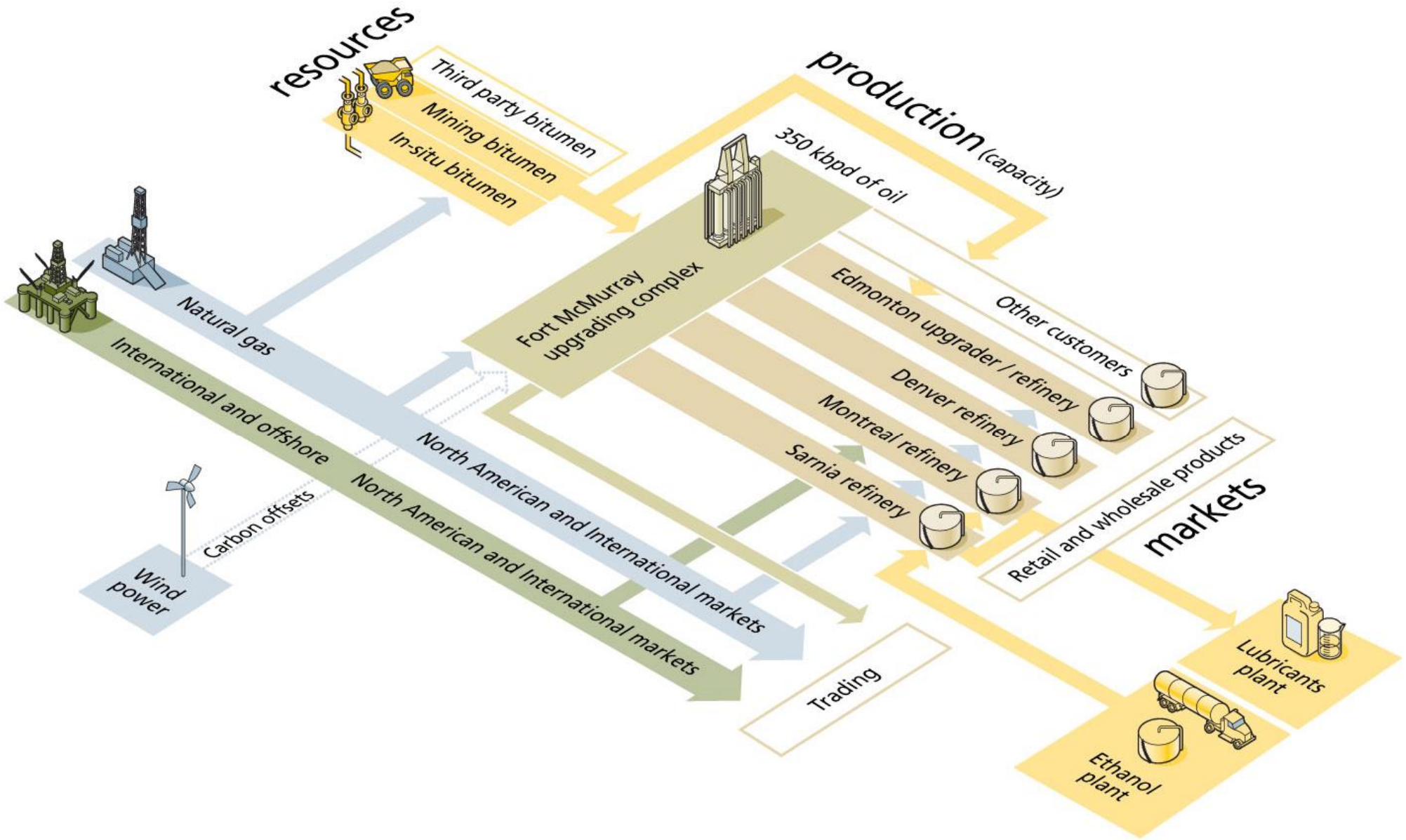
Enterprise Risk & Governance

April 2013


resources
Third party bitumen
Mining bitumen
In-situ bitumen
production (capacity)
350 kbpd of oil
Fort McMurray upgrading complex
Natural gas
International and offshore
North American and International markets
North American and International markets
Carbon offsets
Wind power
Trading
Other customers
Edmonton upgrader / refinery
Denver refinery
Montreal refinery
Sarnia refinery
Retail and wholesale products
markets
Lubricants plant
Ethanol plant

