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CNO Ship Availability Maintenance Team Workload and Manning

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CNO SHIP AVAILABILITY MAINTENANCE TEAM WORKLOAD AND MANNING



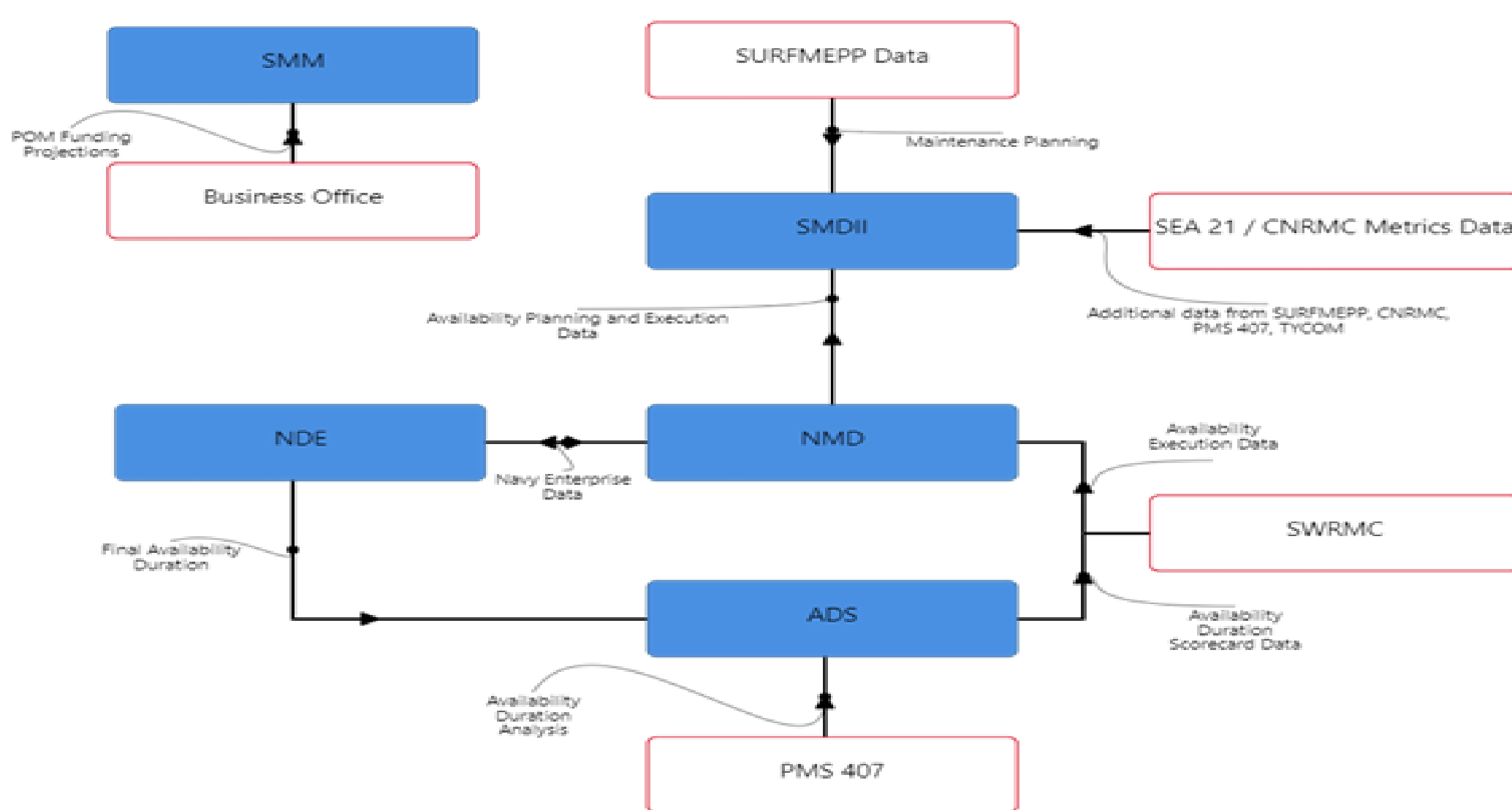
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Motivation

The current CNO, Admiral Michael Gilday, set a goal of zero lost operational days due to maintenance by the end of FY21. This will require a substantial improvement on performance from 2020, when only 40% of ships had their maintenance completed on time. Ship maintenance has received substantial attention because the majority of scheduled maintenance availabilities are delayed, sometimes by years. These long delays impact operational availability of each ships and, due to bottlenecks, potentially related ships.



Dry Dock Availability for two ships



Availability Duration Analysis Systems (as Internal Block Diagram)

Approach

The research project studied the planning process for major surface ship maintenance activities, termed availabilities, and sought to determine whether the Navy's estimates for maintenance availabilities could be improved. We analyzed data on the estimated and actual durations of surface ship availabilities conducted at the Southwest Regional Maintenance Center (SWRMC). For estimates, we narrowed the project scope to examine estimates for tanks and voids work conducted as part of each availability. Data was collected for 30 surface ships and various regression analyses were conducted

Results

Contractor estimations of the man-days required to execute an availability were consistently lower than the actual number of man-days required to complete the availability. Other estimates from the Navy Maintenance Database, Ship Maintenance Data Improvement Initiative, and Ship Maintenance Model provided more accurate estimates of the man-days required to complete availabilities. An increase in the number of requests for contract changes, i.e., growth work, for older ships and those ships that had extended deployments between availabilities. This finding was more noticeable for DDG class ships than for either CG or LCS class ships, likely due to the larger sample size available for DDGs.

USS UNDERWAY (DDG XXX) - FY20 SRA Availability Dates: mm/dd/yy - mm/dd/yy				
Reporting Unit	Duration (calendar days)	Remarks	Task Assign	
NDE				
DRY DOCK				
TSV				
MOD				
CSMP				
Integration				
Major Ship Alterations			Major Maintenance Items	
Mod Act #	Alteration Title	FAWER	ISSUES	TOTAL
Modernization Impact				

Notional (Blank) Availability Duration Scorecard

Future Work and Implementation

SWRMC can take the results and investigate how contractors make their estimates, with an emphasis on reconciling differences between contractor man-day estimates and Navy generated estimates from Availability Duration Scorecards, the Navy Maintenance Database, and the Ship Maintenance Data Improvement Initiative. They can also explore the proficiency and number of Naval civilians supporting the process and whether improvements in either could affect maintenance duration.



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