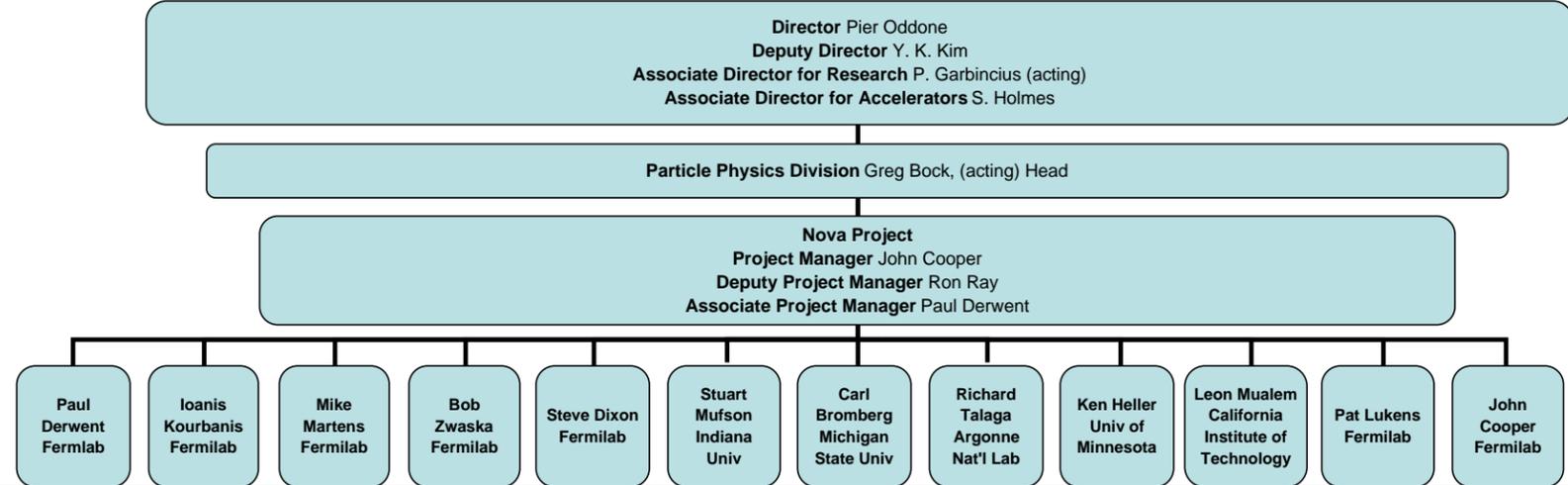




Fermi National Accelerator Laboratory

NOvA Dollarized RAM

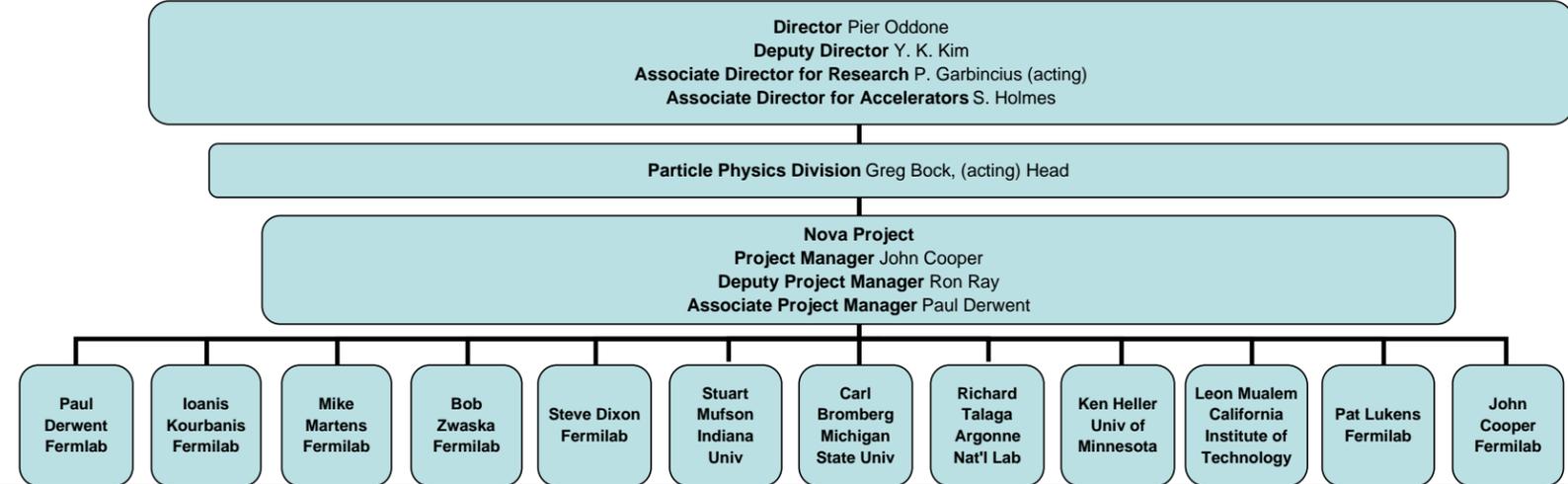


Control Account Manager Budget			\$27,556,138	\$2,821,649	\$7,848,893	\$82,092	\$50,809,570	\$18,787,261	\$10,379,389	\$26,624,394	\$11,727,322	\$18,232,364	\$18,392,358	\$14,746,055
WBS	Activity Description	Account Level												
1	Nova R&D	Nova Reporting Level												
1.0	ANU R&D	Nova Reporting Level												
1.0.1	RR Upgrades	Control account	\$5,176,855											
1.0.2	MI Upgrades	Control account		\$1,037,303										
1.0.3	NUMI Upgrades	Control account			\$2,118,285									
1.0.4	ANU Beam Physics	Control account				\$82,092								
1.0.5	ANU Project Management	Control account	\$344,698											
1.1	Site and Building R&D	Control account					\$2,274,519							
1.2	Liquid Scintillator R&D	Control account						\$271,245						
1.3	WLS Fiber R&D	Control account							\$298,604					
1.4	PVC Extrusion R&D	Control account								\$1,348,394				
1.5	PVC Module R&D	Control account									\$1,421,686			
1.6	Electronics R&D	Control account										\$1,473,437		
1.7	DAQ R&D	Control account											\$1,383,728	
1.8	Detector Assembly R&D	Control account												\$2,737,018
1.9	Project Management R&D	Control account												\$9,184,127
2	Nova Construction	Nova Reporting Level												
2.0	ANU Construction	Nova Reporting Level												
2.0.1.1	Recycler Ring Modifications	Control account	\$7,919,390											
