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# Sandia Infrastructure Investment Planning (SIIP) Process

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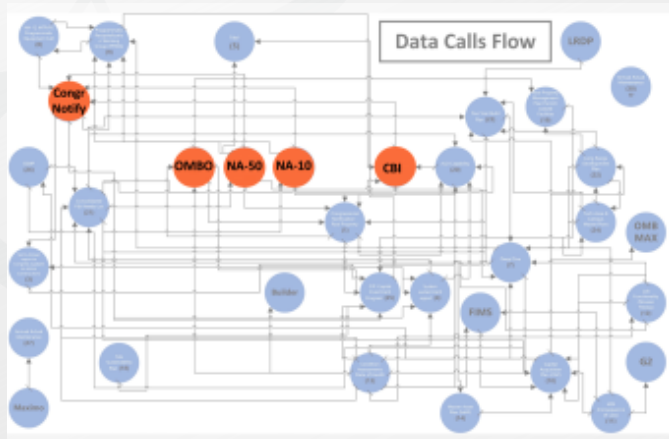


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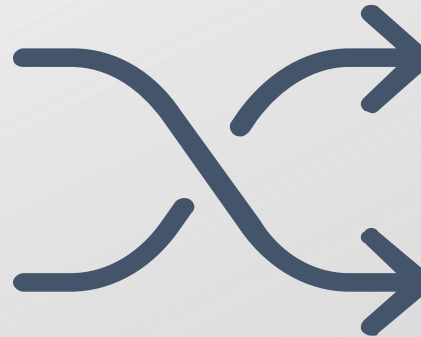
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## Inception of SIIP

### ISSUES



### FOCUS AREA



### RESULTS



- Lack of corporate planning process and cohesive investment strategy
- Ad hoc and siloed data call processes (30+ databases)
- Prioritization is fragmented across process ownership
- Information is inconsistent due to multiple databases
- Inefficiencies and confusion amongst internal and external customers
- Perception of funding “shopping”

1

### Sandia Infrastructure Investment Planning (SIIP) Process

*an approach for how Sandia identifies its F&I investment needs to obtain funding*

2

### “One Database”

*a single source of truth for data related to Sandia’s F&I investment needs*

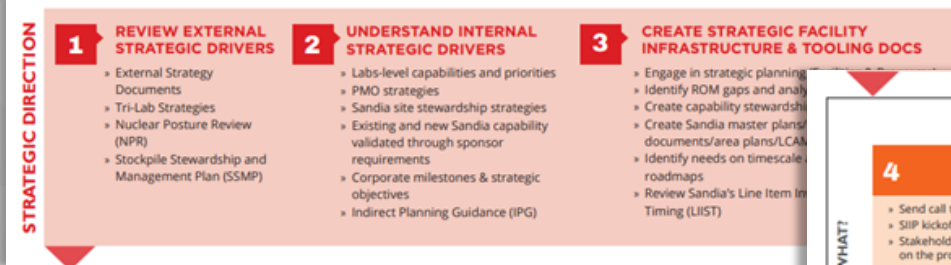
- One Database
- Prioritization process including informed funding decisions
- Input from multiple lenses
- Lab-wide Portfolio Balancing
- Better alignment of F&I needs to funding sources
- Documented direction on funding sources use aligned to CAS
- Continuous feedback and improvement