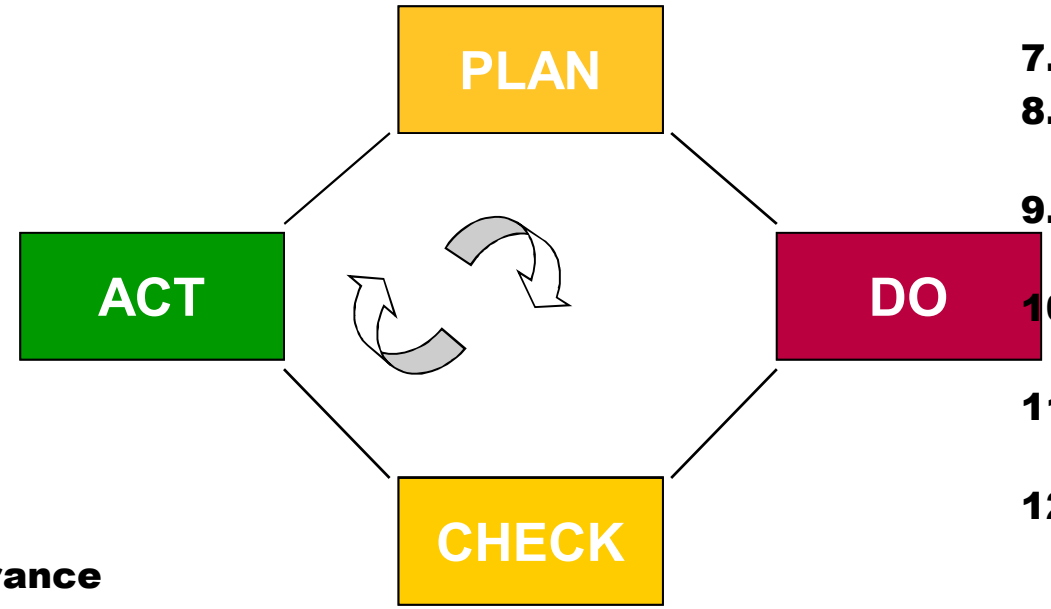
The Suncor Operations Excellence Management Systems (OEMS)

- Developed to provide a framework for company policies, standards, and procedures to support the company's goal of operational excellence
- Lays out the requirements / expectations for the management of operational risks inherent in Suncor's businesses
- The OEMS contains the requirements for the development and sustainment of an effective risk and hazard identification process and effective processes to mitigate said risks
- The OEMS also lays out requirements for the governance of the OEMS itself, and supporting programs, risks and controls in the areas of Health, Environment, Personal and Process Safety, Wellness, Security etc which fall under its scope.

The following slides provide an overview of Suncor's approach to risk management and governance, focusing in particular on the role of the Corporate Operations Integrity Audit function.

Overview of Suncor Operations Excellence MS Structure

1. **Leadership, Integrity & Accountability**
2. **Risk Identification, Assessment & Management**
3. **Legal Requirements & Commitments**
4. **Objectives, Targets and Planning**
5. **Management of Change**



6. **Structure, Responsibility & Resources**
7. **Training & Competence**
8. **Facilities Design & Construction**
9. **Operations & Maintenance Controls**
10. **Contractor Management & Third Party Services**
11. **Data & Document Management**
12. **Emergency Preparedness & Response**
13. **Information & Communication Management**

14. **Quality Assurance**
15. **Incident Reporting, Investigation & Learning**
16. **Operations Integrity Monitoring, Audit & Assessment**
17. **Corrective & Preventative Action**

18. **Stewardship & Management Review**

WHY

Strategy

Operational Excellence

Values

Policies

Overarching direction and context for managing all aspects of the business

WHAT

Operational Excellence Management System

Company-wide

Requirements of the business to manage operational risks, mitigate environmental impacts and deliver safe, reliable operations

Business Processes

Company-wide, BU / FN

Steps that outline interrelated activities that require resources and turn inputs into clearly defined outputs