2.0.1.2	Recycler Kicker System	Control account	\$7,534,019											
2.0.1.3	Recycler Instrumentation	Control account	\$1,421,492											
2.0.2.1	MI Modifications	Control account		\$373,332										
2.0.2.2	MI RF Cavities	Control account		\$1,411,013										
2.0.3.1	NuMI Primary Proton Beam	Control account			\$1,450,655									
2.0.3.2	NuMI Target Hall Technical Components	Control account			\$1,634,201									
2.0.3.3	NuMI Target Hall Infrastructure	Control account			\$1,716,959									
2.0.3.4	NuMI Decay Pipe/Hadron Absorber/Utilities	Control account			\$928,793									
2.0.4	Project Management - ANU - Construction	Control account	\$5,159,684											
2.1	Site and Building	Nova Reporting Level												
2.1.1	Site Preparation Package	Control account					\$11,530,402							
2.1.2	Far Detector Building	Control account					\$36,637,247							
2.1.3	Site and Building Security	Control account					\$195,804							
2.1.4	Management - Site and Building - Construction	Control account					\$171,599							
2.2	Liquid Scintillator	Nova Reporting Level												
2.2.1	Mineral Oil	Control account						\$12,687,277						
2.2.2	Pseudocumene	Control account						\$1,289,109						
2.2.3	Waveshifters and Stadis 425	Control account						\$2,242,996						
2.2.4	Blending	Control account						\$747,442						
2.2.5	Transport - Liquid Scintillator	Control account						\$1,455,419						
2.2.6	Management - Liquid Scintillator - Construction	Control account						\$93,772						



