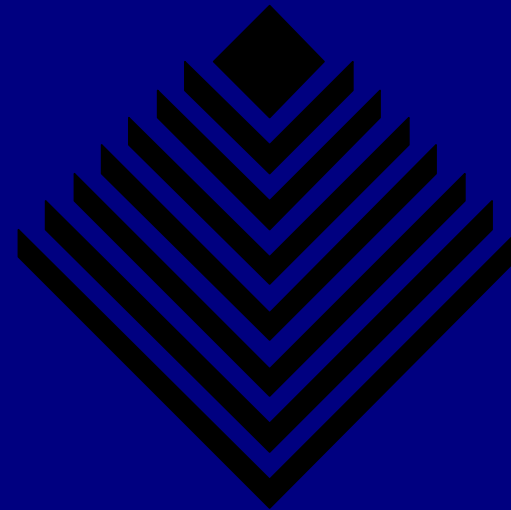
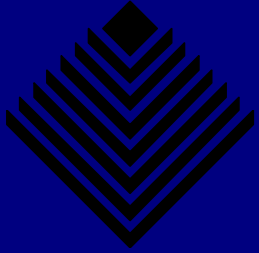


RISK MANAGEMENT CONFERENCE

**DESIGNING AND IMPLEMENTING
AN INTEGRATED RISK MANAGEMENT SYSTEM
THAT EFFECTIVELY MINIMIZES YOUR EXPOSURE**



**Dr James A Robertson PrEng : Managing Director
Differentiated Strategic Solutions (Pty) Ltd
and George J Paton : Director
CRM Risk Control Consultants (Pty) Ltd**