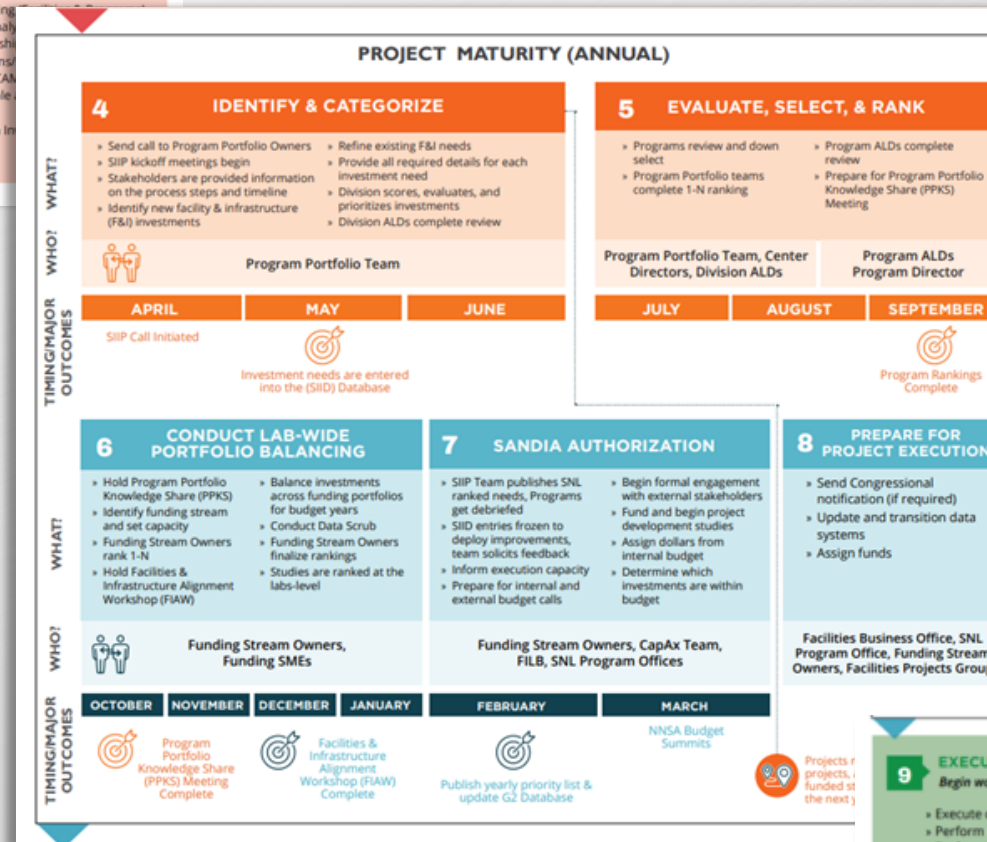
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## SIIP 10 Step Process

### Annual Process



Occasional  
(3-5 years)



Continuous  
(during year)

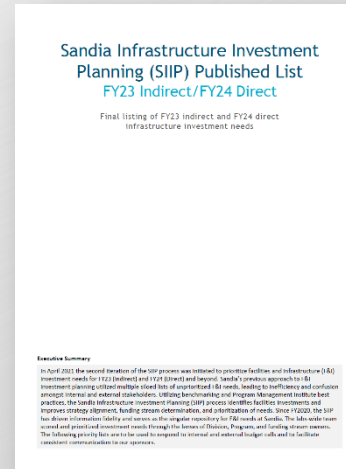
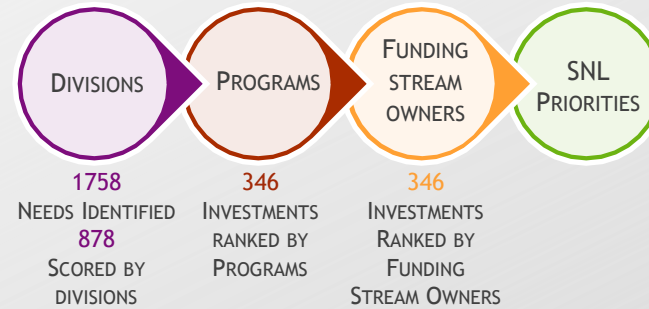




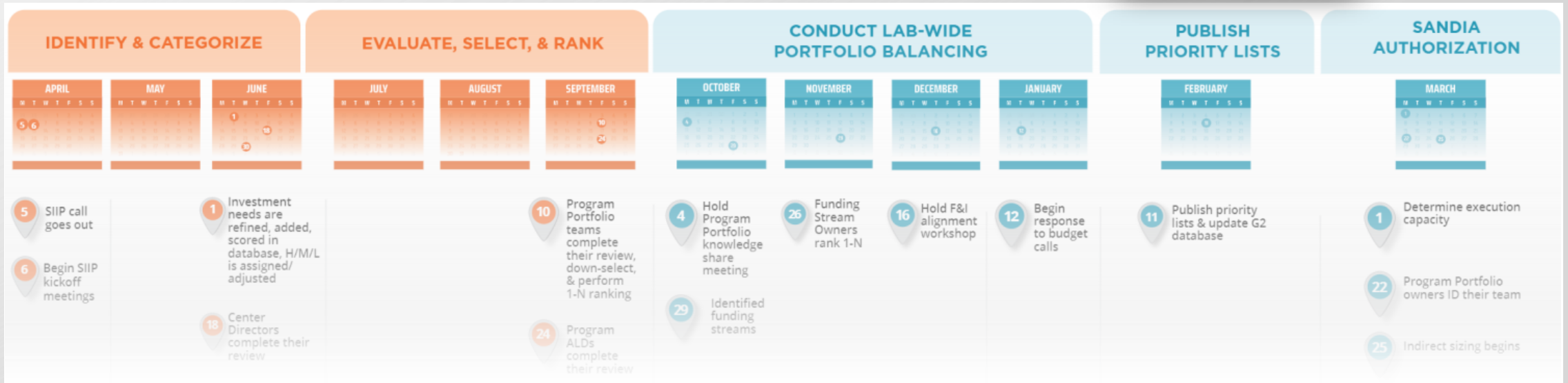
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## Annual process



