

PREVENTING PROGRAM MANAGEMENT PITFALLS USING PORTFOLIO ESTIMATING

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DISCUSSION TOPICS

What is Portfolio Estimating and Management?

Why is Portfolio Estimating and Management important?

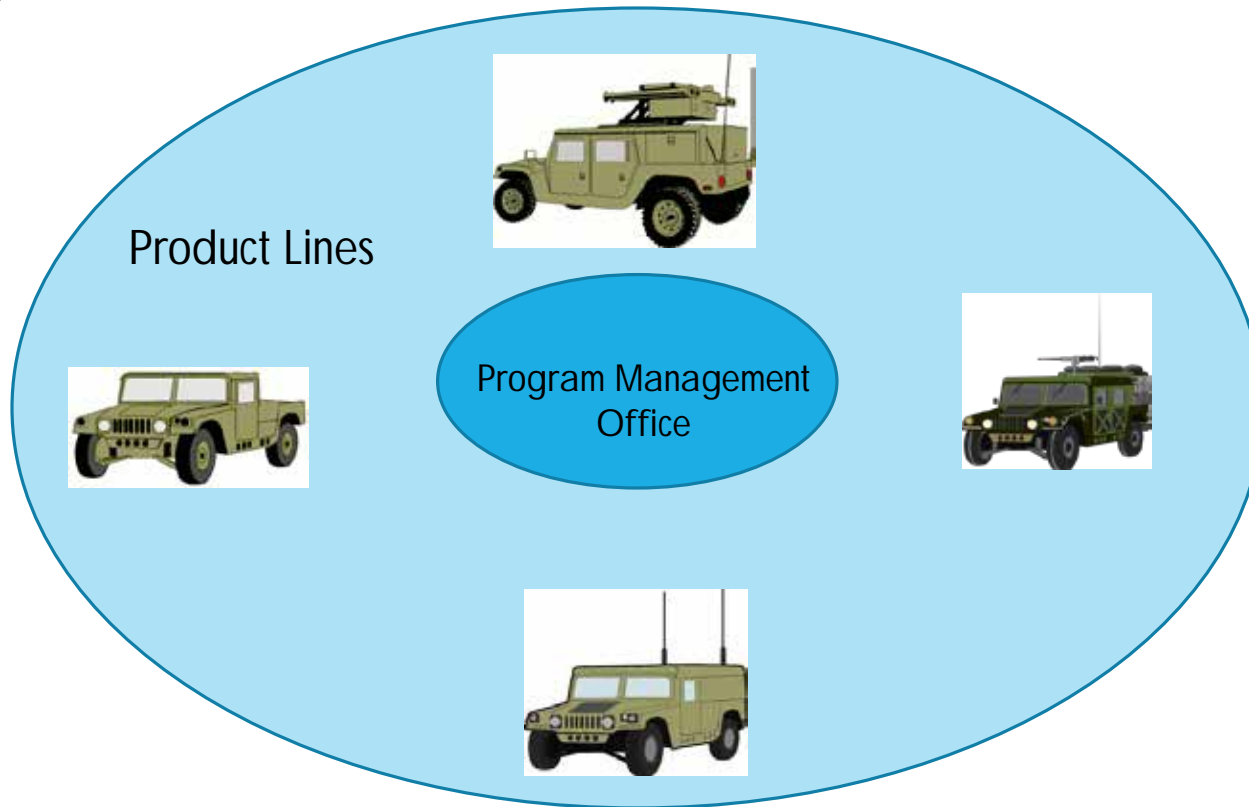
What does Portfolio Estimating and Management look like?

Opportunities of Portfolio Estimating and Management?

Implementing Portfolio Estimating and Management?

DEFINING PORTFOLIO ESTIMATING

Aligning acquisition and sustainment assumptions and estimating methods across multiple projects using similar resources within a given time



WHY PORTFOLIO ESTIMATING? - CORPORATE PROBLEM

Business number one objectivity is profit, but a survey of corporate project managers signify project/profit disconnects. Disconnects may lead to inefficiencies and less than optimal performances.

§80 percent of project management executives know how the organization's projects are aligned with overall business strategy³

§76 percent of project managers question if their project execution is aligned to business objectives ³

- 17 percent believing it isn't aligned at all.

WHY PORTFOLIO ESTIMATING? -GOVERNMENT PROBLEM



GAO Recommends: make informed decisions about the many investments



GAO Recommends: implement an integrated portfolio management approach



GAO Recommends: define the project and portfolio management policies and procedures



GAO Recommends: a comprehensive portfolio review to develop revised acquisition program baselines



GAO Recommends: Implement the practices to effectively control investments

SENIOR LEADERSHIP

DoD set up an Independent Organization to Monitor Portfolio Management of Services

§ Cost Analysis & Program Evaluation (CAPE) Mission: ¹

- “Provide the Department of Defense with timely, insightful and unbiased analysis on resource allocation and cost estimation problems to deliver the optimum portfolio of military capabilities through efficient and effective use of each taxpayer dollar.”

§ Cost Analysis & Program Evaluation (CAPE) Goal #1: ¹

- “Ensure discipline in the Planning, Programming, Budgeting & Execution (PPBE) process to support development of a balanced portfolio of defense capabilities to provide the best defense for the nation.”

§ Joint Cost Schedule Risk and Uncertainty Handbook (CSRUH): ²

- Section 6.0 – Portfolio Level Considerations: explores the impact of project probability selection in a portfolio of projects situation.

¹ [HTTP://WWW.CAPE.OSD.MIL/](http://www.CAPE.OSD.MIL/)

² [HTTPS://WWW.NCCA.NAVY.MIL/TOOLS/CSRUH/INDEX.CFM](https://www.NCCA.NAVY.MIL/TOOLS/CSRUH/INDEX.CFM)