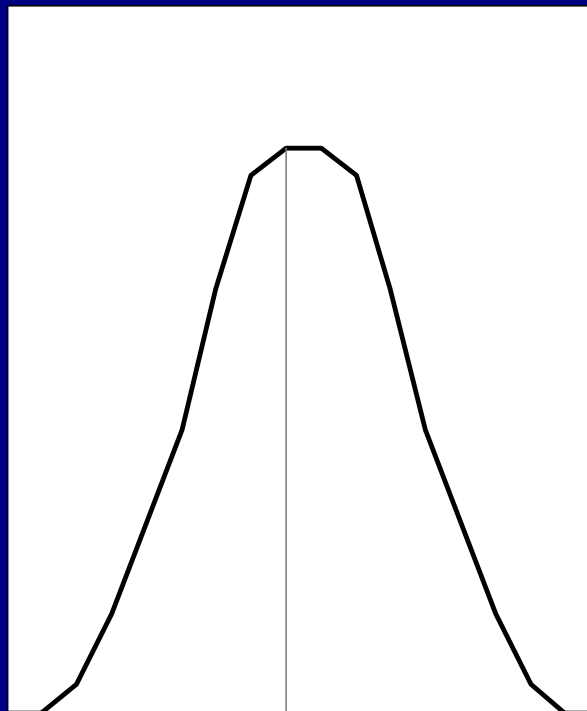


DEFINITION OF RISK

RISK = DEGREE OF VARIABILITY

**THE DIFFERENCE BETWEEN WHAT IS EXPECTED AND
WHAT IS EXPERIENCED**

LOW UNCERTAINTY

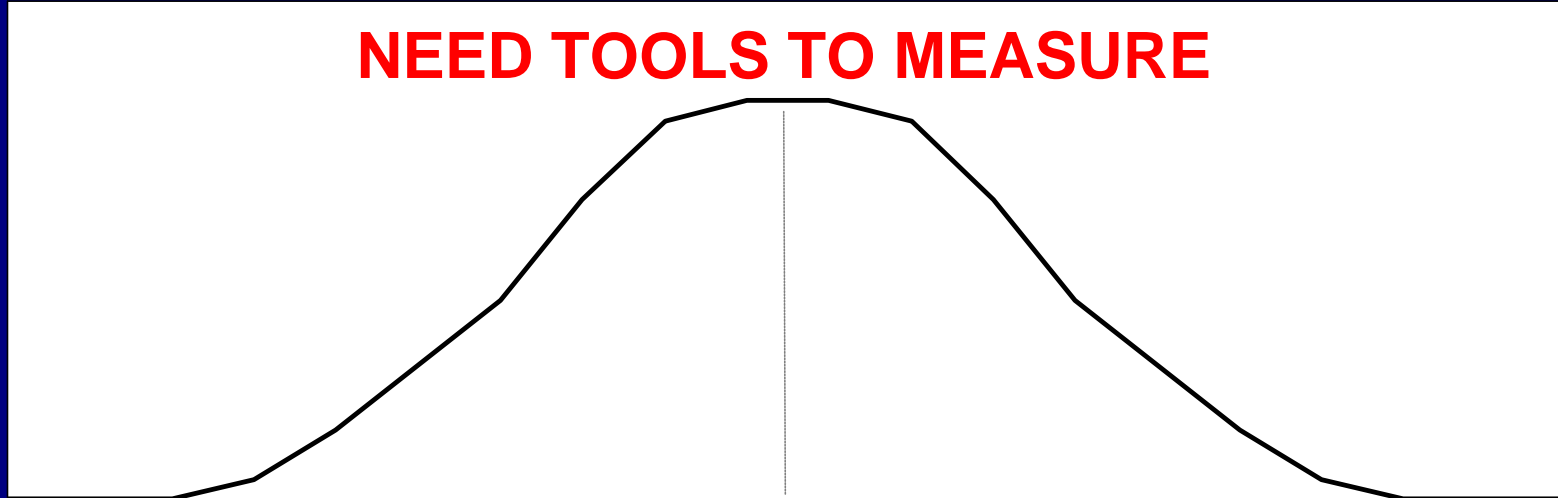


- **Small Variance between upper & lower bounds**
- **Should require less management.**

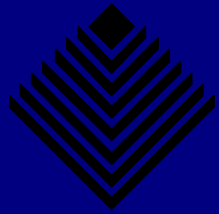
HIGH UNCERTAINTY



NEED TOOLS TO MEASURE



- **Large Variance Between Upper & Lower Bounds**
- **Requires Highly Focused Management.**

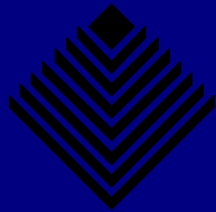


WHY INTEGRATED RISK MANAGEMENT SYSTEMS?

- Manage Physical Risk
- Manage Finance Risk
- Minimize Risk & Maximize Profit



ACHIEVE LASTING BUSINESS BENEFIT



WHY INTEGRATED RISK MANAGEMENT SYSTEMS?

- Treat the cause
- Not the symptoms



**SMALL INCIDENTS UNRECORDED GIVE RISE TO
CATASTROPHES
MOST INCIDENTS CAN BE PREVENTED**



WHY INTEGRATED RISK MANAGEMENT SYSTEMS?

Analyse trends
in a manner that enables **proactive** action to be
taken to anticipate and prevent major losses
and to identify the true cause of recurrent losses.

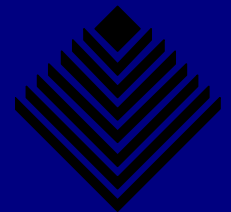
REQUIRES DECISION SUPPORT INFORMATION

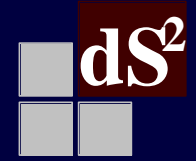
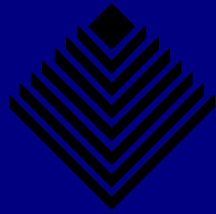
DESIGNING A RISK MANAGEMENT SOLUTION



- Assess potential impact of hazards
- Define steps to achieve objectives
- Develop risk improvement programs
- Develop strategies to control consequences of risk and impact

INTEGRATE INTO DECISION FRAMEWORK

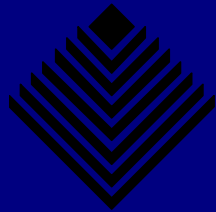




DETERMINE COST OF RISK

- Insurance premium cost
- Retention costs
 - Risk control expenditure
 - Maintenance programmes
 - Training costs
- Fire protection & security
- Management & administration