Standards & Guidelines*

Company-wide, BU / FN

Performance expectations to demonstrate compliance with OEMS requirements, including process safety management

HOW

Procedures, Work Practices and Tools

Company-wide, BU / FN, Facility/site specific

Procedures, practices and tools that operationalize the management system

Individual Actions

Demonstrated behaviours that minimize risk to self, others, the environment, assets and stakeholders

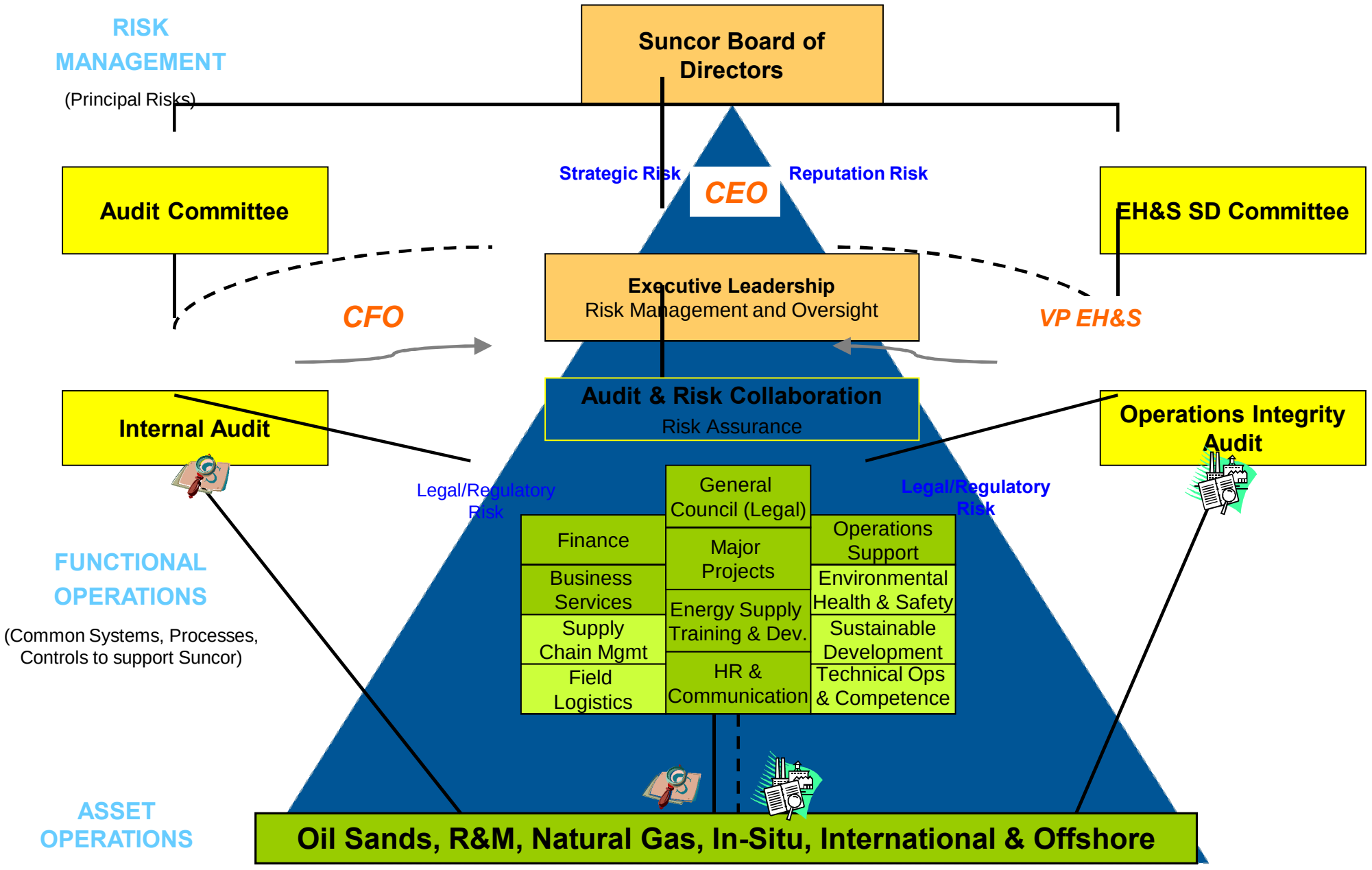
* Includes process safety management standards