Projects will be executed as funding is available



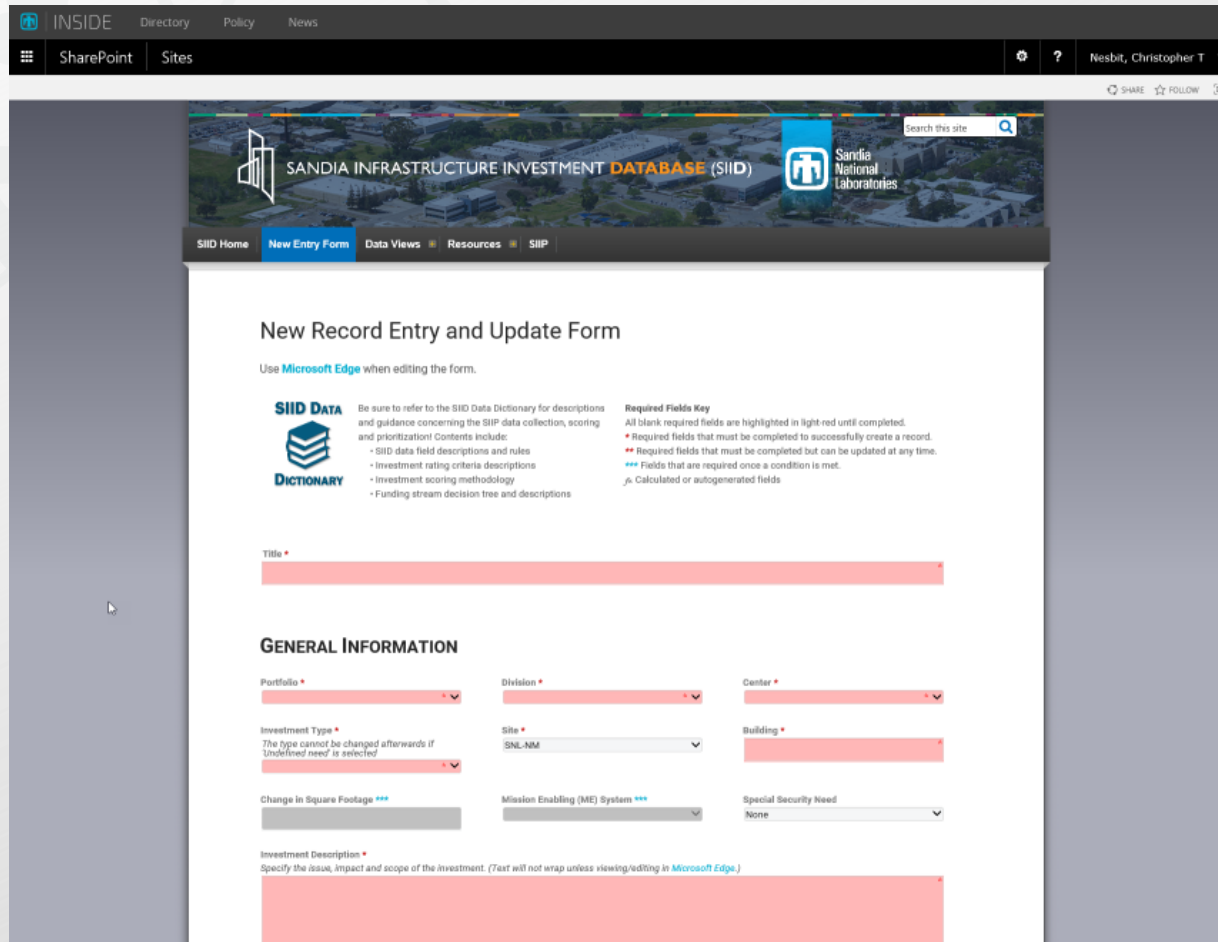
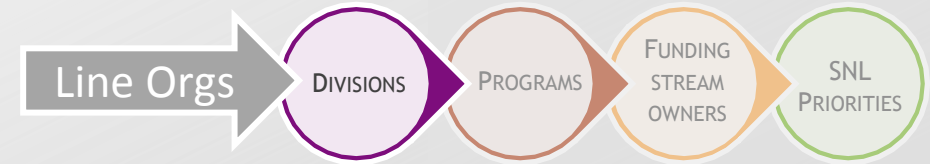




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## SIID entry data collection

- Web-based intake portal and data repository
- Title, Portfolio, Division, Center, Investment type, location
- Investment description (Issue, Impact, Scope)
- Risk to Mission Without Investment
- Requirement drivers
- Investment Requestor, Manager, and POCs
- TPC amount, estimate class level, date of estimate, and need by date.
- Initial Funding Stream and Alternate



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## SIID criteria evaluation

### RATINGS & RANKINGS

#### EVALUATION CRITERIA RATINGS \*\*

Criteria that do not apply to the selected Investment Type are colored in grey and disabled. Refer to the [SIID Data Dictionary](#) for more info.