**BALANCE COST OF RISK IMPROVEMENT
AND LEVEL OF RISK FINANCE**

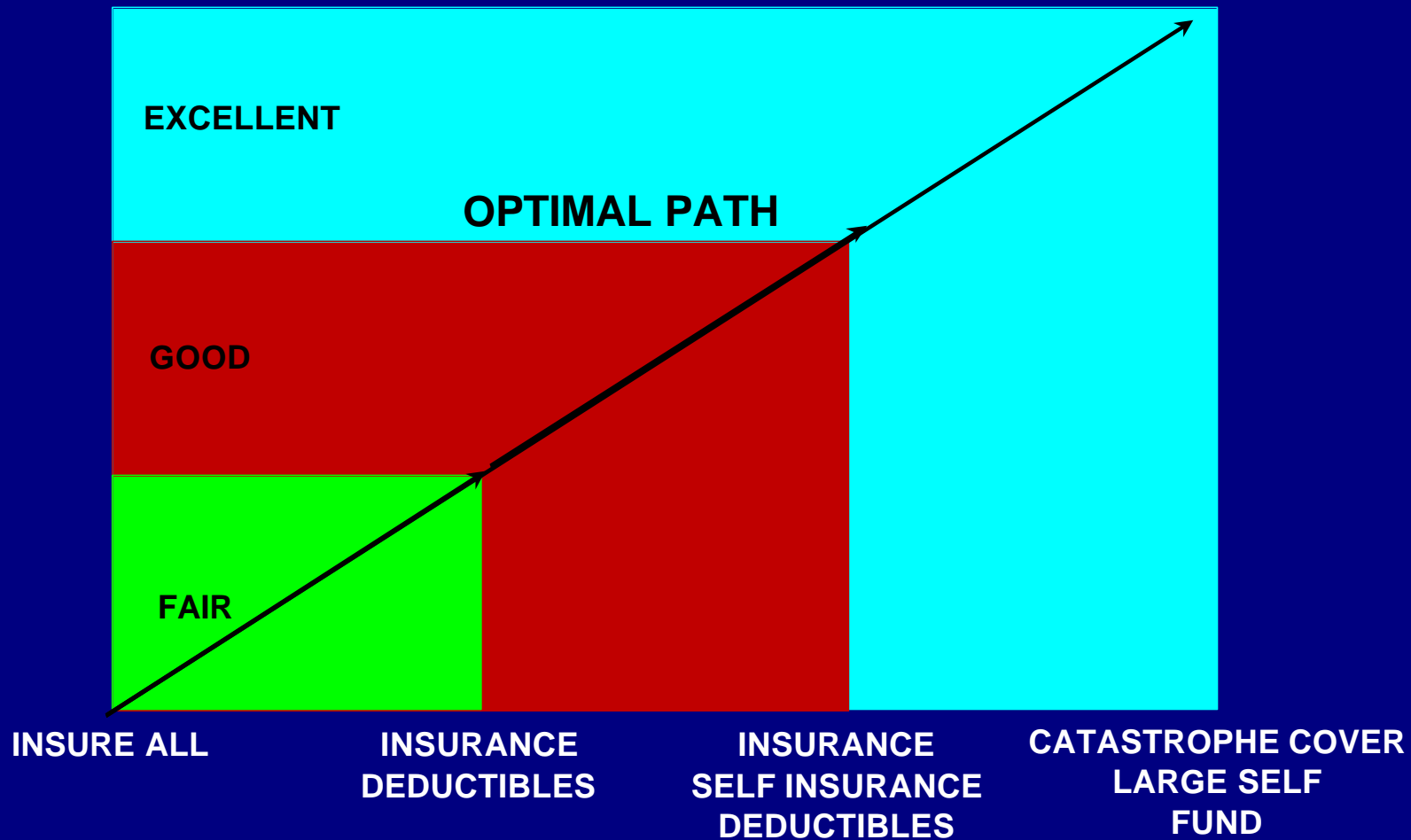


THE RISK MANAGEMENT OBJECTIVE

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RISK MANAGEMENT OBJECTIVE



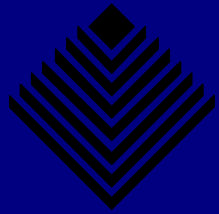
RISK FINANCING



WHY INTEGRATED RISK MANAGEMENT SYSTEMS?