Long Term Benefits of OEMS Governance Initiatives -- Operational Excellence

- Process for the continual reduction of Suncor risk profile, and in particular those low probability but high consequence events that have been occurring with increased frequency in our industry over the last few years
- Improved operational discipline, and corresponding improvements in asset reliability and production performance
- Identification of controls weakness and/ or continual improvement opportunity
- Improved regulatory compliance controls, and resultant stakeholder relations
- Risk transparency
- Facilitates achievement of stretch environmental Goals

SUNCOR ENERGY

Risk and Audit Governance Structure



Operations Integrity Audit

- The Director of the Operations Integrity Audit group reports directly to the Chair of the EHS SD Committee to maintain third party independence
- 2$ Million dollar budget
- 6 full time professional auditors
- Pool of 80 qualified auditors to draw on from operations, as well as usage of external experts
- Works closely with Internal Audit and conducts joint audits where required
- 70 auditable units across the company
- Conducts 30 plus assessments per year
- Trains auditors, and develops audit protocols and auditor guidance for all key requirements
- Maintains common audit software platform, and analyses incident and audit data for trends and emerging risks

- As a requirement of the Operations Excellence management System and Process Safety Management Business Units are required to develop quality risk registries and legal registries, and to use the data in business planning
- A common risk matrix is used across the company and all risk data will be entered into a common company wide data base in 2011
- Business units are required to develop a 3 year risk based schedule of 1st, 2nd and 3rd party audits to demonstrate level 1 and 2 risk controls effectiveness and regulatory compliance, taking into account their principal risks, incident history, previous audit findings, etc
- Business Units are required to conduct annual self assessments against all 18 elements of the Operations Excellence Management System and all 14 Process Safety Management program elements over a 3 year cycle
- The OEMS and PSM peer networks and element leads participate in and provide a quality assurance to the conduct of the self assessment program, as well as facilitating the sharing of best practices across Suncor

