









Vectek Case Studies				
▶ 1. Bottling Plant	Florida USA			
2. Plastic Extruder	Auckland New Zealand			
3. Solar Panel Manufacturer	Maryland USA			
4. Semiconductor FAB	China			
▶ 5. Printing Press	USA			
6. Container Crane	Hong Kong			
7. Church Vapour Lights	Samoa			















Rum Bottling Site Data

- Working 2 x 10 hour shifts = 3,750 cases/hr
- 9 Bottling Lines
- Facility produces 75,000 cases per day
- Largest size bottles run at 400/min
- Miniatures run at 1000/min
- When an unexpected stoppage occurs it can take over one hour to restore production to normal line speeds
- Factory stated maintenance costs \$350k p.a. for replacement parts damaged by unplanned stoppages

Factory Assumptions If lines are down for 40 minutes then 2500 cases are lost If a value of U\$10 per case were assumed, this would equate to U\$25,000 per event The actual figure may be higher, say 40k-50k per event No details are available for scrap costs, lost taxes, rework, overtime to recover lost production etc



	>87%	>80%	>70%	>60%	Lost
Jan	3	2	3	1	1
Feb	2	3	1	2	0
Mar	3	2	1	4	1
Apr	1	4	0	0	1
May	10	2	1	4	0
Jun	13	16	15	10	1
Jul	112	15	1	5	3
Aug	16	9	2	5	0
Sep	57	35	12	24	7
Oct	4	4	0	2	0
Nov	14	26	10	2	0
Dec	13	5	0	0	0
Total	248	123	46	59	14









• 1MVA 400V 50Hz



Problem

- Extruded barrier film. Up to 9 layers
- Nylon particularly problematic
- Long set-up times
- 30 minutes to recover a fault
- Multilayer scrap is non-recoverable
- Less than 100% rolls are not accepted











Production Of A Solar Cell



Silicon ingots are cast in an electric furnace, then mounted on the saw carriage As presented to the saw they are valued at \$2000/brick





















One of the worlds leading semiconductor FABs had a MV switch fail during 2007. The plant went down for 8 hours. They announced a \$50 Million loss to the stock market for this 1 event.



































Weather Created Voltage Disturbances

- Crane malfunctions:-
 - Jambs a container mid cycle
 - Crane has to be manually reset
 - Staff have to physically enter the crane
 - Risk of personal injury. Safety Issue
 - Damaged Container and Crane
- Airliner penalty charges for delayed flights

AVC Solution

- Eliminates Voltage Sags from Crane
- Corrects sags when crane lifting (motoring)
- Corrects sags when crane is lowering (regenerating)