THE PROBLEM

§ Increment 1

§ Initial Deployment

§ Increment 2

§ Increment 1 + Added/refined Capabilities

§ Increment 3

§ Increment 2 + Added/refined Capabilities

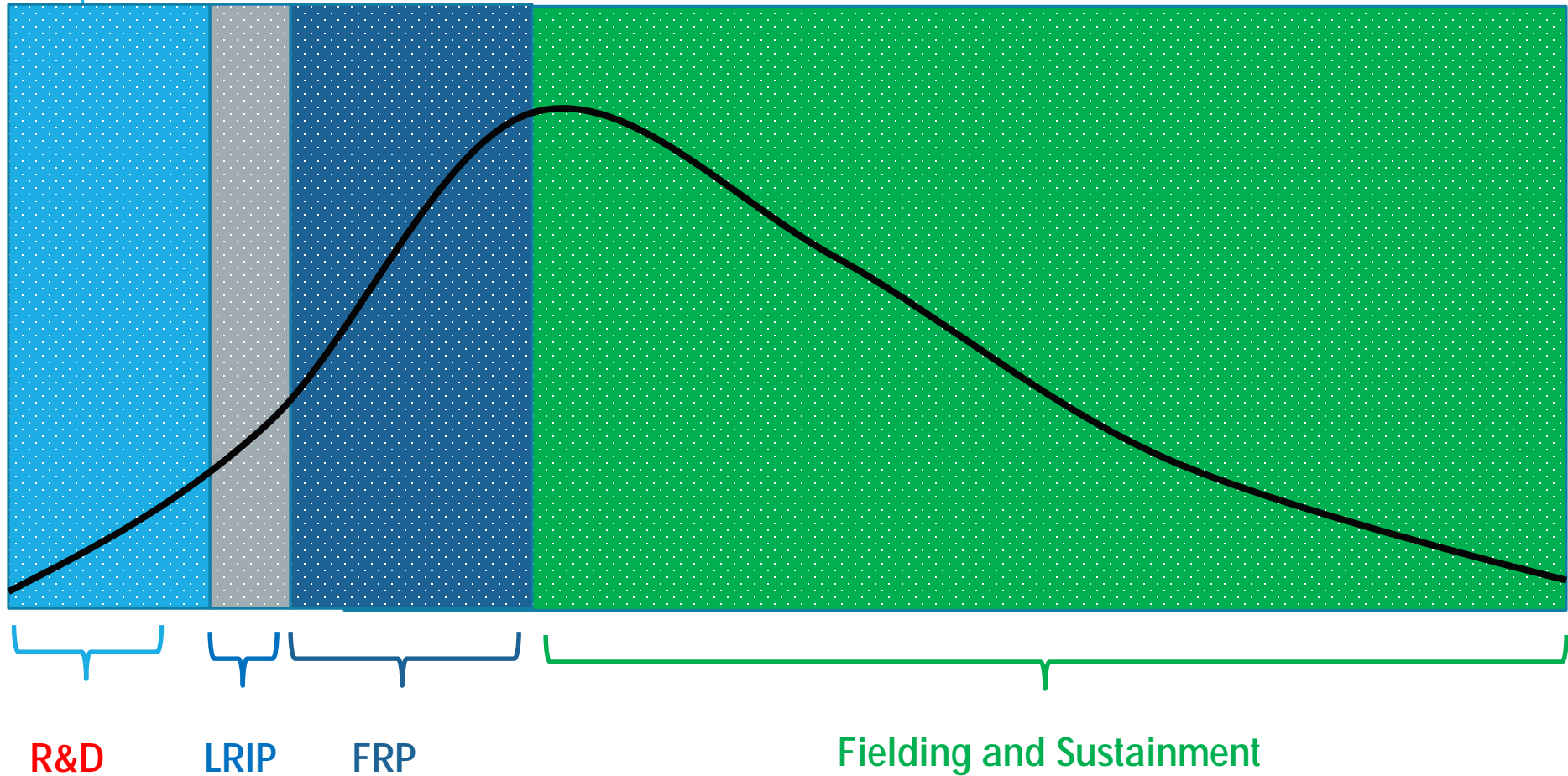
§ Special Projects X and Y common to portfolio

§ Common Acquisition/Program Management, Engineering and Sustainment resources

§ Each Increment is a separate “Program of Record”

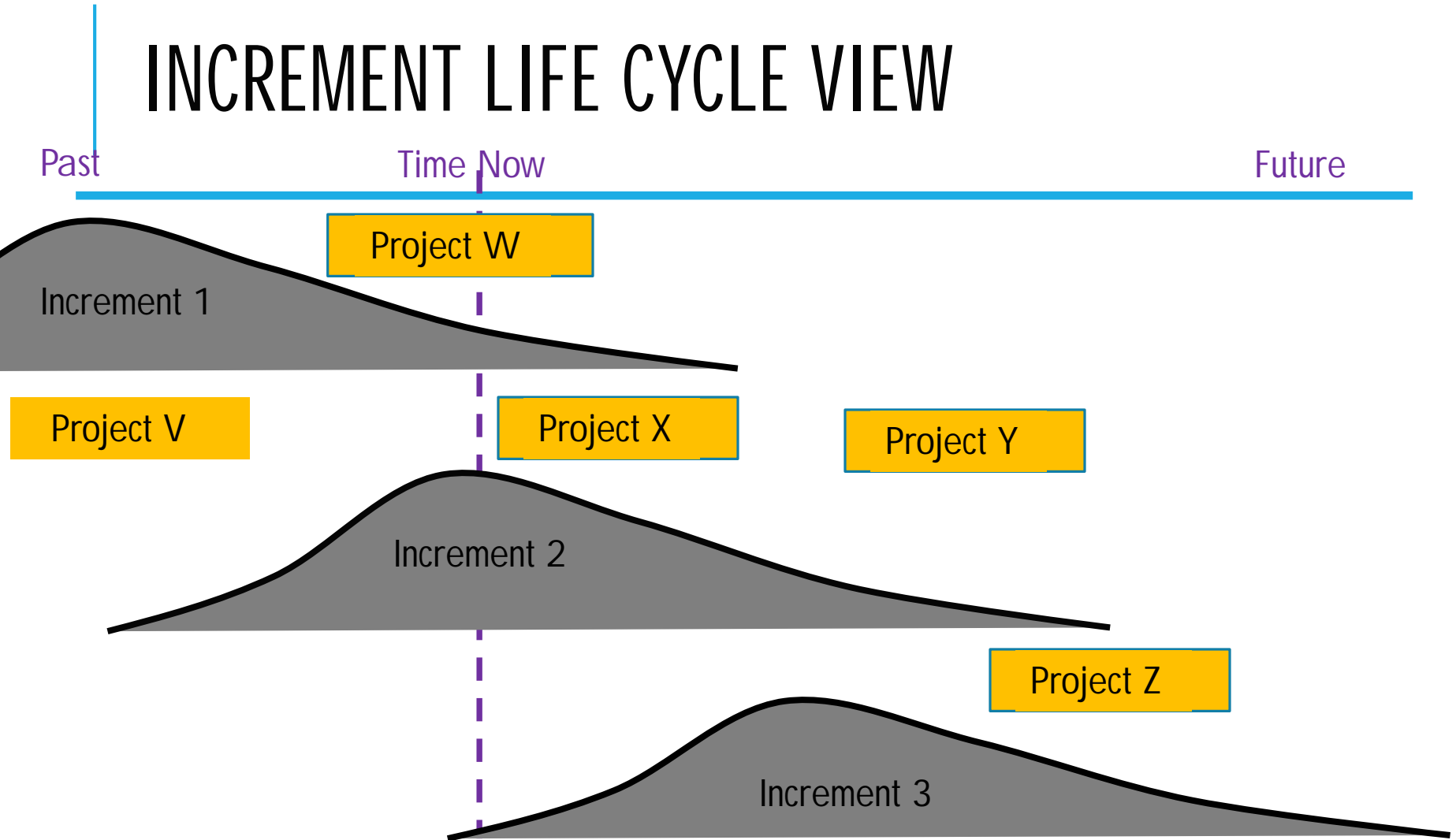
§ Funding is derived from same sponsor but allocated independently

INCREMENT VIEW



There are Several Activities within an Increment

INCREMENT LIFE CYCLE VIEW



Several Major and Minor Activities within the Program Life Cycle

DEFINING PORTFOLIO COST MODEL

Portfolio cost models incorporate risk distributions of each project to develop portfolio level probabilities.