	None	Very Low	Low	Moderate	High	Very High
Risk to Mission (RSK)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Environment, Safety & Health (ESH)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Opportunity (OPP)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Uniqueness (UNQ)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Site Development Plans (SDP)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Facility Operations (FAC)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Space Utilization (UTZ)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Savings Cost/Benefit (SAV)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Deferred Maint Cost/Benefit (DM)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Score  $\mu$       Score Rating  $\mu$

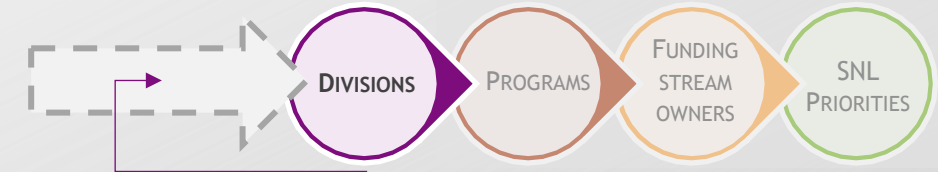
Very low    Low    Moderate    High    Very high

< 0.20     $\geq 0.20$      $\geq 0.40$      $\geq 0.60$      $\geq 0.80$

Note: Score and

Rating and Score

Criteria/Evaluation Factor	Description	Very low	Low	Moderate	High	Very high
<b>Risk to Mission (RSK)</b>						
Mission effectiveness and efficiency	Likelihood that the asset(s) will cause the mission to not effectively and efficiently achieve the activities performed in it through the impact to reduction in margin(s) of mission performance resulting from asset(s) problem/failure	No reduction in performance margin(s)	Very low to moderate reduction in performance margin(s)	Moderate to very high reduction in performance margin(s)	No remaining margin in performance margin(s)	Total failure in performance
Mission failure	Likelihood of mission failure due to the failure of an reliability issue with existing asset(s)	Very low likelihood of mission failure due to the asset(s)	Low likelihood of mission failure due to the asset(s)	Moderate likelihood of mission failure due to the asset(s)	High likelihood of mission failure due to the asset(s)	Very high likelihood of mission failure due to the asset(s)
Urgency	Urgency or length of time until the risk and/or impact to the mission resulting from the asset(s) problem/failure is unacceptable	< 10 years until risk or impact becomes unacceptable	10 – 20 years until risk or impact becomes unacceptable	20 – 30 years until risk or impact becomes unacceptable	> 30 years until risk or impact becomes unacceptable	> 40 years until risk or impact becomes unacceptable
Risk reduction	Impact to portion of gap closure or risk reduction to asset(s)	Very low portion of gap or risk reduction	Low portion of gap or risk reduction	Moderate portion of gap or risk reduction	High portion of gap or risk reduction	Very high portion of gap or risk reduction
Security	Likelihood of security issues resulting from asset(s) problem/failure	Low likelihood of minor issue	Low likelihood of minor issue	Low likelihood of minor issue	Low likelihood of minor issue	Low likelihood of minor issue
<b>Environment, Safety &amp; Health (ESH)</b>						
ESH issues	Likelihood of ESH issues (or incidents) resulting from asset(s)	Very low likelihood of serious issue, low likelihood of minor issue	Low likelihood of serious issue, moderate likelihood of minor issue	Moderate likelihood of serious issue, high likelihood of minor issue	High likelihood of serious issue, very high likelihood of minor issue	Very high likelihood of serious issue
EH&S mandate compliance	Completion of a gap/efficiency in meeting a regulatory mandate	Small correction of minor gap/efficiency	Complete correction of minor gap/efficiency, or a small correction of major gap/efficiency	Significant correction of major gap/efficiency	Significant correction of major gap/efficiency	Complete correction of major gap/efficiency
<b>Opportunity (OPP)</b>						
Impact of existing opportunity	Impact of the benefits or opportunities from the investment to its associated program(s) or capabilities	No long-term benefits, minor short-term benefits	Minor long-term benefits, moderate short-term benefits	Moderate long-term benefits, significant short-term benefits	Significant long-term benefits, major short-term benefits	Major long-term benefits, substantial short-term benefits
Scope of opportunity	Scope of impacts and/or emerging needs promoted by the investment across programs	No scope of impacts/emerging needs are satisfied	Significant scope of impacts/emerging needs are satisfied	Moderate scope of impacts/emerging needs are satisfied	Significant scope of impacts/emerging needs are satisfied	Major scope of impacts/emerging needs are satisfied
<b>Uniqueness (UNQ)</b>						
Implementation of alternatives	Difficulty of replacing the function(s) of the asset(s) with a viable alternative should it be permanently lost for any reason	Alternatives are available within same Division, Program or Facility, other sites do not need to be considered	Reasonable alternatives are available at Sandia but require cross-organizational negotiation, other sites do not need to be considered	Challenging alternatives may be available at Sandia but require effort and/or negotiation, other sites may be available at other sites	Difficult alternatives are unlikely to be available at Sandia, may be available at other sites	Extremely difficult or impossible alternatives are not available at Sandia or other sites
Uniqueness or specialization	Level of uniqueness or specialization of the asset(s)	Very low, little to no specialization, not unique	Low, minimal specialization, generally not considered unique	Moderate, some shared common specialization, fairly unique	High, rare specialization, highly unique	Very high, one of a kind specialization, unique to Sandia
<b>Site Development Plans (SDP)</b>						
Capacity and/or redundancy	Capacity and/or redundancy that benefits the utility and/or infrastructure of multiple buildings as a result of the investment	No capacity and/or redundancy benefits	Minimal capacity and/or redundancy benefits	Moderate capacity and/or redundancy benefits	Significant capacity and/or redundancy benefits	Major capacity and/or redundancy benefits
Part of larger site development strategies	Importance of the investment as part of a larger site development strategy (i.e., NA-50 MWP Area Plan, Site-wide Master Plan, Site Sustainability Plan)	No relationship to the NA-50 MWP Area Plan and/or the Site-wide Master Plan and/or the Site Sustainability Plan	Significant importance to the NA-50 MWP Area Plan and/or the Site-wide Master Plan and/or the Site Sustainability Plan	Moderate importance to the NA-50 MWP Area Plan and/or the Site-wide Master Plan and/or the Site Sustainability Plan	Significant importance to the NA-50 MWP Area Plan and/or the Site-wide Master Plan and/or the Site Sustainability Plan	Major importance to the NA-50 MWP Area Plan and/or the Site-wide Master Plan and/or the Site Sustainability Plan



