

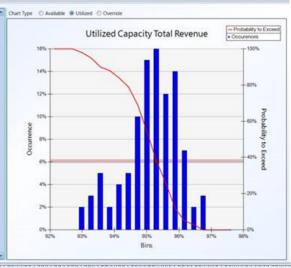
· The Base Case Predicts an Availability of 95.5% over the next 10 years

Flow Diagram × | Capacity × | Culpublisty × | Production × | Capacity Over Time × | Flows × | Events × | Coverage × | +

- · Assumed a 100,000 BPD facility at \$50/barrel
- · Use Fidelis to Quantify Potential Design/Operations or Maintenance Changes

Description of Case	Facility Availability	Delta from Base Case	Delta \$ Per Year
Base Case	95.5%	n/a	n/a
Remove Capex	94.1%	-1.4%	-\$25.6M
Add Redundancy	95.7%	0.2%	\$3.7M
Add Buffer Volume	96.7%	1.2%	\$21.9M
Change Operating Procedures	96.1%	0.6%	\$11M
Reduce Non-Essential Maintenance	96.8%	1.3%	\$23.7M

Drag a co	olumn header	here to group by that o	olumn.		
1	10	Name	Average Available Capacity	Average Utilized Capacity	Average Override Capacity
	1.	Ethylene Unit	98.12%	94.89%	98.129
	2	Ethylene Import	0.00%	1,78%	1.781
	3	Polyethylene Unit	97.59%	97.52%	97.599
	- 4	Polypropylene Unit	98.55%	96.01%	98.555
	5	Oxygen Plant	99.49%	93.41%	99.491
	6	EO Unit	97.06%	93.41%	97.065
	7	PO Unit	98.63%	93.43%	98.631
	8	Hydrogen Plant	99.57%	93.43%	99.579
	9	Polyurethanes Unit	99.71%	93.48%	99.711
	10	Prod A Demand	98.77%	93.65%	98.779
	11	Prod B Demand	98.52%	93.56%	98.521
	12	Prod C Demand	99.52%	93.62%	99.525
	13	Total Revenue	100.00%	95.28%	100.001
	14	PE Demand	100.00%	97,68%	100.001
	15	PP Demand	99.17%	96.16%	99.179
				A 400	100.000



Show most significant				_	Drag a column header here to group by that column.						
						Event ID	Event Name	Culpability	Average Event Deactivations	Average Culpability Basis Unit Shutdowns	Average Culpability Basis Unit Slowdowns
33 - Polyuretha					1	18	Prod B Demand	14.19%	6.00	0.10	19.3
31 - Polyuretha					-	28	D 2800 Fe	10.89%	3.83	0.95	7.2
14 - Ethylene F											
25 - Prod C Doc						16	Prod A Demand	10.19%	5.00	0.07	12.8
30 - H2 Plant						21	D 2100 Fe	8.01%	3.44	0.03	5.3
29 - 02 Plant	2.00				_	- 4	H 400 Heater	6.48%	2.27	0.48	3.8
7 - D 700 Feed											
22 - Late Ship						11	Hi Temp Cooli	5.73%	5.00	0.11	6.5
2 - E 200 Exch.						9	£ 900 Exchanger	5.22%	2.09	0.00	3.3
1 - C 100 Comp					_	23	E 2300 E.,	5.13%	2.29	0.01	3.6
15 - C 1500 Com					_						
8 - C 800 Comp						8	C 800 Co	4.69%	1.51	0.02	22
23 - E 2300 Exc.						15	C 1500 Co	4.10%	1.23	0.01	1,9
9 - E 900 Exch 11 - Hi Temp Co					-	1	C 100 Co	4.09%	1.30	0.01	2.7
4 - H 400 Heat							F 300 F - 4	2.046	1.00	201	22
21 - D 2100 Fee						- 2	E 200 Exchanger	3.94%	1,89	0.01	3.3
16 - Prod A Dem						22	Late Ship	3.42%	9.27	0.00	9.2
28 - D 2800 Fee						7.	D 700 Fe	3.41%	2.42	0.00	2.5
18 - Prod B Dem.					_	56	O2 Plant	2,23%	3.78	0.01	3.5
	25 45	6% 8% 10%	12% 14%	16%		ents:	Ur. Parol	.6,63%	3.78	. 0.01	3.3
		6% 8% 10% Culpability	1476	1078	Pro	d 8 Demand					