§ Developed under a single cost model

- § May not be the most optimal method for large and complex models
- § Challenging configuration management (CM) control
- § Provides best insight and interdependencies of projects

§ Use third party portfolio tools to incorporate independent project cost models

- § Automatically incorporates risk distribution defined by initial models
- § Not all third party interface with each other

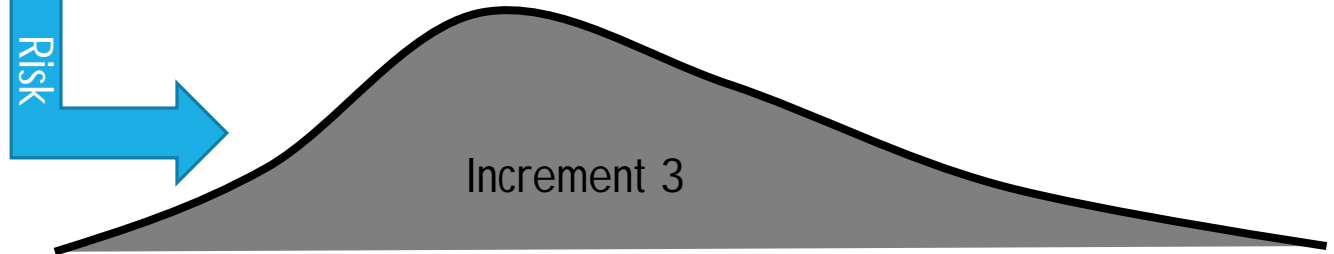
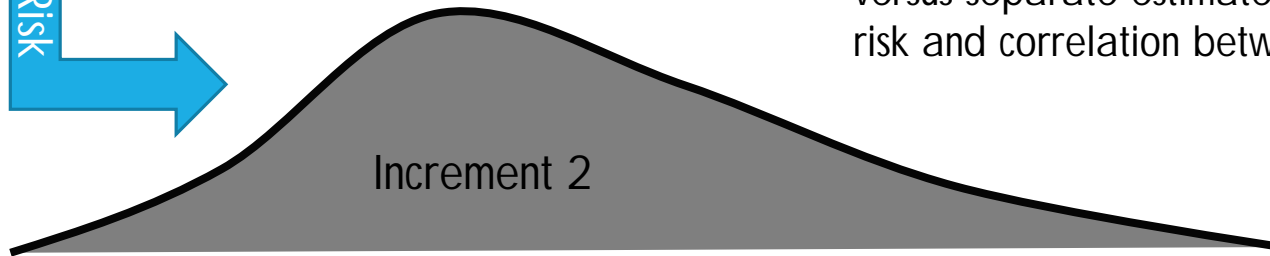
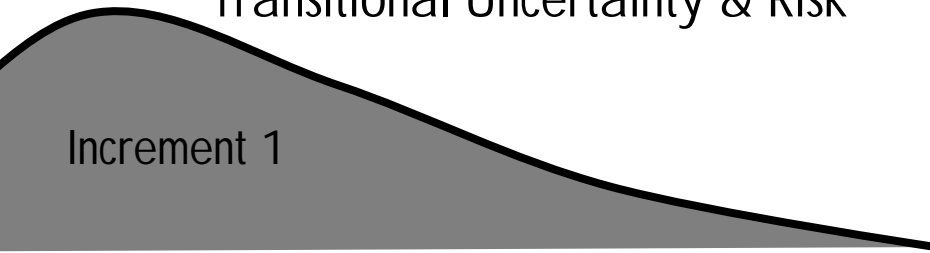
§ Develop independent portfolio cost model

- § Manually incorporates project risk distributions
- § Requires risk statistics from project cost models
- § Does not required third party cost model synergy

The Best Model is Whichever Can Provide Best CM Control

INCORPORATING UNCERTAINTY

“Transitional Uncertainty & Risk”



In order to calculate the possible cost of the entire project portfolio, one must combine the single project estimates taking into account the uncertainty involved. Development of single portfolio estimate versus separate estimates allows for application of risk and correlation between increments.

INCORPORATING UNCERTAINTY

Point Estimates do not represent the risk distribution of the project. Risk distributions must be identified and incorporated in the cost model.

§ Create custom distribution from simulation trial data from

§ Output statistics from Parametric Models or other Cost Models

§ Define a custom distribution from percentile results from the third party tool

§ Uses third party risk distribution tools to define best distribution fit

§ Generate a lognormal distribution from two curve values

§ Extracting the median and the 85% value

§ Extracting the mean and standard deviation

§ Only recommended with the little or no detailed information available

INCORPORATING CORRELATION

“Program Portfolio Effect” - NASA

| # Projects | Project CL | Portfolio CL | |
|------------|------------|----------------|------------------|
| | | No Correlation | 0.25 Correlation |
| 5 | 50 | 38% | 40% |
| 5 | 60 | 61% | 59% |
| 5 | 70 | 80% | 78% |
| 5 | 80 | 94% | 92% |
| 10 | 50 | 32% | 36% |
| 10 | 60 | 62% | 61% |
| 10 | 70 | 87% | 83% |
| 10 | 80 | 98% | 96% |
| 20 | 50 | 24% | 32% |
| 20 | 60 | 65% | 61% |
| 20 | 70 | 94% | 86% |
| 20 | 80 | 99% | 98% |

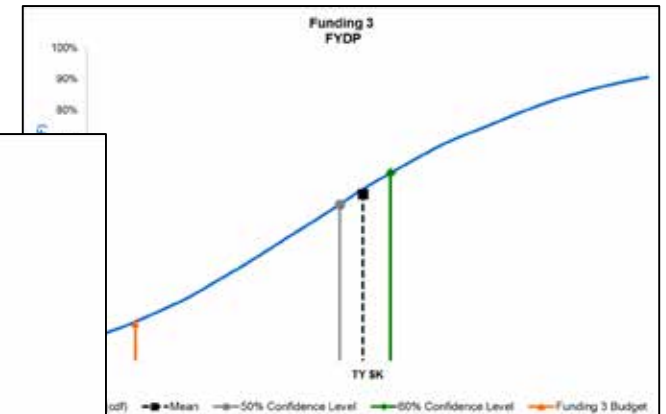
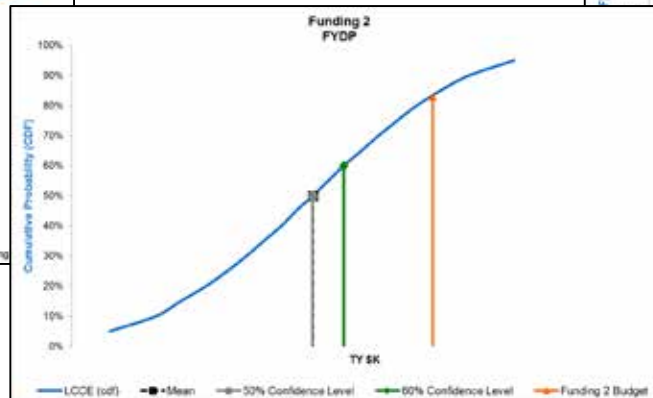
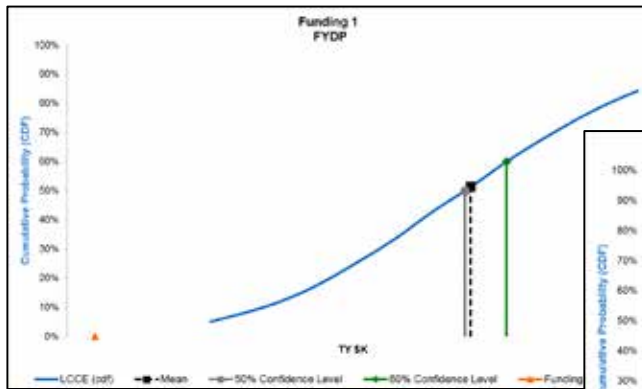
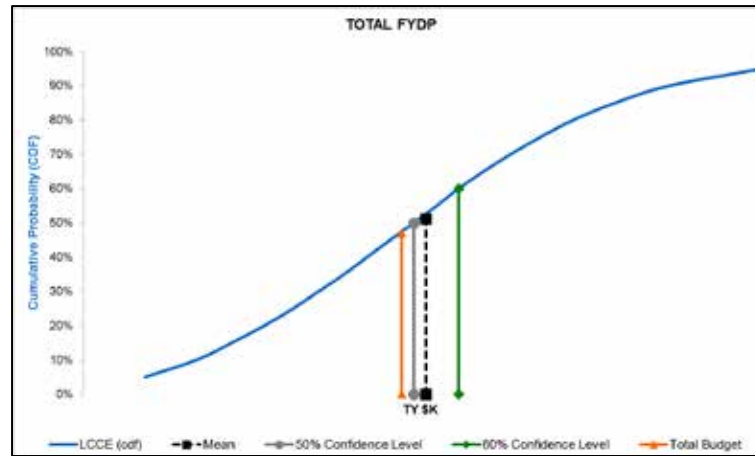
“Portfolio Total Results at Various Project Probabilities” - CSRUH

