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Los Alamos National Laboratory

Agenda

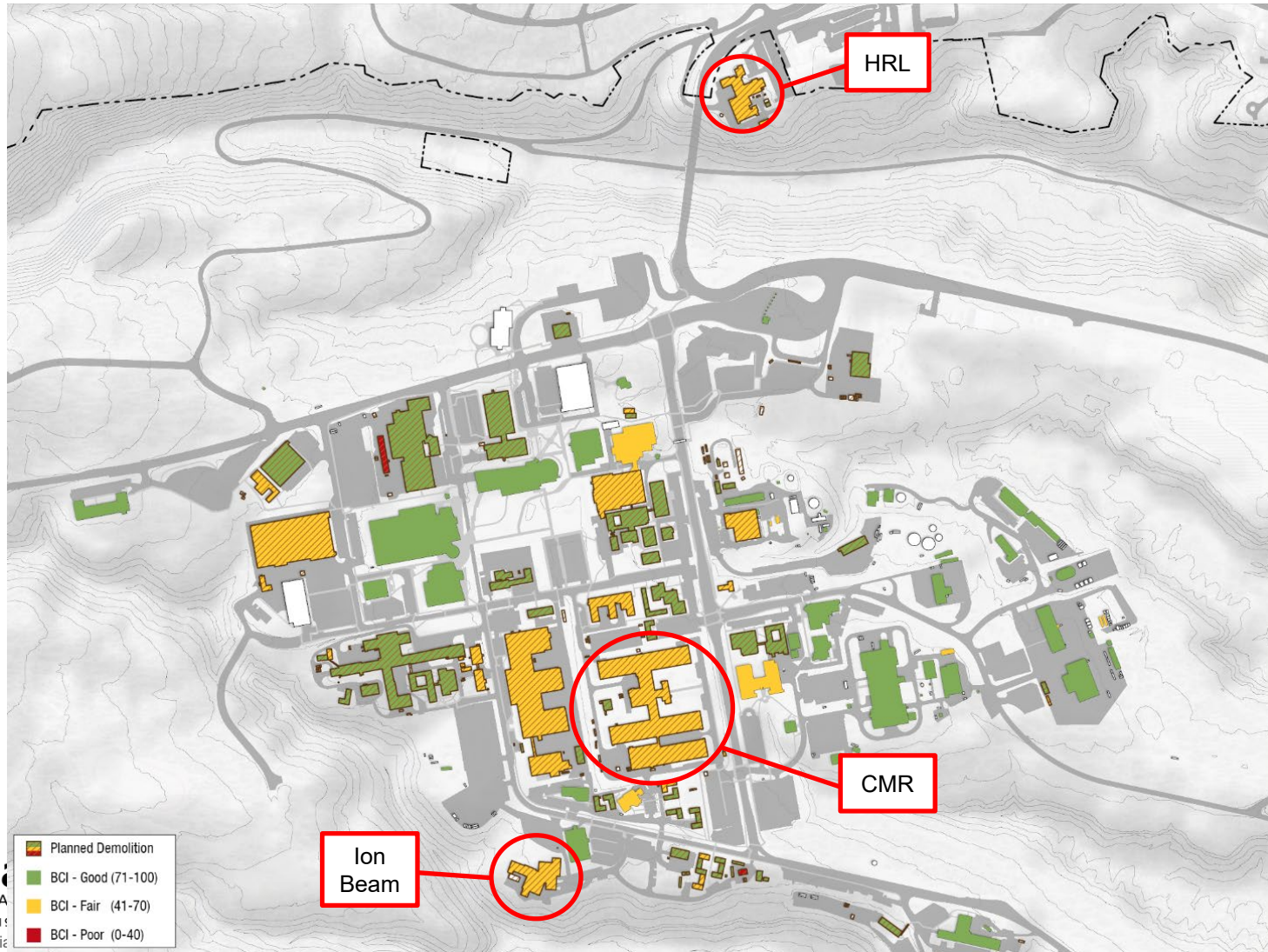
- Campus Master Planning
- Recap Project Prioritization (Functionality)

June 18, 2020

LANL Campus Master Planning


- Campus Master Plan (CMP) currently under development, completion anticipated in late FY21
 - Developing an interactive tool that will allow a user to select embedded, ordered layers of information including data sets, timeframes, and side-by-side comparisons
 - Area Development Plans will provide more detail for geographical areas or capabilities and feed into G2 and the MAP
- Multiple mission, infrastructure, and environmental data elements are being analyzed to help determine the long-term end state
 - Mission gaps, land use, buildable area, utilities, potential release sites, archeological, T&E, etc.
 - BUILDER BCI, ERI, and MDI are included in the analysis