- 9 Scoring Criteria (Risk, Safety, Opportunity, Uniqueness, Site Development, Facility Ops, Space Utilization, Fac Ops Savings, DM Savings)
- Notes for criteria scoring captured during intake and Division review.
- Scoring value is normalized, 0.00 – 1.00 scale, project specific – not all criteria may apply
- Criteria scoring based on definitions, but may have variance – Used to initiate conversation, not yet determinant

Very low	Low	Moderate	High	Very high
< 0.20	$\geq 0.20$	$\geq 0.40$	$\geq 0.60$	$\geq 0.80$



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## Need vetting and prioritization



- **Identifies** Wants vs. Needs
- SME need detailed intake knowledge
- Down-selects entries to operational impacts (VH-VL)
- 1-N all needs (operations)



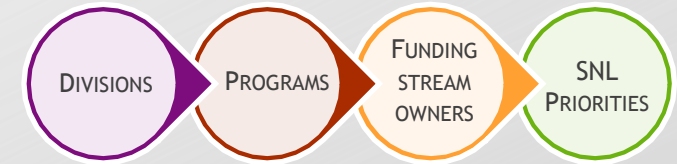
- **Integrates** Division priorities by project type
- Program integration understanding
- Down-selects entries (further) to risks and deliverable impacts
- 1-N (mission)



- **Balances** need funding requests to funding portfolios
- Reviews and confirms need match to funding sponsors
- Proposes funding source rank order based on 1-N priorities



- **Publishes** “Single List” of needs for yearly budget summits
- Down-selected needs specific to budget year
- Ranking within historical funding and over-target priorities





