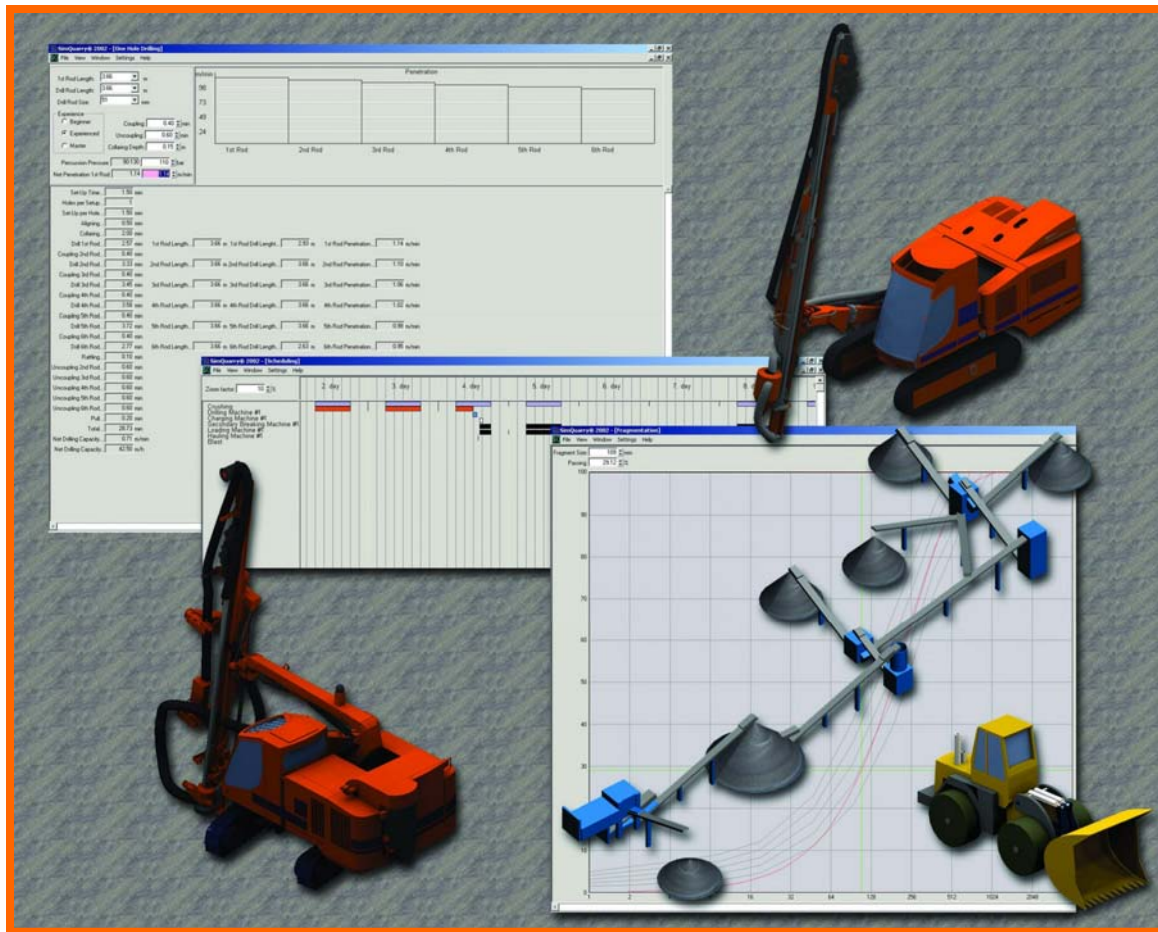


# SimQuarry™

## Revolution In Process Knowledge



# The Quarrying Process



# Road Construction Process

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# Creating Value In Drilling

- **Drilling**
  - production and productivity
  - operator safety
  - cost of operation
  - environment
- **Blasting**
  - drilling pattern
  - yield and powder factor
  - mean fragment size  $k_{50}$
  - amount of fines in blasting
  - floor and wall control
  - risk of fly rock
  - vibrations and air blast
- **Secondary breaking**
  - amount and size of boulders