Table 6-2 Portfolio Total Results at Various Project Probabilities

| Correlation of Projects: | 0.00 | 0.30 | 0.50 | 0.90 |
|---|---------|---------|---------|---------|
| Probability Level | 30% | 30% | 30% | 30% |
| Portfolio Total at Selected Probability Level | \$846 | \$835 | \$820 | \$775 |
| Sum of Projects at Selected Probability Level | \$762 | \$762 | \$762 | \$762 |
| Probability of Sum of Projects | 5% | 9% | 15% | 27% |
| Probability Level | 50% | 50% | 50% | 50% |
| Portfolio Total at Selected Probability Level | \$887 | \$886 | \$883 | \$871 |
| Sum of Projects at Selected Probability Level | \$866 | \$866 | \$866 | \$866 |
| Probability of Sum of Projects | 40% | 42% | 44% | 49% |
| Probability Level | 60% | 60% | 60% | 60% |
| Portfolio Total at Selected Probability Level | \$908 | \$911 | \$915 | \$922 |
| Sum of Projects at Selected Probability Level | \$923 | \$923 | \$923 | \$923 |
| Probability of Sum of Projects | 67% | 64% | 62% | 60% |
| Probability Level | 70% | 70% | 70% | 70% |
| Portfolio Total at Selected Probability Level | \$930 | \$939 | \$951 | \$978 |
| Sum of Projects at Selected Probability Level | \$987 | \$987 | \$987 | \$987 |
| Probability of Sum of Projects | 89% | 84% | 78% | 71% |
| Probability Level | 90% | 90% | 90% | 90% |
| Portfolio Total at Selected Probability Level | \$994 | \$1,019 | \$1,051 | \$1,148 |
| Sum of Projects at Selected Probability Level | \$1,176 | \$1,176 | \$1,176 | \$1,176 |
| Probability of Sum of Projects | 100% | 100% | 98% | 92% |

In the absence of any other rationale, assigning the default 0.3 is appropriate. Increasing correlation results in the estimate total at the portfolio level closer to the sum of the project total.