Fermi National Accelerator Laboratory

NOvA Dollarized RAM



Control Account Manager Budget			\$27,556,138	\$2,821,649	\$7,848,893	\$82,092	\$50,809,570	\$18,787,261	\$10,379,389	\$26,624,394	\$11,727,322	\$18,232,364	\$18,392,358	\$14,746,055
WBS	Activity Description	Account Level												
2.3	WLS Fiber	Nova Reporting Level												
2.3.1	Procurement - WLS Fiber	Control account							\$84,360					
2.3.2	Production - WLS Fiber	Control account							\$9,958,779					
2.3.3	Management - WLS Fiber - Construction	Control account							\$37,646					
2.4	PVC Extrusions	Nova Reporting Level												
2.4.1	Procurement - PVC Extrusions	Control account								\$177,691				
2.4.2	Extrusion Pre-Production	Control account								\$1,172,758				
2.4.3	Extrusion Production	Control account								\$21,776,474				
2.4.4	Production Quality Assurance and Extrusion Evaluation	Control account								\$605,199				
2.4.5	Shipping & Handling - PVC Extrusions	Control account								\$782,062				
2.4.6	Management - PVC Extrusions - Construction	Control account								\$761,816				
2.5	PVC Modules	Nova Reporting Level												
2.5.1	End Seals	Control account									\$1,798,372			
2.5.2	Optical Connector Production	Control account									\$118,077			
2.5.3	Module Production	Control account									\$7,603,656			
2.5.4	Management - PVC Modules - Construction	Control account									\$785,531			
2.6	Electronics	Nova Reporting Level												
2.6.1	APD Module Production	Control account										\$6,288,235		
2.6.2	Readout - FEB	Control account										\$2,610,747		
2.6.3	Readout Infrastructure	Control account										\$2,905,067		
2.6.4	Management - Electronics - Construction	Control account										\$39,179		
2.7	DAQ	Nova Reporting Level												
2.7.1	DAQ Software	Control account										\$778,265		
2.7.2	DAQ Hardware	Control account										\$2,100,306		
2.7.3	Integration - DAQ	Control account										\$441,042		
2.7.4	Detector Control System - DAQ	Control account										\$204,894		
2.7.5	Management - DAQ - Construction	Control account										\$7,464		
2.8	Near Detector Assembly	Nova Reporting Level												
2.8.1	Near Detector Site Preparation	Control account											\$3,578,374	
2.8.2	Mechanical Construction and Installation - Near Detector	Control account											\$492,573	
2.8.3	Liquid Scintillator Filling Equipment - Near Detector	Control account											\$54,128	
2.8.4	Installation Coordination - Near Detector	Control account											\$32,051	
2.8.5	Management - Near Detector Assembly - Construction	Control account											\$91,930	
2.9	Far Detector Assembly	Nova Reporting Level												
2.9.1	Mechanical Systems - Far Detector Assembly	Control account											\$1,790,369	
2.9.2	Detector Infrastructure - Far Detector Assembly	Control account											\$475,003	
2.9.3	Scintillator Filling Equipment - Far Detector Assembly	Control account											\$468,394	
2.9.4	Block Assembly and Installation - Far Detector Assembly	Control account											\$7,705,179	
2.9.5	Management - Far Detector Assembly - Construction	Control account											\$967,339	
2.10	Project Management - Nova Project - Construction	Control account												\$5,561,928