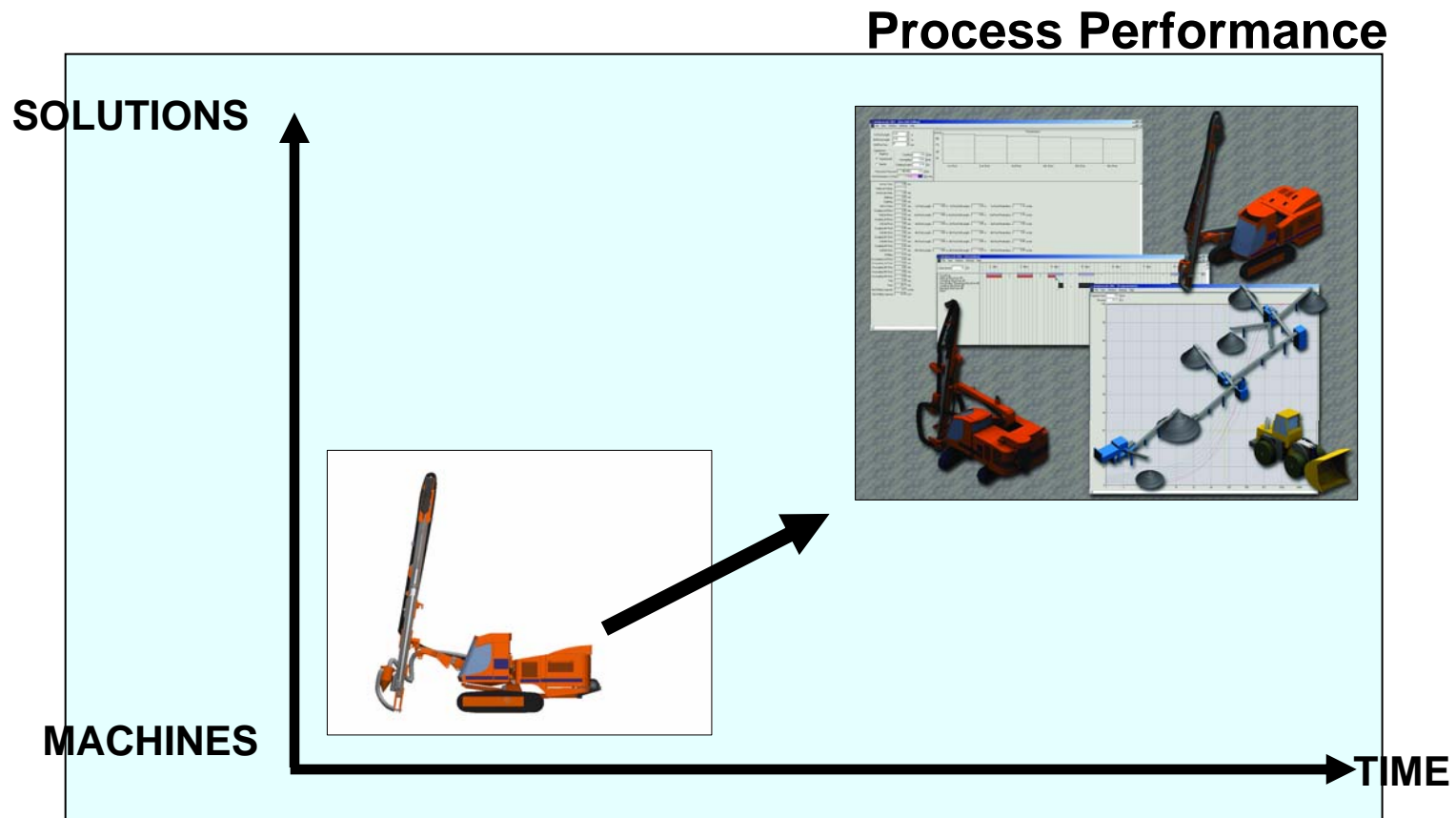


# Creating Value In Drilling

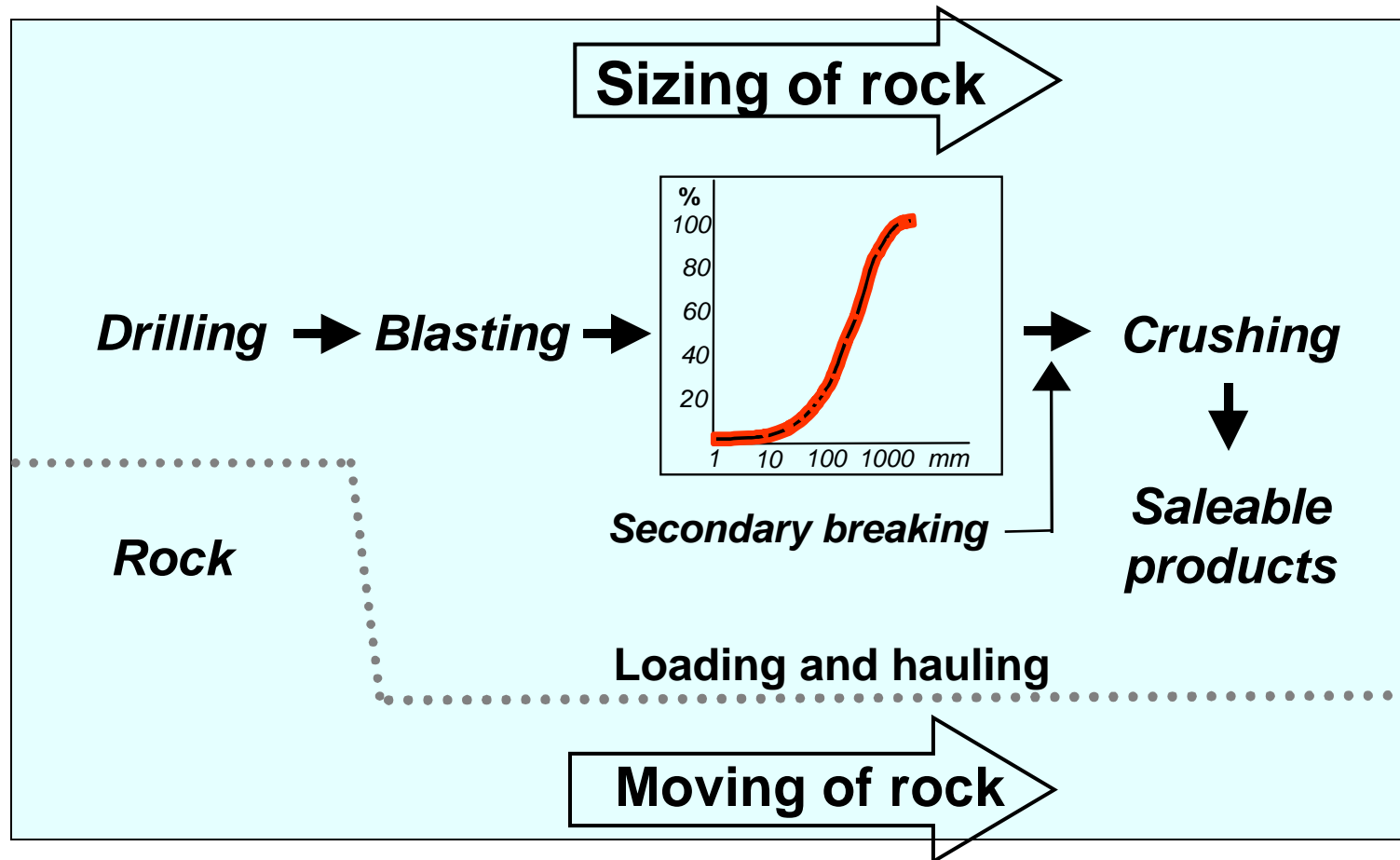
- **Loading and hauling**
  - loadability of shot rock
  - floor humps and toes
  - handling boulders
  - loading capacity and cost
- **Crushing**
  - amount of fines
  - aggregate quality
  - crushing capacity