RISK ALIGNMENT



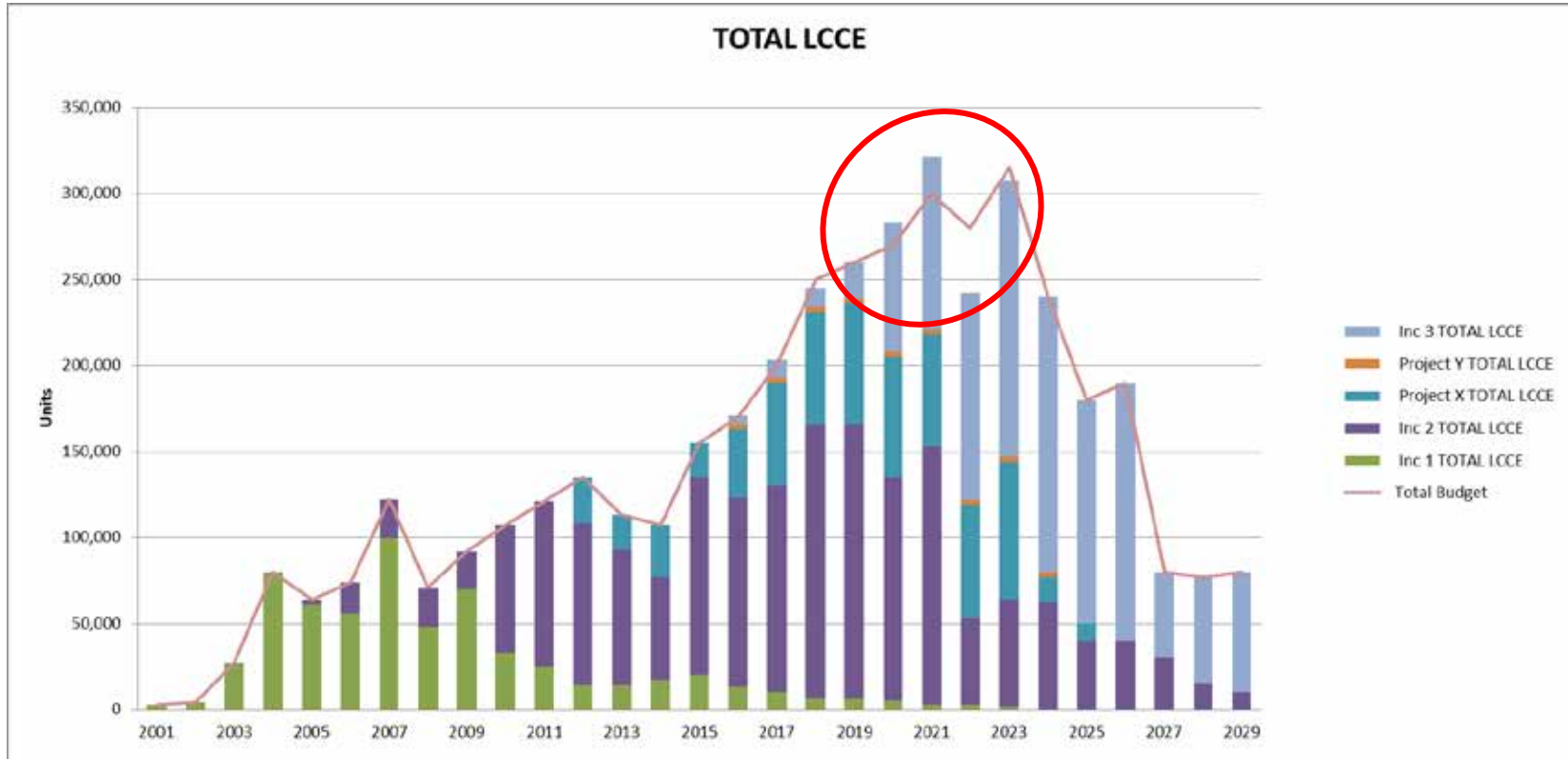
STOVE PIPE VIEW

Some PMs assumes underruns from other is enough to offset overruns by others



Stove Pipe view doesn't highlight issues

SAND CHART



Easily Identifiable Cost/Budget Deltas at Portfolio

PORTFOLIO ESTIMATES

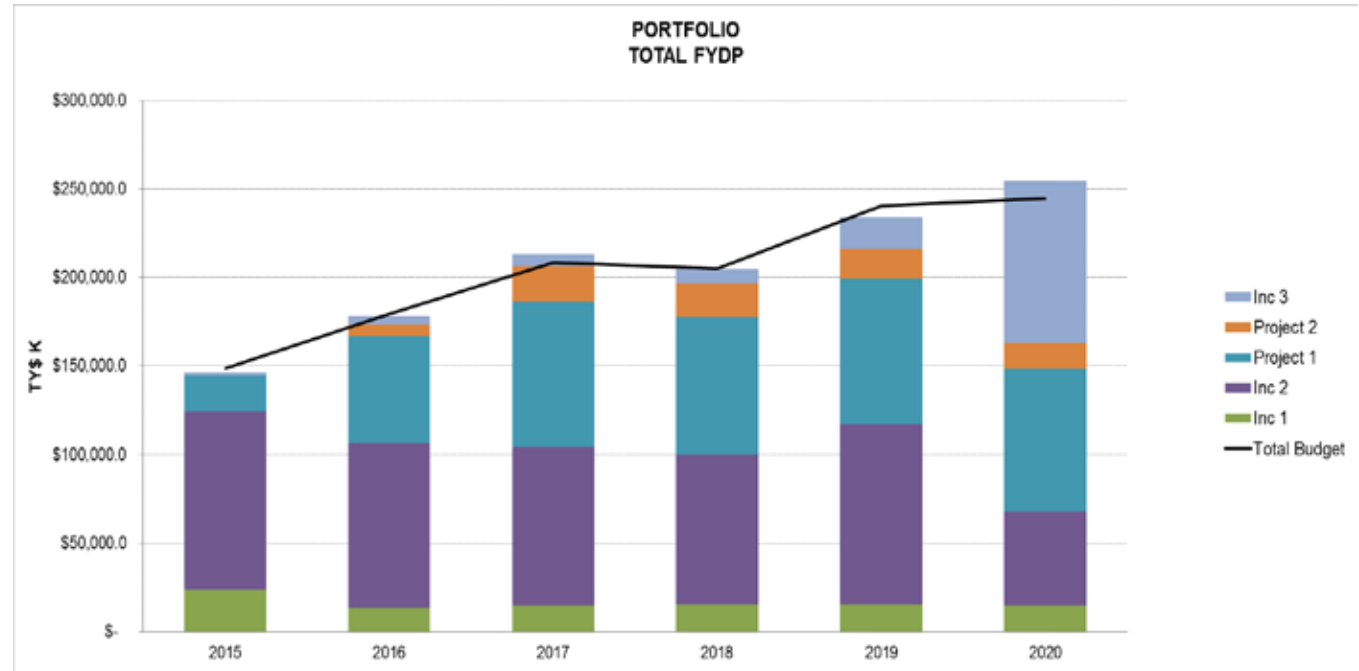
| | | | | | | | | | |
|------------------------------------|----------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|------------------------|
| TOTAL Budget | | \$148,716.0 | \$179,371.0 | \$208,153.0 | \$204,952.0 | \$240,334.0 | \$244,529.0 | | \$1,188,847.0 |
| Inc 1 TOTAL Budget | | \$21,323.0 | \$14,306.0 | \$10,792.0 | \$14,444.0 | \$14,248.0 | \$14,232.0 | | \$89,345.0 |
| Inc 2 TOTAL Budget | | \$107,739.0 | \$96,820.0 | \$87,275.0 | \$84,517.0 | \$103,787.0 | \$35,140.0 | | \$515,278.0 |
| Project X TOTAL Budget | | \$18,182.0 | \$59,889.0 | \$90,035.0 | \$84,763.0 | \$91,546.0 | \$90,747.0 | | \$435,162.0 |
| Project Y TOTAL Budget | | \$0.0 | \$3,569.0 | \$12,907.0 | \$12,943.0 | \$12,969.0 | \$13,016.0 | | \$18,196.0 |
| Inc 3 TOTAL Budget | | \$1,472.0 | \$4,787.0 | \$7,144.0 | \$8,285.0 | \$17,784.0 | \$91,394.0 | | \$130,866.0 |
| TOTAL LCCE | \$1,137,716.8 | \$146,097.6 | \$178,066.0 | \$213,228.0 | \$204,502.2 | \$234,032.7 | \$254,440.3 | \$683,988.4 | \$3,059,076.2 |
| Inc 1 TOTAL LCCE | \$570,745.7 | \$23,797.9 | \$13,612.9 | \$14,970.6 | \$15,013.2 | \$15,335.5 | \$14,804.1 | \$68,602.8 | \$743,887.1 |
| Inc 2 TOTAL LCCE | \$482,168.1 | \$100,546.1 | \$92,977.9 | \$89,519.9 | \$85,264.0 | \$101,945.6 | \$52,659.6 | \$393,808.0 | \$1,398,889.3 |
| Project X TOTAL LCCE | \$84,803.0 | \$20,281.6 | \$60,392.1 | \$81,654.9 | \$77,534.4 | \$82,218.0 | \$80,885.6 | \$206,750.7 | \$694,520.4 |
| Project Y TOTAL LCCE | \$0.0 | \$0.0 | \$6,296.1 | \$19,938.6 | \$18,405.5 | \$16,749.5 | \$14,696.8 | \$14,826.8 | \$90,913.4 |
| Inc 3 TOTAL LCCE | \$0.0 | \$1,472.0 | \$4,787.0 | \$7,144.0 | \$8,285.0 | \$17,784.0 | \$91,394.0 | \$0.0 | \$130,866.0 |
| TOTAL Delta (Budget - LCCE) | | \$2,618.4 | \$1,305.0 | (\$5,075.0) | \$449.8 | \$6,301.3 | (\$9,911.3) | | (\$1,870,229.2) |
| Inc 1 TOTAL Delta | | (\$2,474.9) | \$693.1 | (\$4,178.6) | (\$569.2) | (\$1,087.5) | (\$572.1) | | (\$654,542.1) |
| Inc 2 TOTAL Delta | | \$7,192.9 | \$3,842.1 | (\$2,244.9) | (\$747.0) | \$1,841.4 | (\$17,519.6) | | (\$883,611.3) |
| Project X TOTAL Delta | | (\$2,099.6) | (\$503.1) | \$8,380.1 | \$7,228.6 | \$9,328.0 | \$9,861.4 | | (\$259,358.4) |
| Project Y TOTAL Delta | | \$0.0 | (\$2,727.1) | (\$7,031.6) | (\$5,462.5) | (\$3,780.5) | (\$1,680.8) | | (\$72,717.4) |
| Inc 3 TOTAL Delta | | \$0.0 | \$0.0 | \$0.0 | \$0.0 | \$0.0 | \$0.0 | | \$0.0 |