A means of acquiring and analyzing comprehensive and detailed loss statistics is essential.

A COMPUTER BASED SOLUTION IS THE ONLY WAY



RISK MANAGEMENT DEFINED



- A comprehensive range of activities for dealing with risks
- Manage the interdependence between alternatives
- A integral part of the business

ACHIEVE LASTING BUSINESS BENEFIT

THE RISK MANAGEMENT ENVIRONMENT

CHANGING ECONOMICS

CHANGING POLITICS

RISK MANAGEMENT PHILOSOPHY & STRATEGY

BUSINESS PHILOSOPHY & STRATEGY

Marketing

Finance

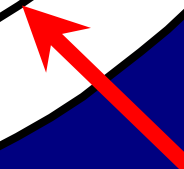
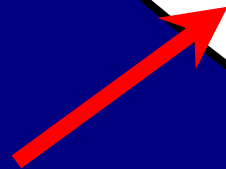
YOUR ORGANISATION

Human Resources

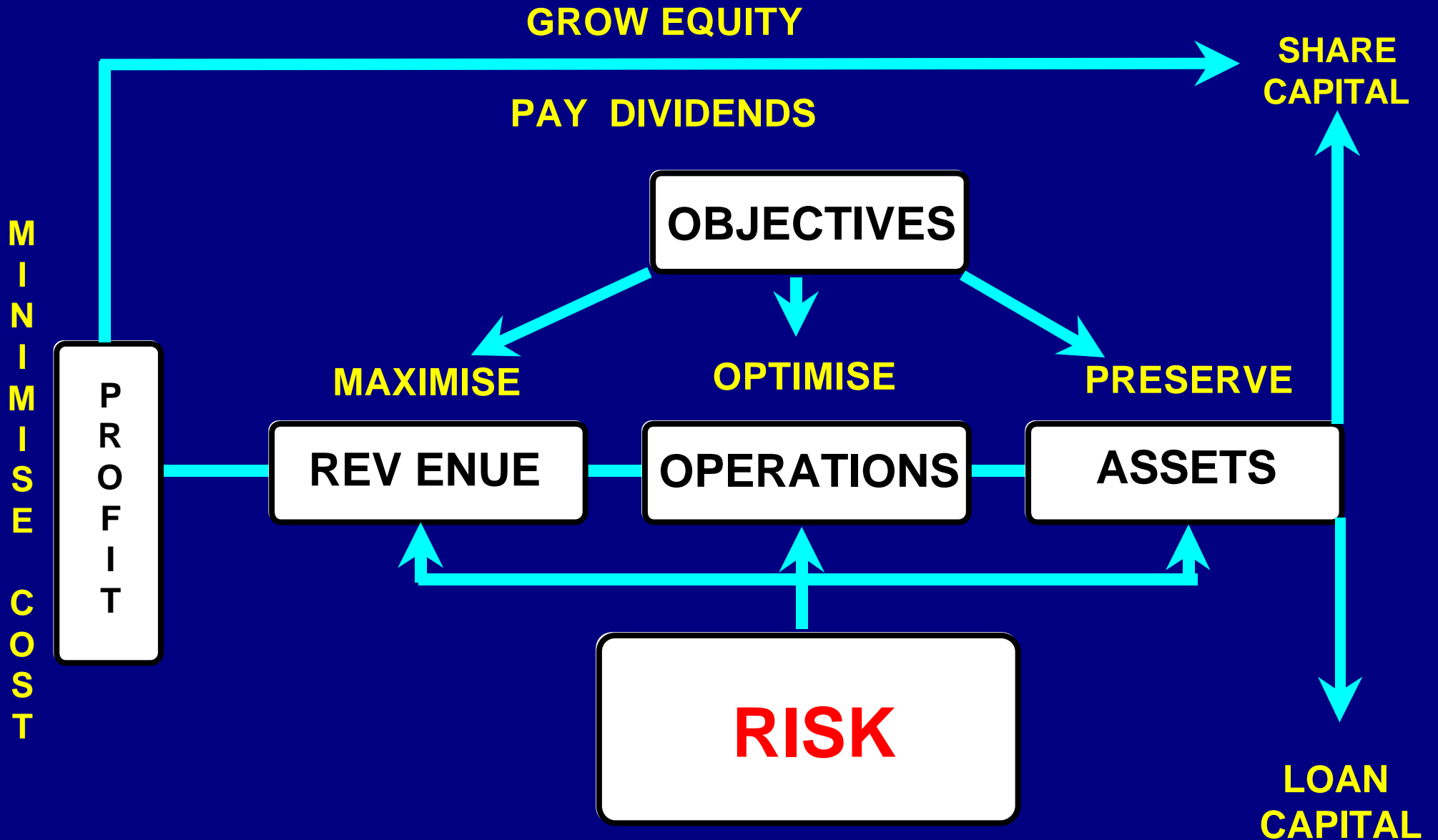
Production

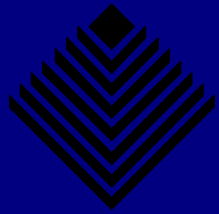
ETC

FUTURE CONTRACTS



THE BUSINESS IMPLICATIONS OF RISK





DEFINITIONS

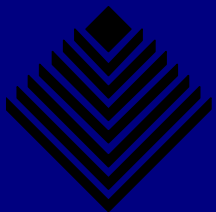


- **Pure risk:**
 - Loss, damage, disruption, injury, etc
 - Without potential gain, profit or other advantage
- **Risk control:**
 - Provision of standards of protection
 - Avoid transfer or acceptance of risk

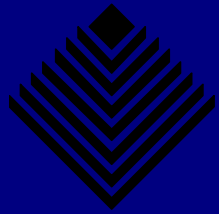


DEFINITIONS

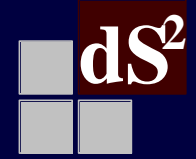
- **Risk financing**
 - Provision of funds for recovery
- **Risk evaluation**
 - Quantitative / qualitative measure of risk