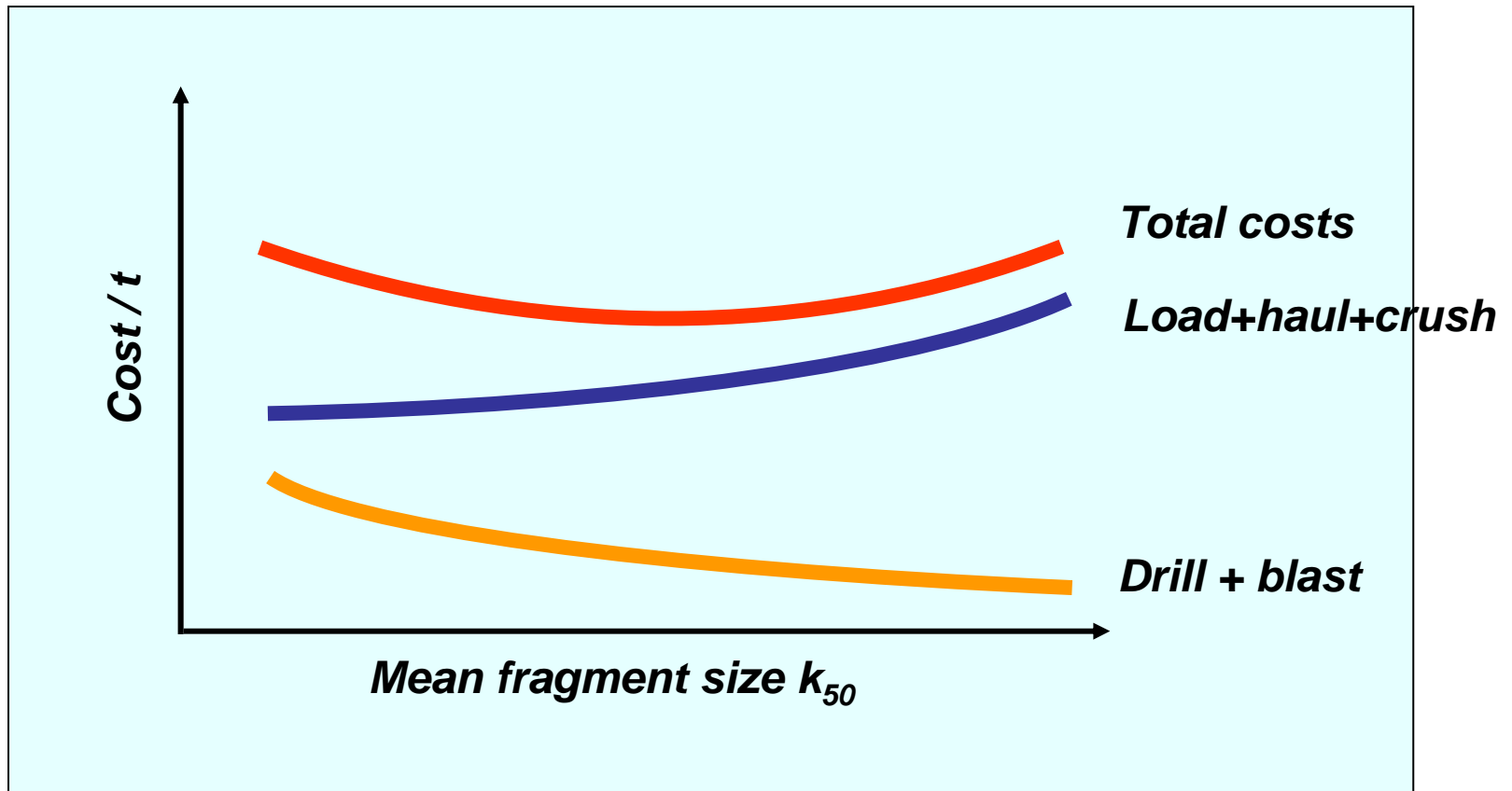
# Industrial Trends



# Sizing Rock - Moving Rock

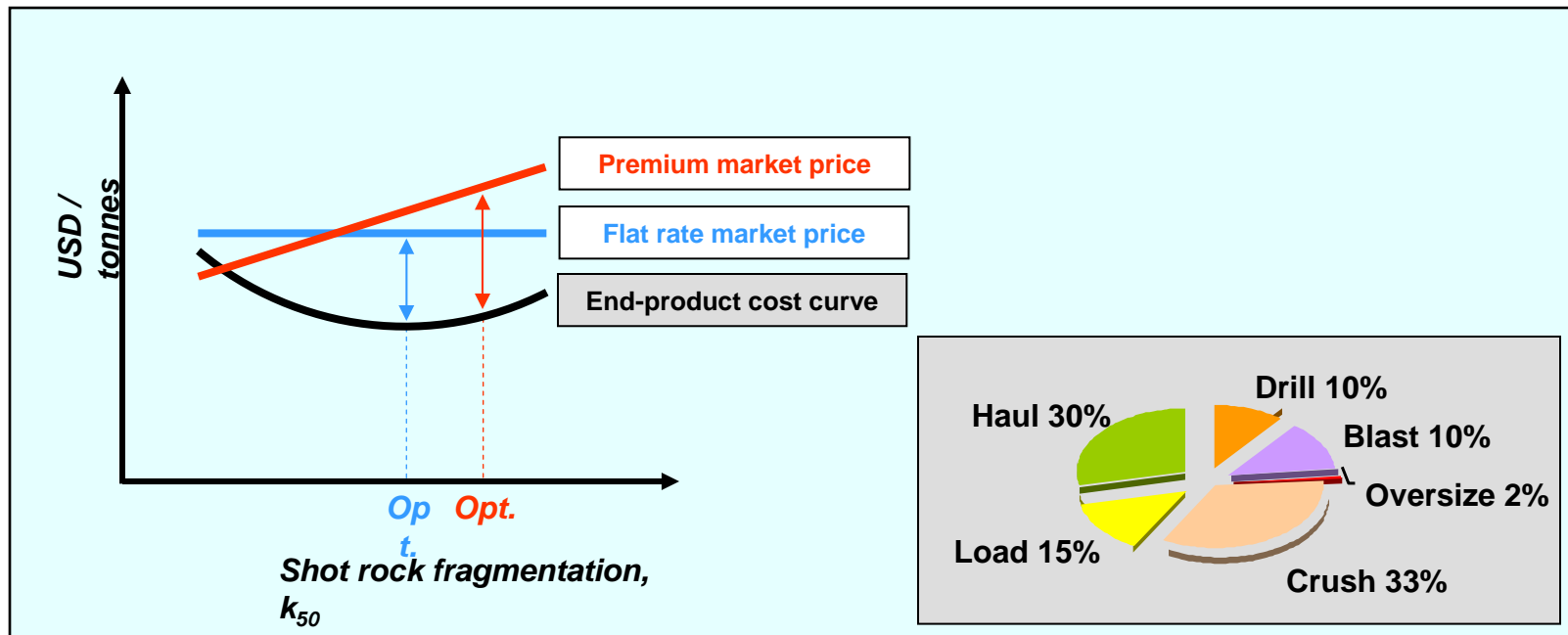