	ID	Name	Average Number of Full Events	Average Number of Empty Events
	1	C2 Storage	14.24	2.00
	2	C3 Storage	10.98	9.10
-	3	EO Storage	6.22	7.4
-	.4	FO Storage	6.51	10.22
-	5	Polyethylene Storage	1.00	1.00
_	7	Product A	5.22	7.93
-	3	Product B	7.56	8.75
-	9	Product C	1.09	11.24
-	10	Folypropylene Storage	2.71	5.37

maga-Color	nr header here to group			-31	S S	 Probability Of Depth Documence
	ID	Description	Average Nax Needed		Spare Coverage	- Probability of Coverage
1 Crc Pumps			100%			
				800		
				Probability of Coverage		
				20%		
				0%	0 1 1 Stock Level	2

					Change On susting	Doduce Nor
	Base Case	Remove Capex 📮	Add Redundancy	Add Buffer Volume	Change Operating Procedures	Reduce Non- Essential Maintenance
Facility Availability	95.5%	94.1%	97.7%	96.7%	96.1%	96.8%
\$ Per Year						
Average Available Capacity						
Ethylene Unit	98.12%					
Ethylene Import	0.00%					
Polyethylene Unit	97.59%					
Oxygen Plant	99.49%					
EO Unit	97.06%					
PO Unit	98.63%					
Hydrogen Plant	99.57%					
Plyurethanes Unit	99.71%					
Prod A Demand	98.77%					
Prod B Demand	98.52%					
Prod C Demand	99.52%					
Total Revenue	100.00%					
PE Demand	99.17%					
PP Demand	99.17%					
Ethane	100.00%					
Average Utilized Capacity		1				
Average Override Capacity						
⊕ Culpability						
Average Event Deactivations						
Average Culpability						
Offic Structuowits						
Average Culpability Unit Slowdowns						
Average Number of Full Events						
Average Number of Empty Events						
		1 -				

Might create supergroups of sections (the original tabs- Capacity, Culpability, Events, Coverage)

What is the user going to paste into their report?

Maybe everything below the top three lines is too much.

Could let users search for items and then add them to a custom table

	Base Case	Remove Capex 📮	Add Redundancy 📮	Add Buffer Volume 📮	Change Operating Procedures	Reduce Non- Essential Maintenance
Facility Availability	95.5%	-1.3%	+3.6%	+1.0%	+1.2%	+1.9%
\$ Per Year						
Average Available Capacity						
Ethylene Unit	98.12%					
Ethylene Import	0.00%					
Polyethylene Unit	97.59%					
Oxygen Plant	99.49%					
EO Unit	97.06%					
PO Unit	98.63%					
Hydrogen Plant	99.57%					
Plyurethanes Unit	99.71%					
Prod A Demand	98.77%					
Prod B Demand	98.52%					
Prod C Demand	99.52%					
Total Revenue	100.00%					
PE Demand	99.17%					
PP Demand	99.17%					
Ethane	100.00%					
Average Utilized Capacity						
Average Override Capacity						
		-				

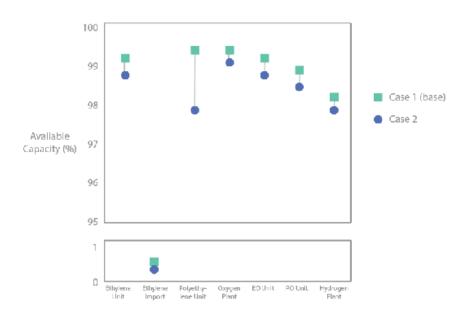
Actuals L	Dellas		
	Facility Availability (%)	\$/Year (\$M)	Volumetric Production (units)
Base Case	95.5	N/A	N/A
Remove Capex	94.1		
Add Redundancy	95.7		
Add Buffer Volume	96.7		
Change Operating Procedures	96.1		
Reduce Non- Essential Maintenance	96.8		show % increase in
			nerformance versus

Actuals

Deltas

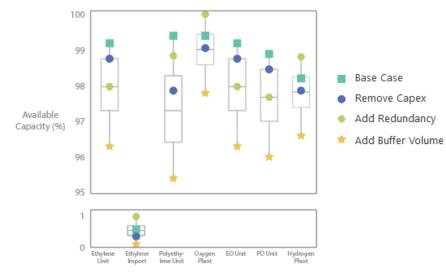
Average Available Capacity

ROI comparison?



Average Available Capacity





Average Available Capacity