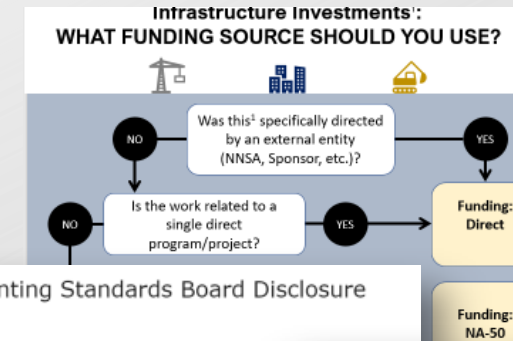


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## Funding Identification

- Principled approach to ensure correct funding source is identified
- Funding Decision Tree, Cost Accounting Standards Disclosure Statement, and team of experts determine funding source
- Funding stream owners review, approve and rank investments
- Published list of investments available for funding input
- Requests approved through normal processes
- SIID updated when funding is secured



Cost Accounting Standards Board Disclosure Statement

Cost Accounting Standards  
NATIONAL TECHNOLOGY AND ENGINEERING SOLUTIONS  
COST ACCOUNTING STANDARDS BOARD  
DISCLOSURE STATEMENT  
REQUIRED BY PUBLIC LAW 100-679  
Revision 6, Effective: October 1, 2021

**Sandia Infrastructure Investment  
Planning (SIIP) Published List  
FY23 Indirect/FY24 Direct**

Final listing of FY23 indirect and FY24 direct  
infrastructure investment needs

### FUNDING STREAMS

Investment Funding Type \*\*

Object Indirect

Funding Stream - Option 1 \*\*\*

Funding Stream - Option 2

Funding Stream - Final \*\*\*

### FUNDING DECISION TREE

The following set of questions are derived from the Funding Decision Tree flowchart found within the Data Dictionary. Completing these questions is optional but highly recommended - particularly for investments with unclear funding streams.

1. Was this specifically directed by an external entity (NNSA, Sponsor, etc.)?  
If yes, the funding stream is direct funding. If no, go to question 2.

2. Is the work related to a single direct program/project?  
If yes, the funding stream is direct funding. If no, go to question 3.

3. Is this a general purpose program?  
If yes, go to question 4.

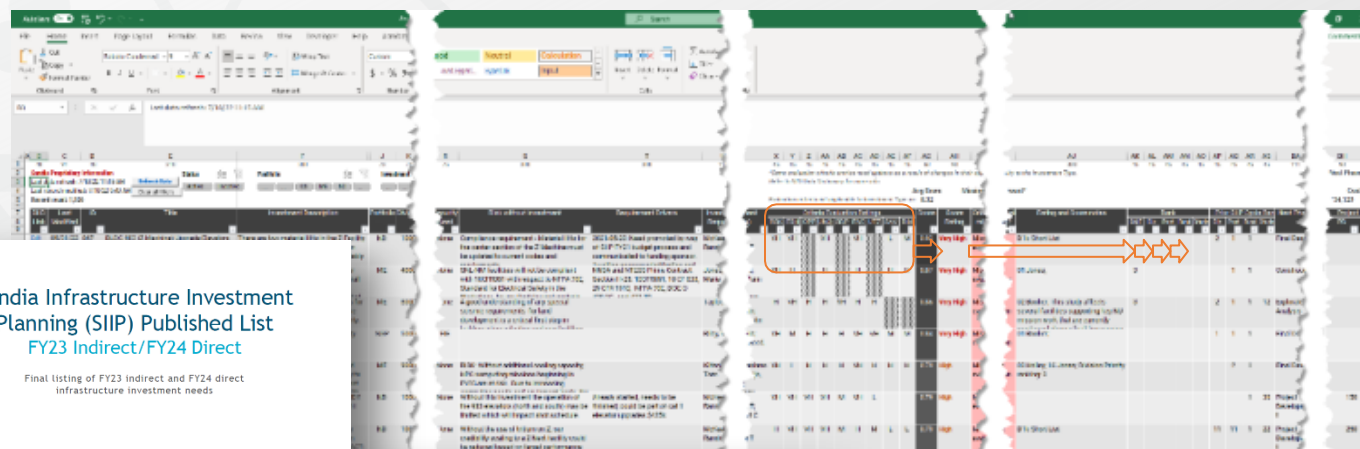
### COST & SCHEDULE

Refer to the field definitions and section and in the [SIIP Data Dictionary](#) for additional information on this section (next phase)

	Exploratory Analysis (EA)	Project Development (PD)	Final Design (FD)	Construction (CON)
Project phase funded? **	Y <input type="radio"/> N <input type="radio"/> N/A <input type="radio"/>	Y <input type="radio"/> N <input type="radio"/> N/A <input type="radio"/>	Y <input type="radio"/> N <input type="radio"/>	Y <input type="radio"/> N <input type="radio"/>