# Cost Effects

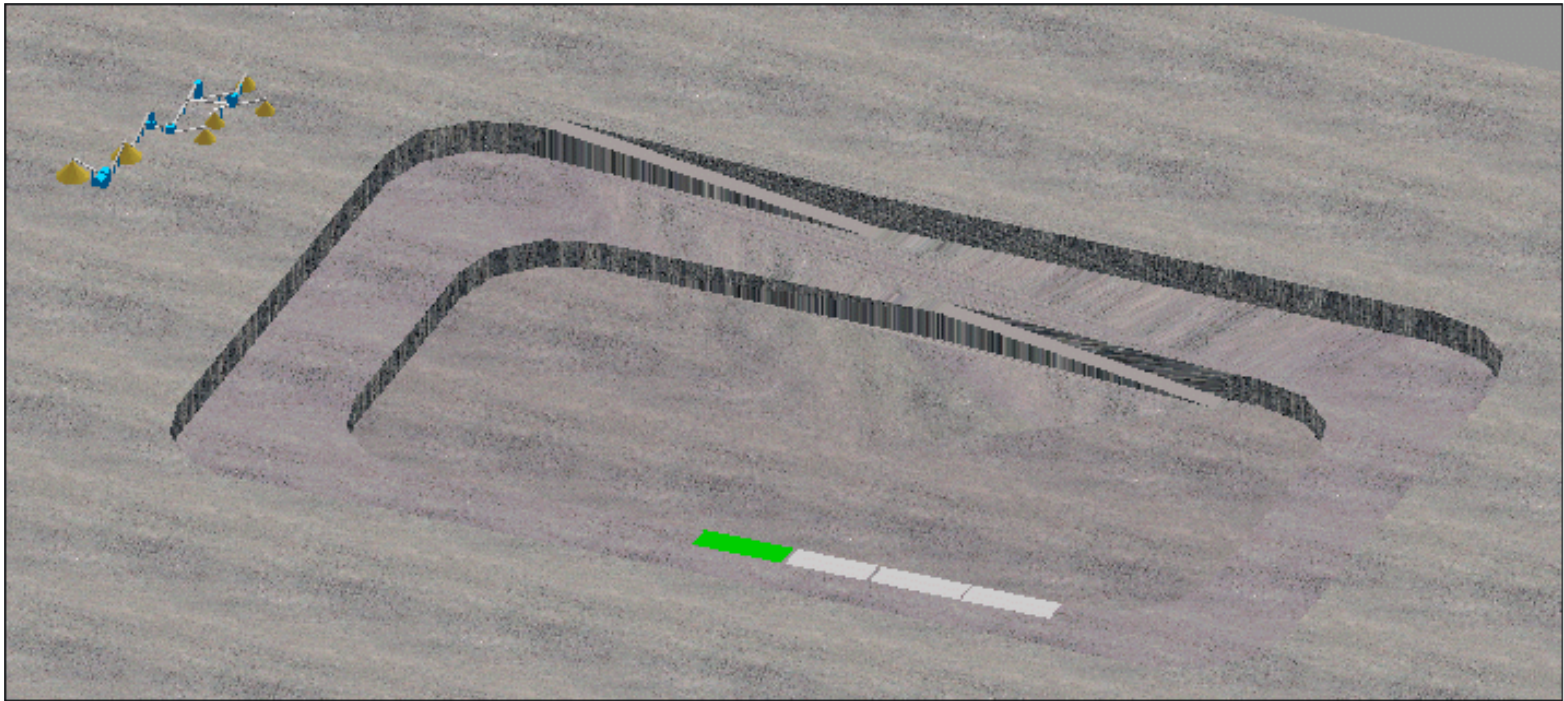




# From Cost Minimum To Revenue Maximum



## 3-D Quarry View



# Products