CMP Overlay of BUILDER BCI and Planned Disposition in TA-03



TA-03 Long Term Plan




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■ Long Term Build
■ Mid Term Build
■ Near Term Build
■ Existing Building

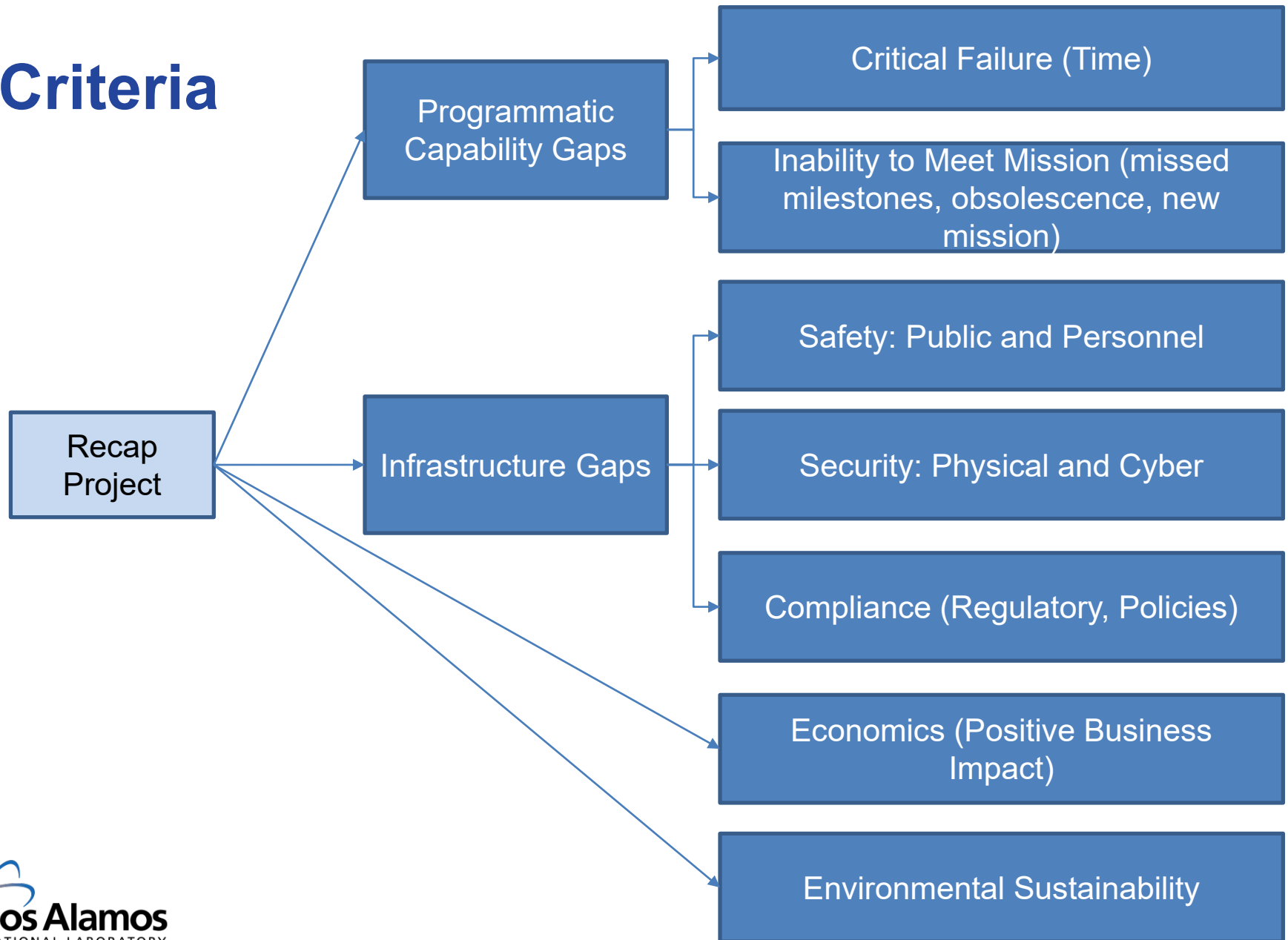
Disposition of High ERI Assets is On Track