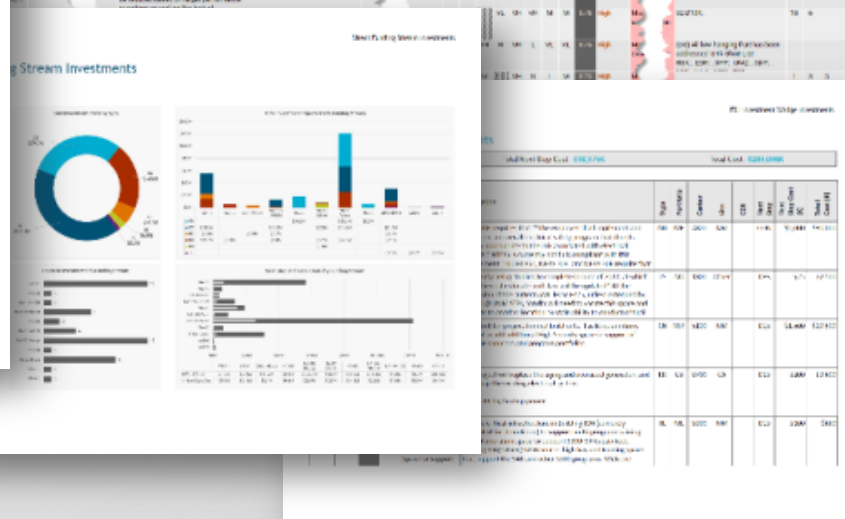


## Scoring, prioritizing, ranking, balancing, publishing



### Sandia Infrastructure Investment Planning (SIIP) Published List FY23 Indirect/FY24 Direct

Final listing of FY23 indirect and FY24 direct infrastructure investment needs



#### Executive Summary

In April 2021 the second iteration of the SIIP process was initiated to prioritize facilities and infrastructure (F&I) investment needs for FY23 (indirect) and FY24 (direct) and beyond. Sandia's previous approach to F&I investment planning utilized multiple siloed lists of prioritized F&I needs, leading to inefficiency and confusion amongst internal and external stakeholders. Utilizing benchmarking and Program Management Institute best practices, the Sandia Infrastructure Investment Planning (SIIP) process identifies facilities investments and improves strategy alignment, funding stream determination, and prioritization of needs. Since FY2020, the SIIP has driven information fidelity and serves as the singular repository for F&I needs at Sandia. The labs wide team scored and prioritized investment needs through the lens of Division, Program, and Funding stream owners. The following priority lists are to be used to respond to internal and external budget calls and to facilitate consistent communication to our sponsors.

- Division generally down-selects to a Top Needs only list for budget targets
- Program aggregates Division 1-N lists and filters to project type for ranking
- Program down-selects project type list respecting top Divisions' rankings and utilizes criteria score for ties
- Funding sources balance aggregate project types to external criteria (if available) and historical funding
- Planning publishes year end list for budget conferences