and Market

**SOProducts**

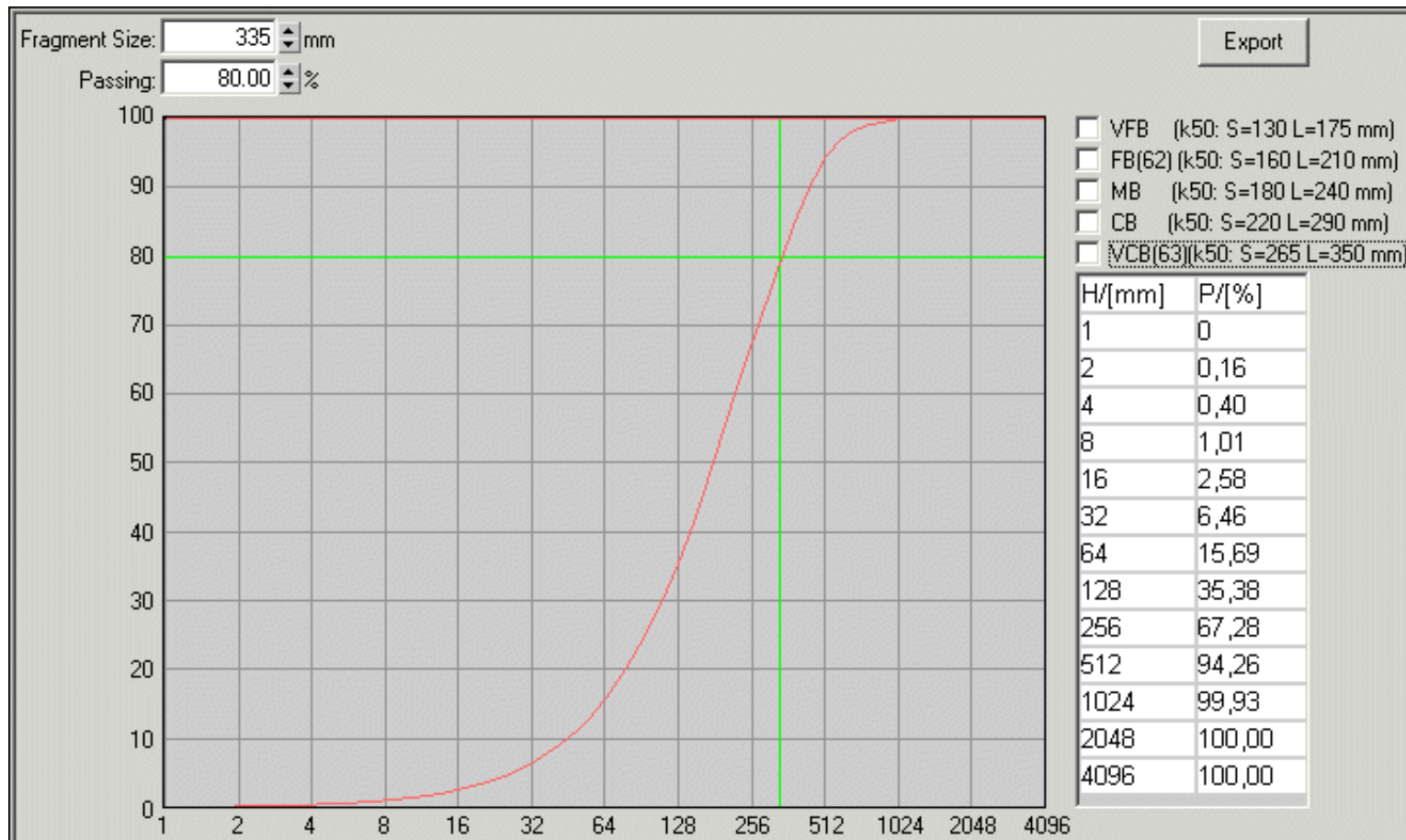
Final Fines Percentage:  %      Method:  Controlled     Free