 - Gauge potential severity and frequency
- **Risk identification**
 - Potential risks to which organization is exposed



MEASUREMENT TECHNIQUES ARE VITAL

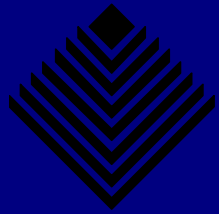


URE RISK IMPROVEMENT TECHNIQUES



- **Avoidance**
 - Action to prevent occurrence
- **Retention**
 - Accept risk in present form
- **Transfer**
 - Insurance or contractual transfer of consequences
- **Control**
 - Reduce by controlling frequency and severity

REQUIRES INFORMATION



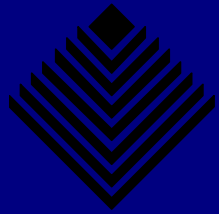
RISK FINANCING



- Provide funds to assist business to survive and recover from losses
- Internal (self) financing
 - Funds and budget
 - Unbudgeted
- External financing
 - Insurance



REQUIRES INFORMATION IN ORDER TO TAKE INFORMED DECISIONS



PHYSICAL FACTORS GIVING RISE TO EXCESSIVE RISK



- Insurance claims not a true measure of risk
- Focus on overall cost of risk
- Identify physical factors that exacerbate risk
 - Maintenance
 - Health
 - Environmental
 - etc

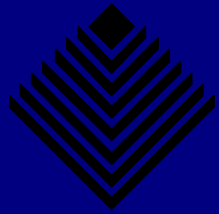
TRUE CAUSES OF LOSS ARE OFTEN OBSCURE

RISK BASED MAINTENANCE MANAGEMENT



- **Small components**
 - Often initiate failures or losses
 - Not high profile
 - Frequently neglected
- **Develop a risk oriented maintenance approach**