| | Prior | YR 1 | YR 2 | YR 3 | YR 4 | YR 5 | YR 6 | To Complete | Total |
|--|--------------------|--------------------|--------------------|--------------------|-------------------|-------------------|-------------------|------------------|---------------------|
| Funding 1 Budget | | \$10,827.0 | \$17,785.0 | \$24,731.0 | \$21,837.0 | \$34,340.0 | \$34,854.0 | | \$144,374.0 |
| Inc 1 Funding 1 Budget | | | | | | | | | |
| Inc 2 Funding 1 Budget | | \$2,024.0 | \$2,759.0 | \$2,063.0 | \$1,027.0 | \$2,002.0 | \$2,150.0 | | \$12,025.0 |
| Project X Funding 1 Budget | | \$7,331.0 | \$10,239.0 | \$6,222.0 | \$3,233.0 | \$5,252.0 | \$5,351.0 | | \$37,616.0 |
| Project Y Funding 1 Budget | | | | \$9,302.0 | \$9,302.0 | \$9,302.0 | \$9,302.0 | | |
| Inc 3 Funding 1 Budget | | \$1,472.0 | \$4,787.0 | \$7,144.0 | \$8,285.0 | \$17,784.0 | \$18,051.0 | | \$57,523.0 |
| Funding 1 LCCE | \$233,886.5 | \$10,289.6 | \$20,159.4 | \$22,565.7 | \$23,904.3 | \$31,306.8 | \$29,727.2 | \$4,427.4 | \$376,258.3 |
| Inc 1 Funding 1 LCCE | \$65,421.1 | \$1,975.0 | \$1,975.0 | \$2,013.7 | \$2,063.3 | \$2,094.0 | \$2,136.9 | | \$96,063.3 |
| Inc 2 Funding 1 LCCE | \$120,974.0 | \$1,658.3 | \$1,979.7 | \$2,013.7 | \$2,063.3 | \$2,094.0 | \$2,136.9 | | \$132,906.0 |
| Project X Funding 1 LCCE | \$47,491.4 | \$7,159.5 | \$11,411.7 | \$4,806.2 | \$6,988.1 | \$7,127.8 | \$5,112.9 | | \$90,097.5 |
| Project Y Funding 1 LCCE | | | | \$8,601.9 | \$6,577.9 | \$4,300.9 | \$4,427.4 | \$4,427.4 | \$28,335.6 |
| Inc 3 Funding 1 LCCE | | \$1,472.0 | \$4,787.0 | \$7,144.0 | \$8,285.0 | \$17,784.0 | \$18,051.0 | | \$57,523.0 |
| Funding 1 Delta (Budget - LCCE) | \$537.2 | (\$2,365.4) | (\$2,165.3) | (\$2,067.3) | \$3,033.2 | \$5,126.8 | | | (\$62,986.2) |
| Inc 1 Funding 1 Delta | \$0.0 | (\$1,975.0) | \$0.0 | \$0.0 | \$0.0 | \$0.0 | | | (\$66,611.9) |
| Inc 2 Funding 1 Delta | \$366.7 | \$782.3 | \$49.3 | (\$1,026.3) | (\$62.0) | \$14.1 | | | (\$120,795.8) |
| Project X Funding 1 Delta | \$171.5 | (\$1,122.7) | \$1,415.8 | | | | | | |
| Project Y Funding 1 Delta | \$0.0 | \$0.0 | \$700.1 | | | | | | |
| Inc 3 Funding 1 Delta | \$0.0 | \$0.0 | \$0.0 | | | | | | |

| | Prior | YR 1 | YR 2 | YR 3 | YR 4 | YR 5 | YR 6 | To Complete | Total |
|--|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|------------------------|
| Funding 2 Budget | | \$125,662.0 | \$148,221.0 | \$169,819.0 | \$163,988.0 | \$186,607.0 | \$190,470.0 | | \$884,796.0 |
| Inc 1 Funding 2 Budget | | \$13,985.0 | \$8,421.0 | \$4,300.0 | \$5,471.0 | \$5,053.0 | \$6,068.0 | | \$42,298.0 |
| Inc 2 Funding 2 Budget | | \$100,826.0 | \$90,150.0 | \$81,706.0 | \$76,977.0 | \$95,320.0 | \$28,630.0 | | \$471,609.0 |
| Project X Funding 2 Budget | | \$10,851.0 | \$49,650.0 | \$83,813.0 | \$81,540.0 | \$86,294.0 | \$65,396.0 | | \$397,544.0 |
| Project Y Funding 2 Budget | | | | | | | | | |
| Inc 3 Funding 2 Budget | | | | | | \$73,343.0 | | | \$73,343.0 |
| Funding 2 LCCE | \$924,907.5 | \$125,945.3 | \$144,410.4 | \$166,247.4 | \$155,296.5 | \$175,764.1 | \$196,713.5 | \$433,511.1 | \$2,222,795.8 |
| Inc 1 Funding 2 LCCE | \$443,872.1 | \$18,286.0 | \$8,159.0 | \$6,378.1 | \$6,818.3 | \$7,313.7 | \$7,076.7 | \$23,977.3 | \$521,882.7 |
| Inc 2 Funding 2 LCCE | \$343,802.1 | \$94,537.2 | \$85,654.6 | \$81,172.2 | \$75,853.7 | \$91,051.1 | \$40,521.1 | \$200,780.5 | \$1,015,374.5 |
| Project X Funding 2 LCCE | \$37,233.3 | \$13,122.1 | \$48,980.4 | \$78,848.8 | \$70,546.3 | \$75,090.2 | \$75,772.8 | \$206,750.7 | \$604,344.6 |
| Project Y Funding 2 LCCE | | \$1,616.4 | \$1,847.3 | \$1,847.3 | \$2,078.2 | \$2,309.1 | | | \$7,851.0 |
| Inc 3 Funding 2 LCCE | | | | | | | \$73,343.0 | | \$73,343.0 |
| Funding 2 Delta (Budget - LCCE) | (\$698.3) | \$3,810.6 | \$3,571.6 | \$6,691.5 | \$10,902.9 | (\$6,276.5) | (\$6,276.5) | | (\$1,164,724.3) |
| Inc 1 Funding 2 Delta | (\$4,301.0) | \$282.0 | (\$2,079.1) | (\$1,347.3) | (\$2,267.0) | (\$2,008.0) | | | (\$477,194.5) |
| Inc 2 Funding 2 Delta | \$66,989.4 | \$4,859.4 | \$5,538.8 | \$1,123.3 | \$4,288.9 | (\$13,811.1) | | | (\$906,600.5) |
| Project X Funding 2 Delta | (\$2,071.1) | \$669.6 | \$6,964.2 | \$10,993.7 | \$11,203.8 | \$9,623.2 | | | (\$198,390.8) |
| Project Y Funding 2 Delta | \$0.0 | (\$1,616.4) | (\$1,847.3) | (\$2,078.2) | (\$2,309.1) | \$0.0 | | | (\$6,536.7) |
| Inc 3 Funding 2 Delta | \$0.0 | \$0.0 | \$0.0 | \$0.0 | \$0.0 | \$0.0 | | | \$0.0 |

