 1990's. However, it must be noted that sole-sourcing peaked in 1995 at 70% - up from 32% in 1990. From 1995 to 1997, however, there was a sharp decline in sole-sourcing from 70% to 50%. Between 1997 and 2003 there were some vacillations, but by 2003 the amount of sole-sourcing was once again at 50%. In 2005, however, sole-sourcing declined significantly to 38%.

Conversely, the percentage of feasibility studies that were fully competed increased over the same period. In 1995 only around 28% of all feasibility studies were competed as compared to 58.5% in 2005. As can be seen in Chart 1, in 1998 and 2003 the percentage of fully competed feasibility studies is nearly equal to that of sole-sourcing. In 2004 and 2005, however, the percentage of sole-sourced projects declined substantially compared to those projects which were competed. As a result, by the end of the period (2005) USTDA fully competed nearly 59% of its feasibility studies and sole-sourced about 38%. Other sources of competition remain insignificant.



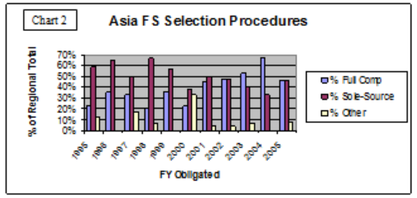
The following Table 1 presents the year-to-year data regarding the two main methods for selecting USTDA contractors between 1995 and 2005. It includes the number and percentages of feasibility studies that were sole-sourced and fully competed for each year.

Table 1

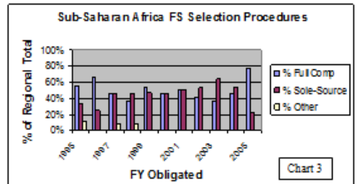
FY Obligated	Total # of FS's	# of FS w/ Full Competition	% Full Competition	# of FS w/ Sole Source	% Sole Sourced
1995	123	31	25%	86	70%
1996	95	35	37%	58	61%
1997	103	42	41%	51	50%
1998	108	50	46%	52	48%
1999	114	48	42%	64	56%
2000	95	49	52%	38	40%
2001	116	61	53%	52	45%
2002	114	58	51%	54	47%
2003	87	41	47%	43	49%
2004	51	28	55%	23	45%
2005	53	31	58%	20	38%

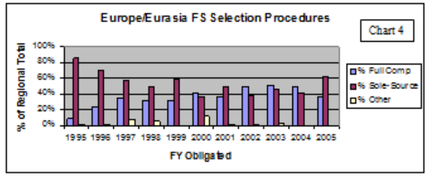
REGIONAL TRENDS IN SELECTION PROCEDURES 1995-2005

Selection procedures are generally dictated by the needs of each individual project. However, occasionally economic and political factors influence selection procedures. Although this can be seen in all regions, it is most apparent in Asia where sole-sourcing was predominantly used until 2002, when both sole-sourcing and full competition were used equally. The significant increase of full competition in 2001 is due to the political amelioration of U.S.-China relations and USTDA's return to obligating projects in China in that year. China consistently used full competition more often than sole-sourcing, in contrast to the region as a whole which tended towards sole-sourcing. China tipped the scales in the region and instigated the relative equilibrium between sole-sourcing and full competition.



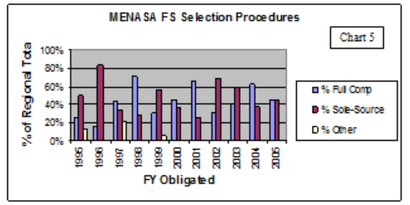
The effect of economic influences on selection procedure trends is made evident by the sharp dip in sole-sourcing in Asia in 1997 – a phenomenon that can be explained by the 1997 Asian Tigers financial crisis. Sole-sourcing most frequently occurs when a U.S. business approaches USTDA with a project proposal and therefore, it is understandable that fewer U.S. companies would be inclined to invest money at a time when the market crash was at its worst. Sole-sourcing recovered in subsequent years and, in fact, had an all time high in 1998 of approximately 68%. Success fee and cost share agreements did not diminish as a result either. The fact that the Asian financial crisis did not have as significant of an effect on the region as one would expect could partially be explained by the fact that USTDA's regional budgets have remained relatively consistent over the years and therefore projects were created despite the economic turmoil. This, in and of itself, fulfills one of USTDA's missions to provide

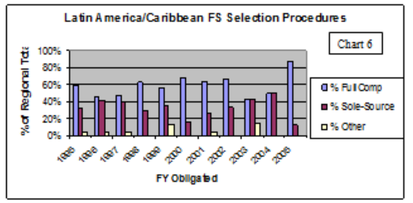




economic and development aid to both U.S. companies and grantees in countries that by nature are riskier investments.

The remaining charts demonstrate the trends in the other four regions. Another influence in selection procedures is the impact of the significant decline in the total number of FSs obligated. With a decrease in the total numbers, percentages become much more volatile. In Latin America and the Caribbean, for example, both the Country Managers and the Regional Director indicated that they felt that often U.S. companies were not as interested in direct investment and joint ventures in the region due to the high risk and small size of the markets. As a result, fewer U.S. companies come to USTDA with project proposals and a greater percentage of the projects are fully competed. The anomalies in this trend begin after 2003 and 2004 when the number of FS's obligated were reduced by 50% per year. In 2002 15 FS's were obligated whereas in 2003 there were 7, and there were only 4 in 2004. This distinct decrease can be explained by the sharp increase in TA projects obligated in the same years (see the section on TAs below). The impact on selection procedure percentages, however, is to make them much more volatile and not as reliable an indicator of the regional influences on these factors.