Property ID	Name	ERI	Total GSF*	Demo Status
18-0032 18-0116	Critical Assembly Bldgs (Casa 2 and 3)	NA	9,293	Demolished FY17
03-0035	Press Bldg	NA	15,073	Demolished FY17 (Indirect)
46-0088	Icons Lab	NA	4,558	Demolished FY18 (Indirect)
03-0016	Ion Beam	100	56,259	Risk mitigation funded FY20, Earliest Start FY29
46-0001	Lab/Office Bldg	100	29,069	Demolished FY19
16-0306	Plastics Bldg	90	19,639	Funded FY20
41-0004	Ice House	79	22,119	Planned FY21
03-0029	Chemistry and Metallurgy Research (CMR) Facility	74	612,786	Building still operational, Earliest Start FY27
43-0001	Health Research Laboratory (HRL)	74	105,470	Planned FY23
16-0460	Lab Bldg	74	13,825	Funded FY20
16-0280	Inspection Bldg	72	19,023	Demolished FY18

LANL Project Prioritization Methodology

- LANL implemented a new project prioritization methodology for FY22 Recap project submittals
- Multi-attribute decision analysis using Criterium Decision Plus2 software
- Rated seven criteria against twelve projects
 - Criteria includes condition and functionality assessment
 - Combined with four weighting perspectives to provide the final results
 - Results used in prioritization of Recap project submittal list

Criteria



Process: Scoring Projects, Weighting Criteria, and Outcomes

TABLE 1
Criterion Scores for NA-50 Recapitalization Projects, Generic Names

Criterion	Project 1	Project 2	Project 3	Project 4	Project 5	Project 6	Project 7	Project 8	Project 9	Project 10	Project 11	Project 12
Critical Failure	7	7	7	7	6	1	4	4	6	6	4	7
Inability to Meet Mission	7	6	6	6	7	1	6	1	5	6	7	7
Safety	7	7	7	4	5	3	5	5	5	6	6	6
Security	1	1	1	1	4	1	5	1	3	5	6	1
Compliance	7	7	7	5	6	7	5	7	3	2	3	1
Economics	7	6	6	4	6	1	6	1	4	5	7	7
Environmental Sustainability	4	3	3	6	4	1	5	1	4	7	7	6

Legend

- 7 Finest
- 6 Excellent
- 5 Above Avg.
- 4 Avg.
- 3 Below Avg.
- 2 Poor
- 1 Unsatis.

TABLE 2
Weights of Criteria for Several Perspectives

Criterion	Weighting Scheme			
	Equal	Weapons Program	NA-50 (1)	Weapons Infrastructure
Programmatic Capability Gaps				
1) Critical Failure	0.188	0.333	0.175	0.25
2) Inability to Meet Mission	0.188	0.333	0.175	0.25
Infrastructure Gaps				
3) Safety: Public and Personnel	0.125	0.111	0.117	0.24
4) Security: Physical and Cyber	0.125	0.111	0.117	0
5) Compliance	0.125	0.111	0.117	0.093
6) Economics	0.125	0	0.20	0.113
7) Environmental Sustainability	0.125	0	0.10	0.053
Total	1.00	1.00	1.00	1.00

TABLE 3
Project Ranks under Several Weighting Perspectives

Recapitalization Project	Weighting Scheme			
	Equal	Weapons Program	NA-50	Weapons Infrastructure
Project 11	#1	#2	#1	#6
Project 10	#2	#4	#3	#7
Project 5	#3	#1	#2	#5
Project 7	#4	#7	#4	#9
Project 1	#5	#3	#5	#1
Project 2	#6 (tie)	#5 (tie)	#6 (tie)	#2 (tie)
Project 3	#6 (tie)	#5 (tie)	#6 (tie)	#2 (tie)
Project 12	#8	#8	#8	#4
Project 4	#9	#9	#9	#8
Project 9	#10	#10	#10	#10
Project 8	#11	#11	#11	#11
Project 6	#12	#12	#12	#12

Other Data Applications

- Using G2 Infrastructure Planning Project list to ensure consistency with CMP and other site project lists
- Using MDI and ERM in project planning process to evaluate risk
- Using BUILDER scenario tool to identify system focused maintenance investment wedges; currently assessing HVAC and electrical