**REQUIRES COMPUTER BASED MEASUREMENT AND
MODELLING**



TRUE CAUSE OF LOSS NOT EVIDENT

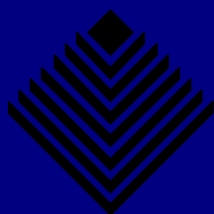
- **Diabetic drivers**
 - Low blood sugar
 - High accident rate
- **Drivers rise at 01h00**
 - Poor concentration by 10h00
- **Often only identified**
 - When insurance premium raised
 - When insurance refused

**A COMPREHENSIVE LOSS RECORDING AND ANALYSIS
SYSTEM CAN BE INVALUABLE**



INFORMATION NEEDS IN ORDER TO IDENTIFY TRENDS FOR PHYSICAL RISK CONTROL

- Major incidents normally preceded by series of minor incidents
- Minor incidents do not individually attract attention
- Accumulated **real** cost of "small" losses may exceed cost of high profile losses



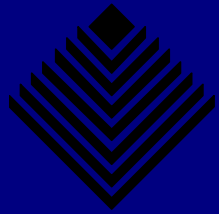
RECORD AND ANALYSE ALL LOSSES

TRUE COST OF RISK



- Traditional loss reporting concentrates on insurance claim
 - Costs that can be recovered
 - Not true costs
- Real cost is the hidden cost

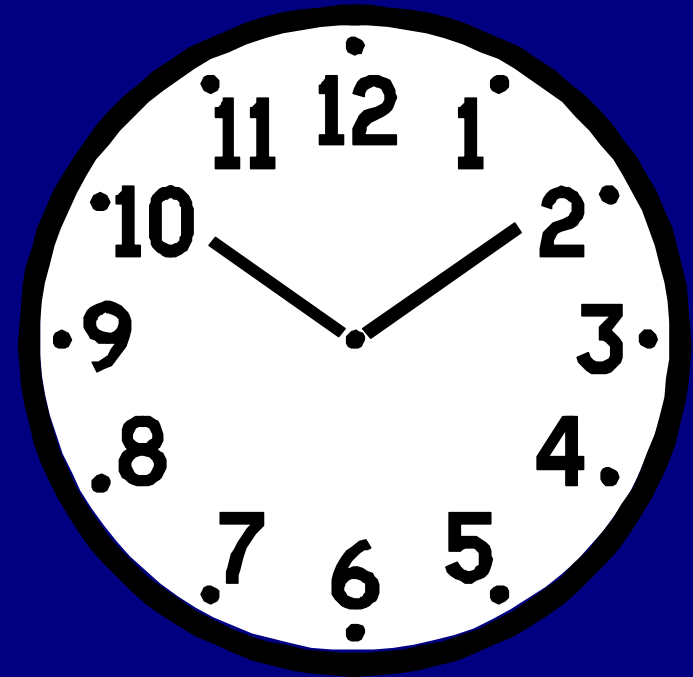
RECORD AND ANALYSE ALL COSTS



HIDDEN COSTS



- Down time
- Management time
- Lost production
- Lost market opportunities
- Customer dissatisfaction
- Unremunerated overtime
- Staff dissatisfaction
- etc