Final Products...:  t/month

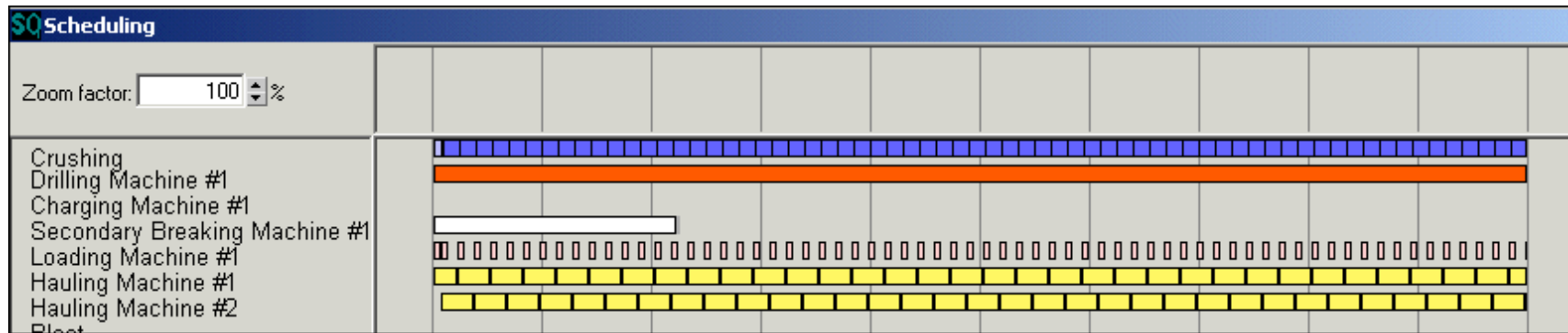
Type	Grain Size	Distribution/[%]	Size/[mm]	Production/[t/month]	Sales Price ex Plant/[EUR]	Value of Production/[EUR/month]	Possibility to Sell [%]	Possibility to Sell [t]	Into Stock [t]	Stock Time [months]	Interest Rate Stock [% p.a.]
Product 1: Sub Base	Medium Coarse	34	0-80	31016.08	3.00	93048.23	50	15508	15508	6	20
Product 2: Concrete Fractions	Medium	26	15-25	23718.18	6.00	142309.05	100	23718	0		
Product 3: Concrete Fractions	Medium Fine	13	10-15	11859.09	6.00	71154.53	100	11859	0		
Product 4: Concrete Fractions	Fine	27	0-10	24630.41	6.00	147782.48	100	24630	0		
Product 5:				0.00		0.00	100	0	0		
Product 6:				0.00		0.00	100	0	0		
Final Fines:				4801.25	0.50	2400.63	100	4801	0		
Production:				91223.75		456694.90					



# Fragmentation Control



# Fleet Management - Scheduling



# Fleet Management - Equipment

**Drilling Machine #1**  
Charging Machine #1  
Secondary Breaking Machine  
Loading Machine #1  
Hauling Machine #1  
Hauling Machine #2