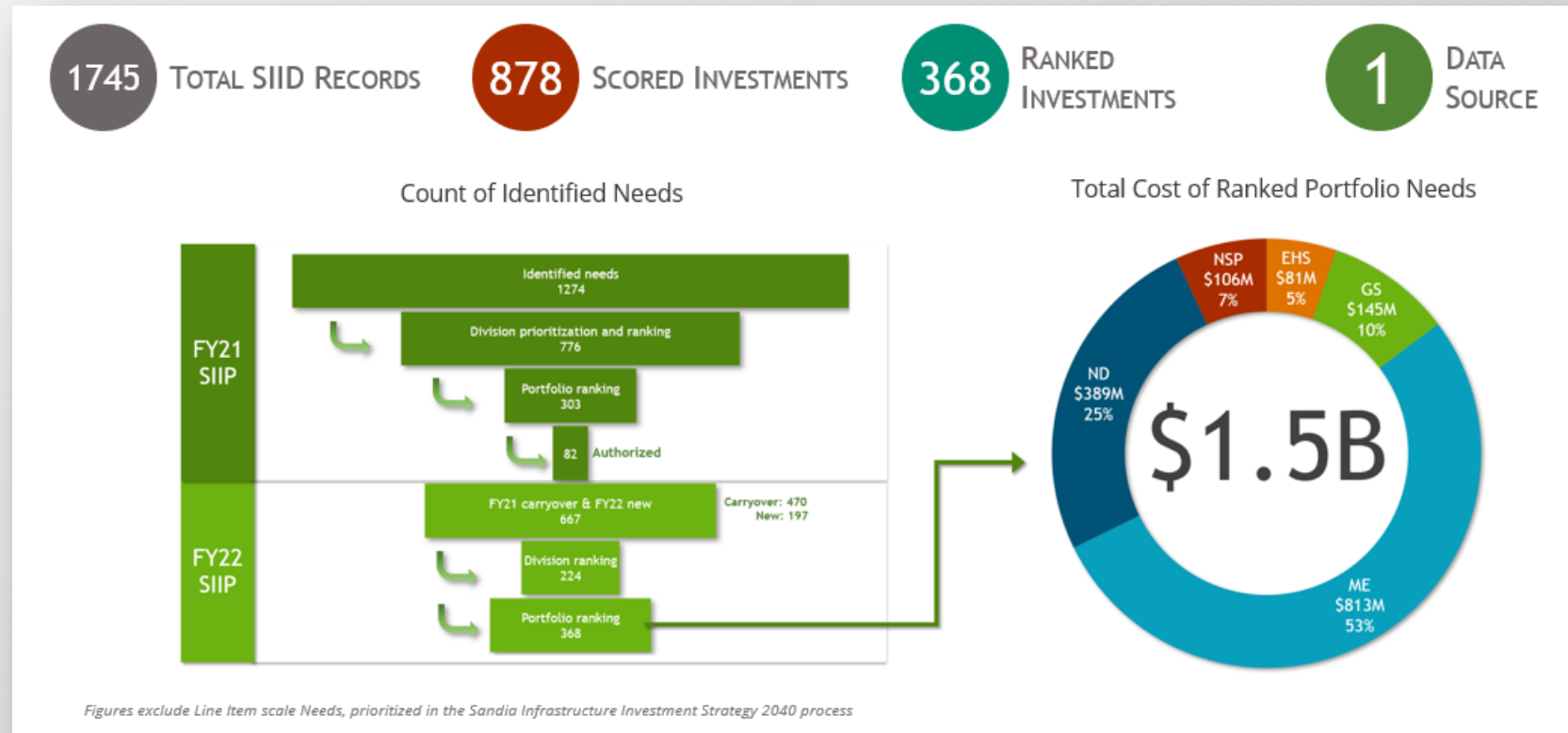
## Where we are, where we're going

### Where We Are

- Significant data collection in previous iterations
- Substantial efforts to score and rank needs

### Where We are Going

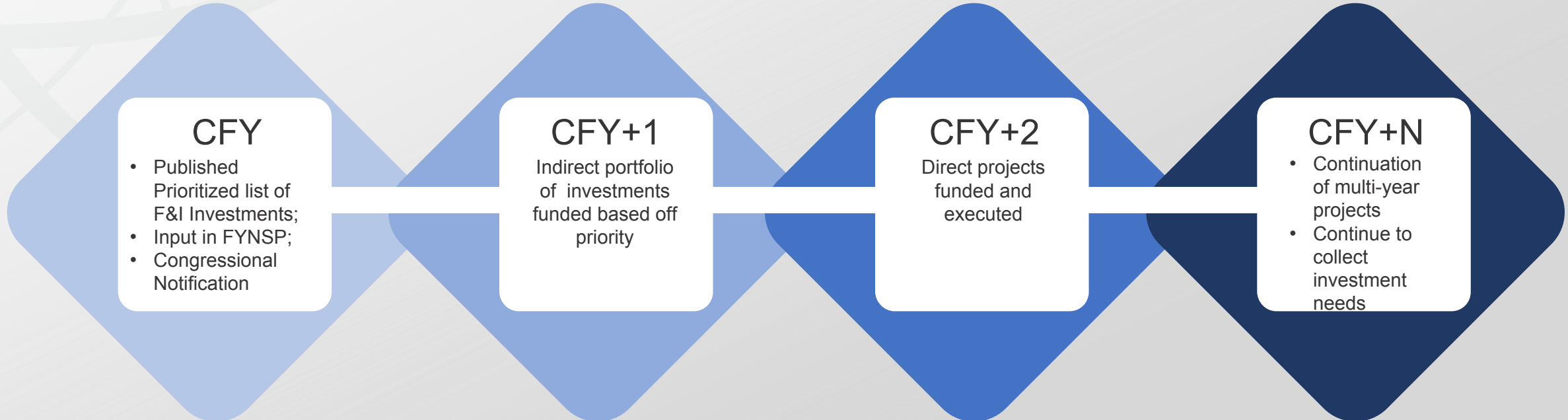
- Further refinement of existing investment needs
- Slotting in emerging needs
- Adjust ranking in response to changes in program strategic direction
- Balancing long range planning with shorter term needs (at the right level of effort)
- Continuous engagement with external sponsors to communicate gaps/needs



*In Progress: Set priorities for FY24 Indirect / FY25 Direct Investment Needs*



## What happens next?







## Questions?

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