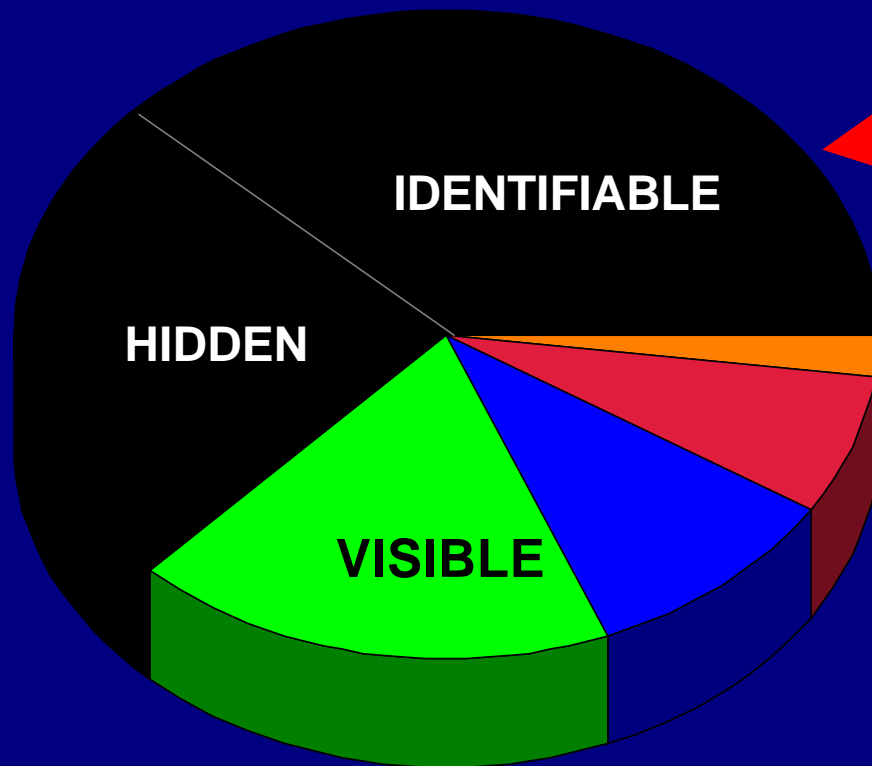


**SOME ARE READILY QUANTIFIED, OTHERS ARE NOT,
ALL ARE IMPORTANT**

HIDDEN COSTS



OPTIMISE RISK MANAGEMENT FOR LOWEST OVERALL
COST AND LOWEST HIDDEN COST



- Down time
- Management time
- Lost production
- Lost market opportunities
- Customer dissatisfaction
- Unremunerated overtime
- Staff dissatisfaction
- etc

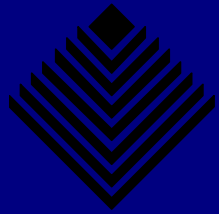
**Reduced expenditure on risk
management gives rise to
increased hidden costs.**

INTERNAL COMMUNICATION NEEDS



- Risk control and insurance departments and decisions often unrelated and uncoordinated
 - No optimization is possible
 - Wrong insurance cover provided
 - Wrong level of cover provided
 - Claims not met
- Re-structure in order to support strategic decision making

**PROVIDE A SINGLE RISK MANAGEMENT INFRASTRUCTURE
AND COMMON DATABASE**

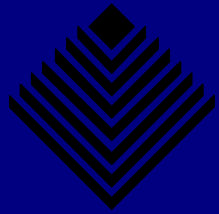


INTERNAL COMMUNICATION NEEDS

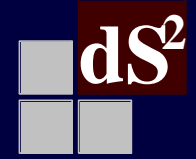


- **Capability to report full financial implications of past losses**
- **Single risk management department for physical and financial risk**
- **Comprehensive risk management information system**

**PROVIDE A SINGLE RISK MANAGEMENT INFRASTRUCTURE
AND COMMON DATABASE**



INTEGRATED INFORMATION SYSTEM



- **All risk related information:**
 - **Planned maintenance**
 - **Risk audit**
 - **Unaccounted losses**
 - **All loss information**

COMPREHENSIVE RECORDING OF ALL LOSSES

ISO 9000 CERTIFICATION

- Database of all major items
 - Boilers, etc
- All legislative requirements
- Prioritized and scheduled all maintenance

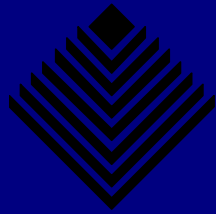
**EXPECTED INCREASED COSTS :
ACCOMPLISHED INCREASED PLANT EFFICIENCY
AND REDUCED COSTS**