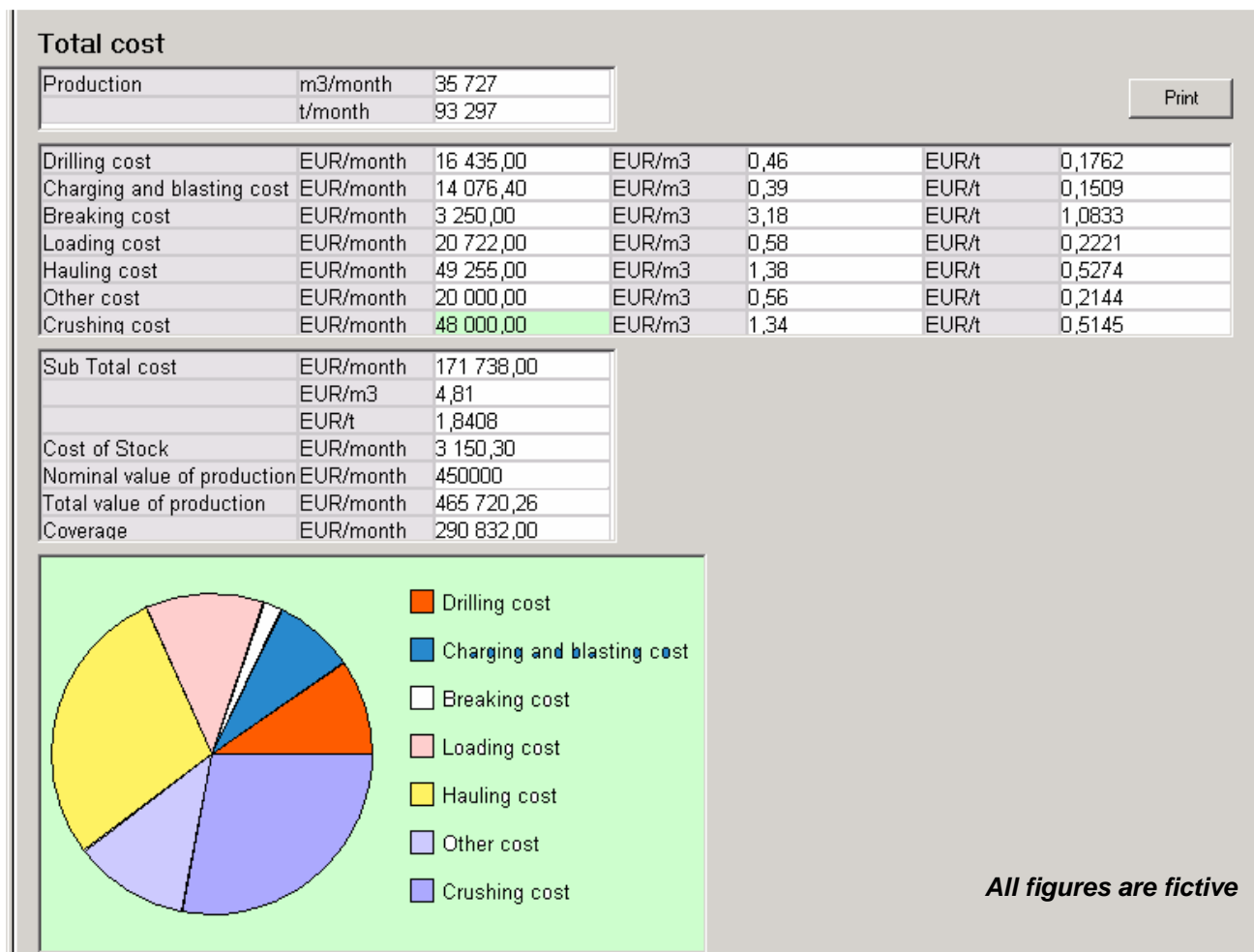
Type  
 Drilling  
 Charging  
 Secondary Breaking  
 Loading  
 Hauling  
 Crushing  
 Miscellaneous

Drilling  
Pantless 1500 HL 1500  
MF Rods 89140  
MF Rods  
Loss per Coupling 3.6 %  
 Water Flushing

Equipment icons: Excavator, Tracked loader, Dump truck, Truck.

Process flow diagram showing material flow through various stages (Feed 1, crushers, screens) and output points.

# Cost Management



# Cost Management