In the Middle East, South East Asia, North Africa (MENASA) region there do not seem to be any discernable trends. It appears as though there is a relatively even bi-annual back and forth between sole-sourcing and fully competed projects. In 1995 and 1996 sole-sourcing was more prevalent and reached an all-time high of 83% in 1996. In 1997 and 1998 more FS's were fully competed as they were in 2000 and 2001 and then again in 2004. In 2005 there were 5 projects that were sole-sourced and 5 that were fully competed.

In conclusion, there are a number of factors that can influence selection procedures in a region; the political and economic situation, U.S. company perception of the lucrative nature of the markets, host country policies, etc. Every regional team emphasized that they do not guide projects one way or another and that each project is unique. In certain circumstances, however, based on the host country's needs it may be suggested that they forgo sole-sourcing in an attempt to bypass the cumbersome legal obligations that come with the cost share and success fee program. If at any given time, however, the regional teams feel that the competition process is a farce in a deliberate attempt by a U.S. company to side-step the legal difficulties of sole-sourcing, then they will either demand a cost share agreement or agree to pay for a portion of the project - thereby requiring an implied cost share by the company.

USTDA Trends in Contractor Selection Procedures, Cost Sharing and Success Fees

1995-2005

Where we are now:

106

Since 1981, USTDA has supported 106 rail sector activities

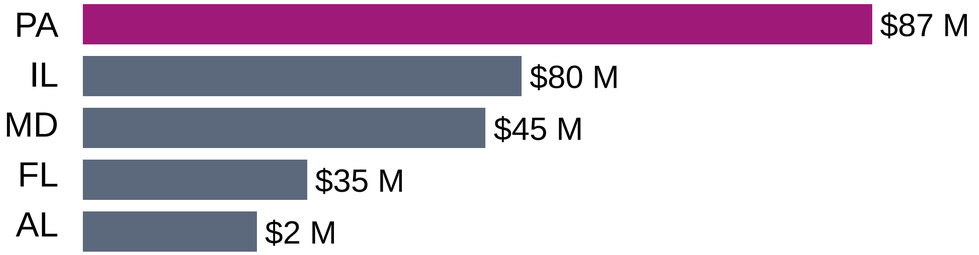
$2.4 B

These projects generated $2.4 billion in U.S. exports

380

These exports came from over 380 U.S. companies.

USTDA's rail sector projects helped generate exports for companies in 37 states, with Pennsylvania in the lead



Key challenges to implementation and exports include:

Life-Cycle Cost

Given the initial high cost of U.S. locomotive equipment, a challenge is showing foreign project sponsors the value of low life-cycle costs.

Legacy Systems

Railway projects are often hampered by interoperability issues, particularly when dealing with legacy systems that utilize standard or meter-gauge.

Diverse Supply Chain

U.S. content levels are difficult to determine for some rail equipment, particularly locomotive kits and engines, given the many components and diverse supply chains used in the manufacturing processes for such items.

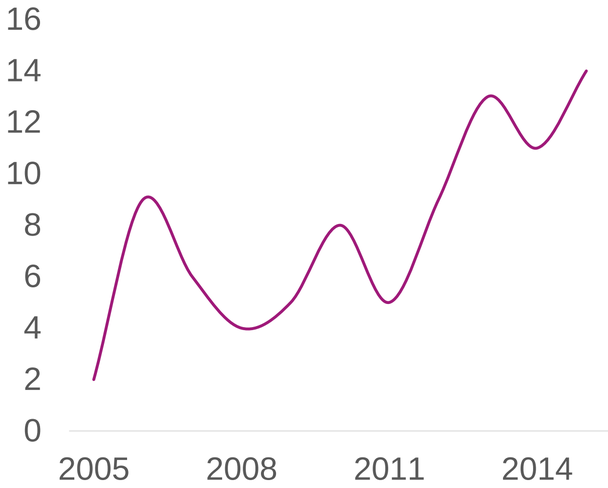
Local Content Requirements

Local content and labor requirements in some foreign markets serve as impediments to U.S. exporters.

Imbalanced Technical Specs.

Tenders requiring design specifications often favor a single supplier. Performance-based specifications, which define what a product is required to do, but not how it is made, can help level the playing field for US vendors.

Growth over last decade:



Common exports:

- Locomotives
- Engines
- Train Control Systems

1 · 3 · 25

Bottom Line Up Front

Resources

AEA Data Viz TIG Website
eval.org/datavisualizationandreporting/home

Data Visualization Checklist
by Ann Emery and Stephanie Evergreen

Presenting Data Effectively
by Stephanie Evergreen

Tools

Juice Analytics
Color Brewer 2.0
Adobe Color
Graphic River
Canva
Visual.ly

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Facebook:
facebook.com/USTDA

OPM.GOV

EVALUCON

FEDERAL EMPLOYEE DEVELOPMENT

THANK YOU

U.S. Trade and Development Agency