THE BENEFITS OF ESTABLISHING AN INTEGRATED LOSS DATABASE



- **Permits holistic risk improvement**
- **Accountability for losses through business model**
- **True cost including hidden costs established**
- **Quality of risk management improved and duplication of effort avoided**

IMPROVED PROFITABILITY



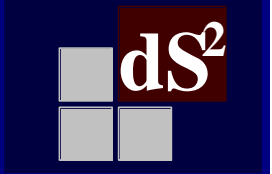
THE BENEFITS OF ESTABLISHING AN INTEGRATED LOSS DATABASE



- **Early identification of adverse trends**
 - Minimize probability of catastrophe
 - Informed disaster recovery planning
- **Accurate centralized information**
 - Simplify risk management
 - Reduce costs
 - Better results

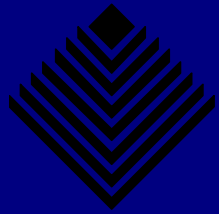
IMPROVED PROFITABILITY

THE BENEFITS OF ESTABLISHING AN INTEGRATED LOSS DATABASE



- **Better decision making**
- **Big picture**
 - **Drill down to all levels of organization**
 - **Direct access to information at all levels**
 - **Benchmark comparable business units**
- **Improved communication**

IMPROVED PROFITABILITY



THE BENEFITS OF ESTABLISHING AN INTEGRATED LOSS DATABASE



- **Effective risk management coordination**
- **Summarization and drill down enable focus on key issues**
- **Monitor insurance policy endorsements and limitations**
 - **Reduce risk of policy being revoked**
 - **Enable aggregate and fund management**
 - **Best balance of self funding and insurance**

IMPROVED PROFITABILITY

CONCEPTUAL REQUIREMENTS FOR THE IMPLEMENTATION OF AN EFFECTIVE RISK MANAGEMENT SYSTEM



- Develop risk exposure profile
- Identify core business activities impacted
- Analyse past losses & trends
- Determine market factors

EFFECTIVE PLANNING AND IMPLEMENTATION



CONCEPTUAL REQUIREMENTS FOR THE IMPLEMENTATION OF AN EFFECTIVE RISK MANAGEMENT SYSTEM

- Integrate risk management with business strategy
- Make part of the corporate culture
- Address environmental issues as part of cost
- Restructure risk management and risk finance
- Implement a centralized loss information acquisition system

CASE STUDY OF AN IMPLEMENTATION



- **Major corporation**
 - **Previously self insured**
 - **Full risk management program**
- **Risk management information system installed in 1992**

DRAMATIC BENEFITS AND MORE ARE EXPECTED

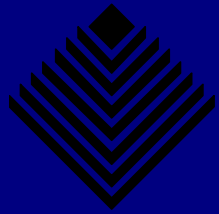
CASE STUDY OF AN IMPLEMENTATION



- More than 10,000 loss incidents per year
- Four operators instead of twelve
- Six regions
- Full loss reporting and analysis
- Major enhancements planned



DRAMATIC BENEFITS AND MORE ARE EXPECTED



CONCLUSION



- **Effective management of risk will give rise to significant improvements in operational efficiency and profitability**



CONCLUSION

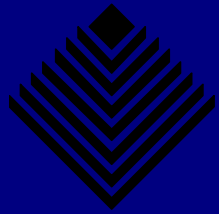


- Effective management of risk will give rise to significant improvements in operational efficiency and profitability
- **A holistic approach to risk management and risk finance is required**

CONCLUSION



- Effective management of risk will give rise to significant improvements in operational efficiency and profitability
- A holistic approach to risk management and risk finance is required
- **The application of an integrated risk management information system is vital**



CONCLUSION



- Effective management of risk will give rise to significant improvements in operational efficiency and profitability
- A holistic approach to risk management and risk finance is required
- The application of an integrated risk management information system is vital

**AN EFFECTIVE SOLUTION THAT WILL IMPROVE
LONG TERM PERFORMANCE AND PROFITABILITY**

THE REAL ISSUES IN OUTSOURCING



QUESTIONS ?