| | Prior | YR 1 | YR 2 | YR 3 | YR 4 | YR 5 | YR 6 | To Complete | Total |
|--|-------------------|-------------------|---------------------|--------------------|--------------------|--------------------|-------------------|--------------------|----------------------|
| Funding 3 Budget | | \$12,227.0 | \$13,365.0 | \$13,600.0 | \$18,122.0 | \$19,327.0 | \$19,238.0 | | \$96,887.0 |
| Inc 1 Funding 3 Budget | | \$7,338.0 | \$5,885.0 | \$6,452.0 | \$8,973.0 | \$9,195.0 | \$9,164.0 | | \$47,047.0 |
| Inc 2 Funding 3 Budget | | \$4,889.0 | \$3,911.0 | \$3,508.0 | \$6,513.0 | \$6,465.0 | \$6,360.0 | | \$31,644.0 |
| Project X Funding 3 Budget | | | | | | | | | |
| Project Y Funding 3 Budget | | | | | | | | | |
| Inc 3 Funding 3 Budget | | \$3,569.0 | \$3,608.0 | \$3,641.0 | \$3,667.0 | \$3,714.0 | | | \$18,196.0 |
| Funding 3 LCCE | \$78,922.8 | \$9,862.5 | \$18,845.3 | \$24,414.9 | \$25,301.4 | \$26,961.8 | \$27,999.5 | \$246,049.8 | \$458,358.0 |
| Inc 1 Funding 3 LCCE | \$61,452.5 | \$5,511.9 | \$3,478.9 | \$6,591.4 | \$8,195.0 | \$8,021.9 | \$7,727.5 | \$44,624.9 | \$152,944.1 |
| Inc 2 Funding 3 LCCE | \$17,392.0 | \$4,350.6 | \$5,346.6 | \$6,334.0 | \$7,357.1 | \$8,800.5 | \$10,002.6 | \$191,025.5 | \$250,608.8 |
| Project X Funding 3 LCCE | \$78.3 | | | | | | | | \$78.3 |
| Project Y Funding 3 LCCE | | | \$4,679.7 | \$9,489.4 | \$9,749.4 | \$10,138.4 | \$10,289.4 | \$10,389.4 | \$54,726.7 |
| Inc 3 Funding 3 LCCE | | | | | | | | | |
| Funding 3 Delta (Budget - LCCE) | \$2,364.5 | (\$140.2) | (\$10,811.9) | (\$5,174.4) | (\$7,634.8) | (\$6,761.5) | | | (\$316,008.9) |
| Inc 1 Funding 3 Delta | \$1,826.1 | \$2,406.1 | (\$2,099.4) | \$778.0 | \$1,173.1 | \$1,436.5 | | | (\$59,154.2) |
| Inc 2 Funding 3 Delta | \$338.4 | (\$1,435.0) | (\$2,826.0) | (\$944.1) | (\$2,335.0) | (\$1,942.0) | | | (\$186,943.5) |
| Project X Funding 3 Delta | \$0.0 | \$0.0 | \$0.0 | \$0.0 | \$0.0 | \$0.0 | | | \$78.3 |
| Project Y Funding 3 Delta | \$0.0 | (\$1,110.7) | (\$5,894.4) | (\$6,108.4) | (\$6,472.4) | (\$6,605.4) | | | (\$28,830.9) |
| Inc 3 Funding 3 Delta | \$0.0 | \$0.0 | \$0.0 | \$0.0 | \$0.0 | \$0.0 | | | \$0.0 |

PORTFOLIO DETAILS



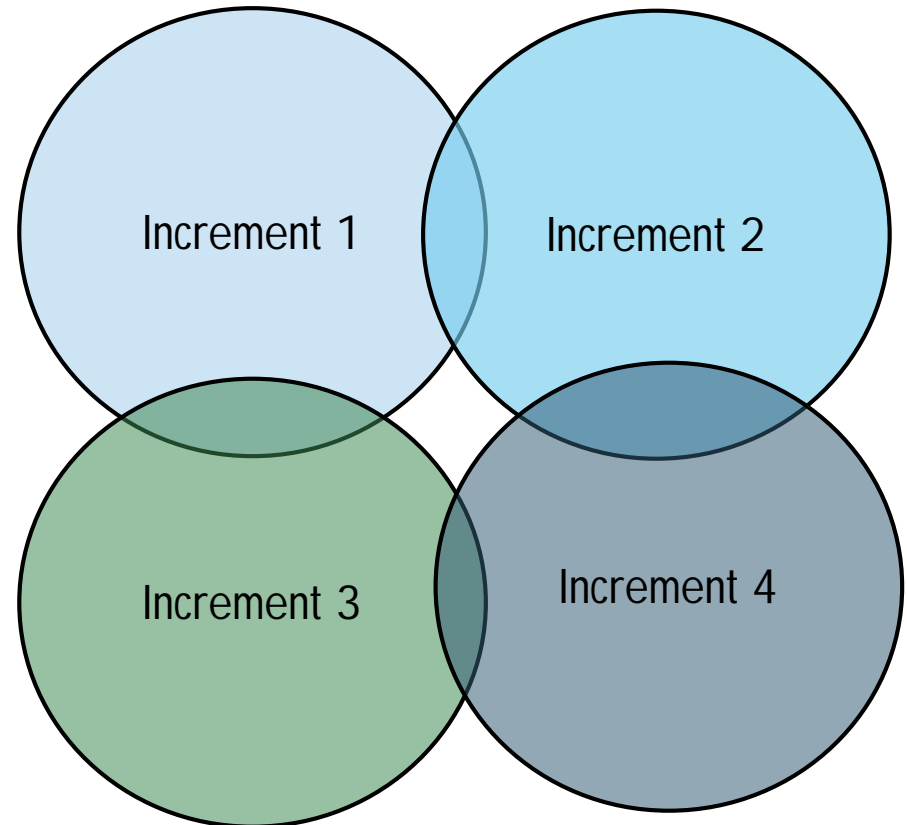
| WBS | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | Total |
|-----------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-----------------------|
| TOTAL LCCE (FYDP) | \$ 146,097.6 | \$ 178,066.0 | \$ 213,228.0 | \$ 204,502.2 | \$ 234,032.7 | \$ 254,440.3 | \$ 1,230,366.8 |
| Inc 1 TOTAL LCCE (FYDP) | \$ 23,797.9 | \$ 13,612.9 | \$ 14,970.6 | \$ 15,013.2 | \$ 15,335.5 | \$ 14,804.1 | \$ 97,534.3 |
| Inc 2 TOTAL LCCE (FYDP) | \$ 100,546.1 | \$ 92,977.9 | \$ 89,519.9 | \$ 85,264.0 | \$ 101,945.6 | \$ 52,659.6 | \$ 522,913.2 |
| Project X TOTAL LCCE (FYDP) | \$ 20,281.6 | \$ 60,392.1 | \$ 81,654.9 | \$ 77,534.4 | \$ 82,218.0 | \$ 80,885.6 | \$ 402,966.7 |
| Project Y TOTAL LCCE (FYDP) | \$ - | \$ 6,296.1 | \$ 19,938.6 | \$ 18,405.5 | \$ 16,749.5 | \$ 14,696.8 | \$ 76,086.6 |
| Inc 3 TOTAL LCCE (FYDP) | \$ 1,472.0 | \$ 4,787.0 | \$ 7,144.0 | \$ 8,285.0 | \$ 17,784.0 | \$ 91,394.0 | \$ 130,866.0 |
| Total Budget | \$148,716.0 | \$179,371.0 | \$208,153.0 | \$204,952.0 | \$240,334.0 | \$244,529.0 | \$1,226,055.0 |

Organized Portfolio Views May Assist In Management and Controls

PITFALLS OF POOR PORTFOLIO MANAGEMENT - INTERDEPENDENCES

Making Decisions Without Acknowledging Interdependencies Between Programs

Promoting interaction between the increments provides a decision making opportunity that could impact other increments and influence trade space.



PITFALLS OF POOR PORTFOLIO MANAGEMENT – INEFFICIENCIES

Loss Of Potential Material And NRE Efficiencies (Should Costs)

- Economies of scale
- Quantity procurement discounts when ordering like parts and material
- Duplication of engineering efforts

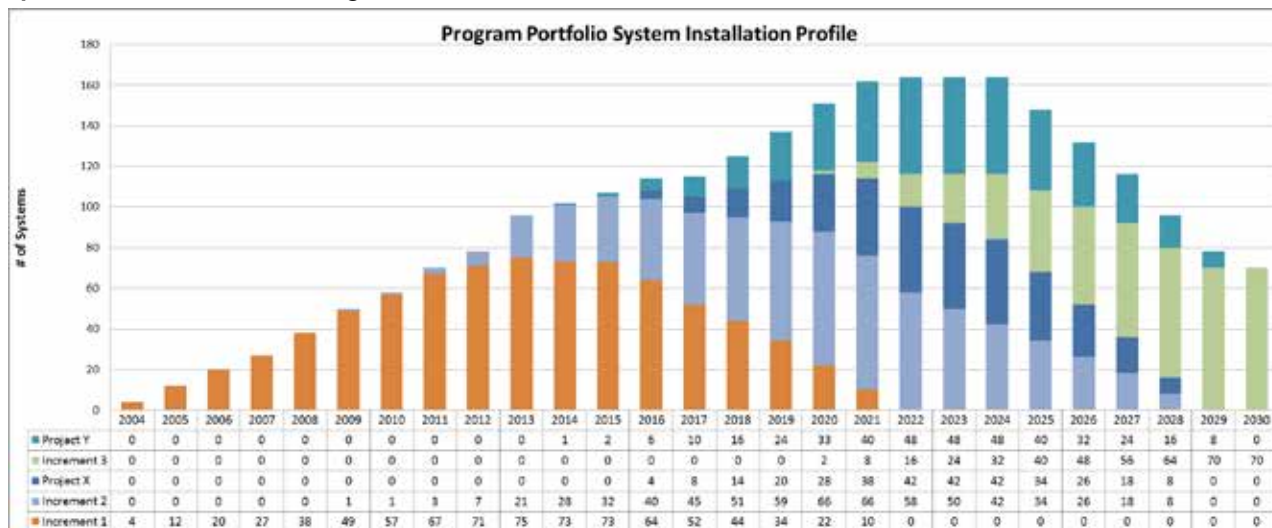
There are common materials or engineering efforts that may be leverage across increments



PITFALLS OF POOR PORTFOLIO MANAGEMENT - COMPETING DIRECTIVES

Competing Directives

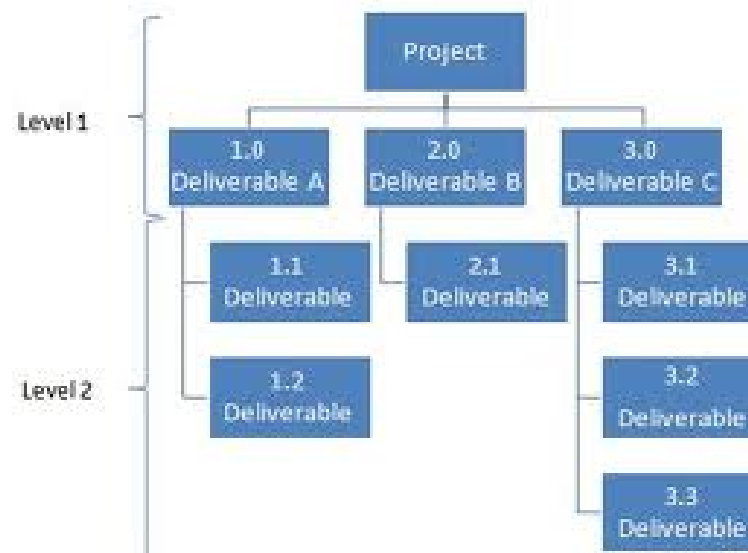
- There may be multiple directives within portfolio management that must be understood in the context of your program or portfolio. These directives may have come from various governing organizations and have conflicting and inconsistent guidance that is difficult to apply to the portfolio assessment. Knowing how your program, portfolio, and/or organization fits into one or more of these structures should help identify these disconnects and support your work to ensure progress and appropriate accountability.



PITFALLS OF POOR PORTFOLIO MANAGEMENT - MISALIGNMENTS

Misaligned Taxonomies/ Methodologies

- For many government organization/agencies, there may be multiple taxonomies that define the portfolio structure. Typically, a single taxonomy has not been adopted nor has an approach been developed to allow the taxonomies to be used together effectively to support the goals of portfolio management.



PITFALLS OF POOR PORTFOLIO MANAGEMENT - RESOURCES

Competing Budget Resources

- Budget authority may not rest with the portfolio manager, making the portfolio manager more of an advisory resource than a decision maker. In the Department of Defense, for example, budget authority generally resides with the Military Services (Title X) and not the capability portfolio managers. In cases where the portfolio manager also has budget authority, many times the execution of the investment plan can be streamlined.



PITFALLS OF POOR PORTFOLIO MANAGEMENT - CULTURE

Culture

- Portfolio management is a "greater good," or enterprise process, and is not supported within a program acquisition culture rewarded for individual program success rather than enterprise success. This is partly because it takes up-front investment to achieve a longer-term 'greater good' outcome. In addition, the mission success or portfolio savings benefits from portfolio changes are not adequately accounted for or attributed to the portfolio changes, making change a difficult proposition.



PITFALLS OF POOR PORTFOLIO MANAGEMENT – POLITICAL FACTORS

Political Factors

- Politics has consistently been an element of investment decision making, as has operational, economic, technical, and other factors. There may be cases where certain solutions are technically elegant and affordable but not politically feasible. In some cases, particular solutions may be favored by leadership, “Pet Rock Projects”..



IMPLEMENTING A PORTFOLIO ESTIMATING APPROACH

Stress importance of transition planning

- Understanding the transition plan from program to program leads to the following...

Importance of building a truly comprehensive estimate model à “Total Cost Management”

- Include all associated programs in single model vs. having separate estimate model for various programs
- Link all interdependencies between programs in estimate model– correlation....
- Incorporating both horizontal and vertical risk to account for program transitional uncertainty

Opening up lines of communication at portfolio level

- Asking the right questions
- Forcing discussion of interdependencies

IMPLEMENTING A PORTFOLIO ESTIMATING APPROACH - COMMITMENT

Portfolio Management Requires Leadership Commitment

- Leadership must endorse portfolio management goals, a rigorous and analytical process, and the willingness to make difficult recommendations and decisions such as investment termination.



IMPLEMENTING A PORTFOLIO ESTIMATING APPROACH - STAKEHOLDERS

Engage All Stakeholders Early And Often

- Due to the significant number of portfolio capability providers, as well as the organizational constructs/governance structures that may divide the decision maker and the portfolio managers, it is important to identify all stakeholders and to understand the magnitude of their stake in the portfolio and how specific stakeholder groups might drive portfolio components and the portfolio. Understanding the different roles, responsibilities, and perspectives of the stakeholders (including those of your particular customer) helps in devising strategies to ensure objective assessment of potential investments, stakeholder buy-in, viable and affordable recommendations, and minimization of "back-door" efforts. Knowing how each stakeholder group drives the portfolio can suggest the needed level of attention that must be paid to each. A minority stakeholder may drive a single requirement that drives solutions to be significantly more complex and costly than would a majority stakeholder holding 90 percent of the requirements; a situation that the government must avoid

IMPLEMENTING A PORTFOLIO ESTIMATING APPROACH - CONTROLS

Many organizations collect and control an entire suite of projects or investments as one set of interrelated activities in a portfolio. Why not the government?

- Businesses have adopted project portfolio management tools and techniques for IT projects, asset management, and budget planning and monitoring
- Business executives state that using project portfolio management allows managers to make decisions faster and with more confidence
- "The experiment indicated that there was an advantage to bundling ERP projects as a portfolio over managing them separately. Specifically, the results suggested that, when managed as a portfolio, highly uncertain ERP projects have a greater chance of succeeding under time and effort constraints."

IMPLEMENTING A PORTFOLIO ESTIMATING APPROACH - SUMMARY

Portfolio estimating and management has five levels:

1. Put all programs into a single estimate model
2. Identify interdependencies between the programs
3. Analyze and apply risk and correlation between portfolio programs
4. Use standard taxonomy mapping for each portfolio program
5. Execute program budgets individually, however make informed management decisions at the portfolio level

QUESTIONS



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