SUNCOR ENERGY

Operations Integrity Audit

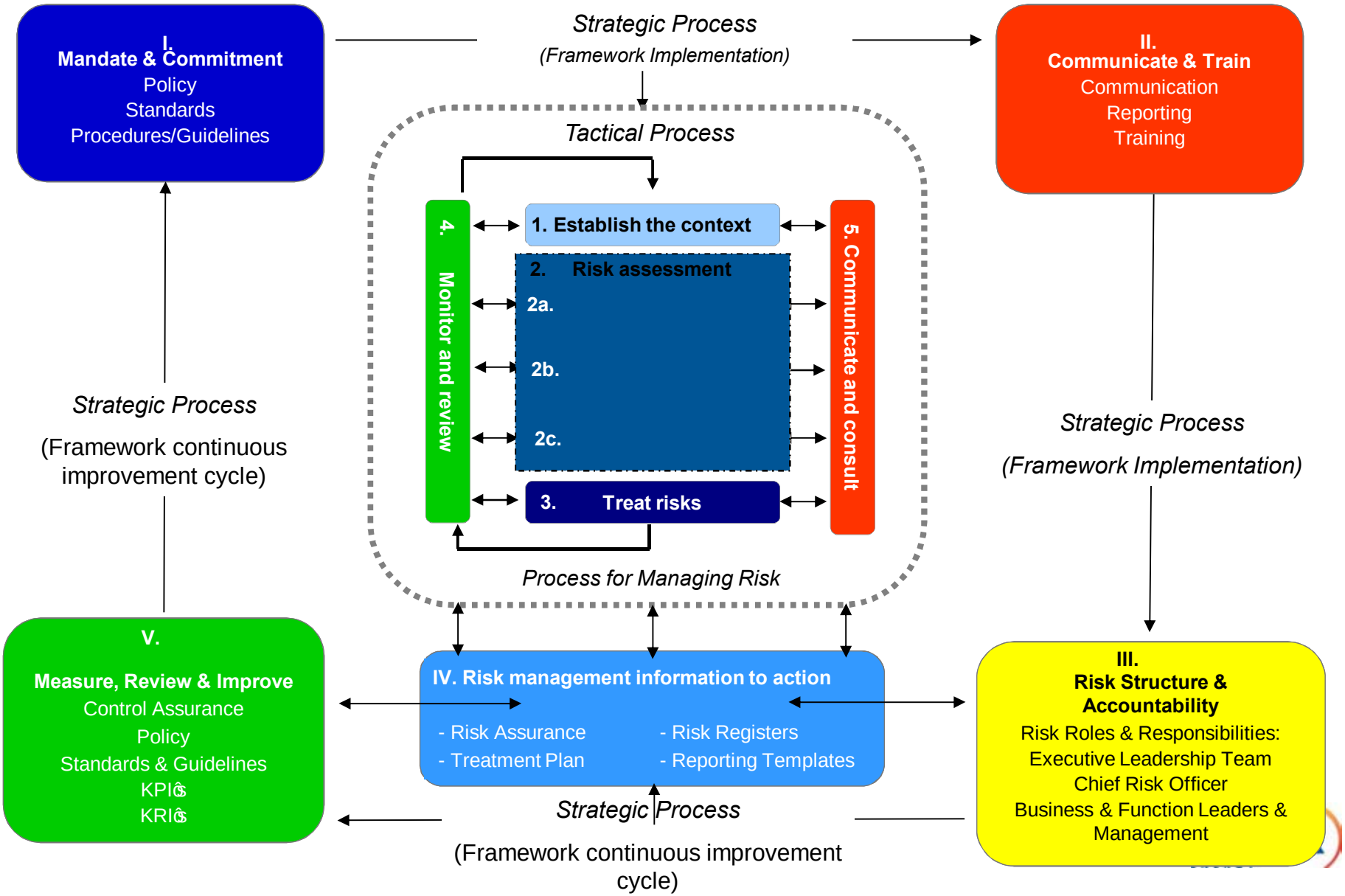
- Operations Integrity Audit is required to manage a fixed cycle of 3 year third party audits for the Suncor Operations Excellence Management System and Process Safety Management program to validate the findings of the self assessment programs
- Operations Integrity Audit undertakes additional risk based audits (taking into account those risks and controls that Operations has indicated they will assess directly)

- All Operations Integrity Audit findings are analyzed and tracked and unacceptable level 1 risk findings are escalated to the EHS SD Board Committee
- The EHS SD Committee reviews the EHS SD stewardship data and audit findings on a quarterly basis and makes recommendations on strategic EHS SD goals and initiatives and those critical risks for which they would like third party validation of control effectiveness

The Risk Management Process

Risk Assessment Model (Adapted from Standard AS/NZS 4360:2004)

OEMS Element 2 and related PS Standard requirements



Suncor Risk Matrix

Likelihood Category - Frequency Guidelines (Business Unit Basis)	Event Description	Project Execution Likelihood	Description
f ≥ 1/yr	Occurs once per year in BU / facility and is likely to reoccur annually	Higher than 90% chance	Probable
0.1 ≤ f < 1/yr (between 1/yr and 1/10 years)	Expected to occur several times in the BU/facility lifetime	70% - 90% chance	Possible
0.01 ≤ f < 0.1/year (between 1/10 and 1/100 years)	Expected to occur in the BU/facility lifetime	50% - 70% chance	Unlikely
0.001 ≤ f < 0.01/year (between 1/100 and 1/1,000 years)	May happen less than once during the BU/facility lifetime	30% - 50% chance	Rare
0.0001 ≤ f < 0.001/year (between 1/1,000 and 1/10,000 years)	Remote chance of happening	10% - 30% chance	Remote
f < 0.0001/year (less than 1/10,000 years)	Extremely remote chance of happening	less than 10% chance	Extremely Remote

Likelihood Category (Increasing Likelihood)	C1	C2	C3	C4	C5	C6
L6	III	II	I	I	I	I
L5	III	III	II	I	I	I
L4	IV	III	III	II	I	I
L3	IV	IV	III	III	II	I
L2	IV	IV	IV	III	III	II
L1	IV	IV	IV	IV	III	III

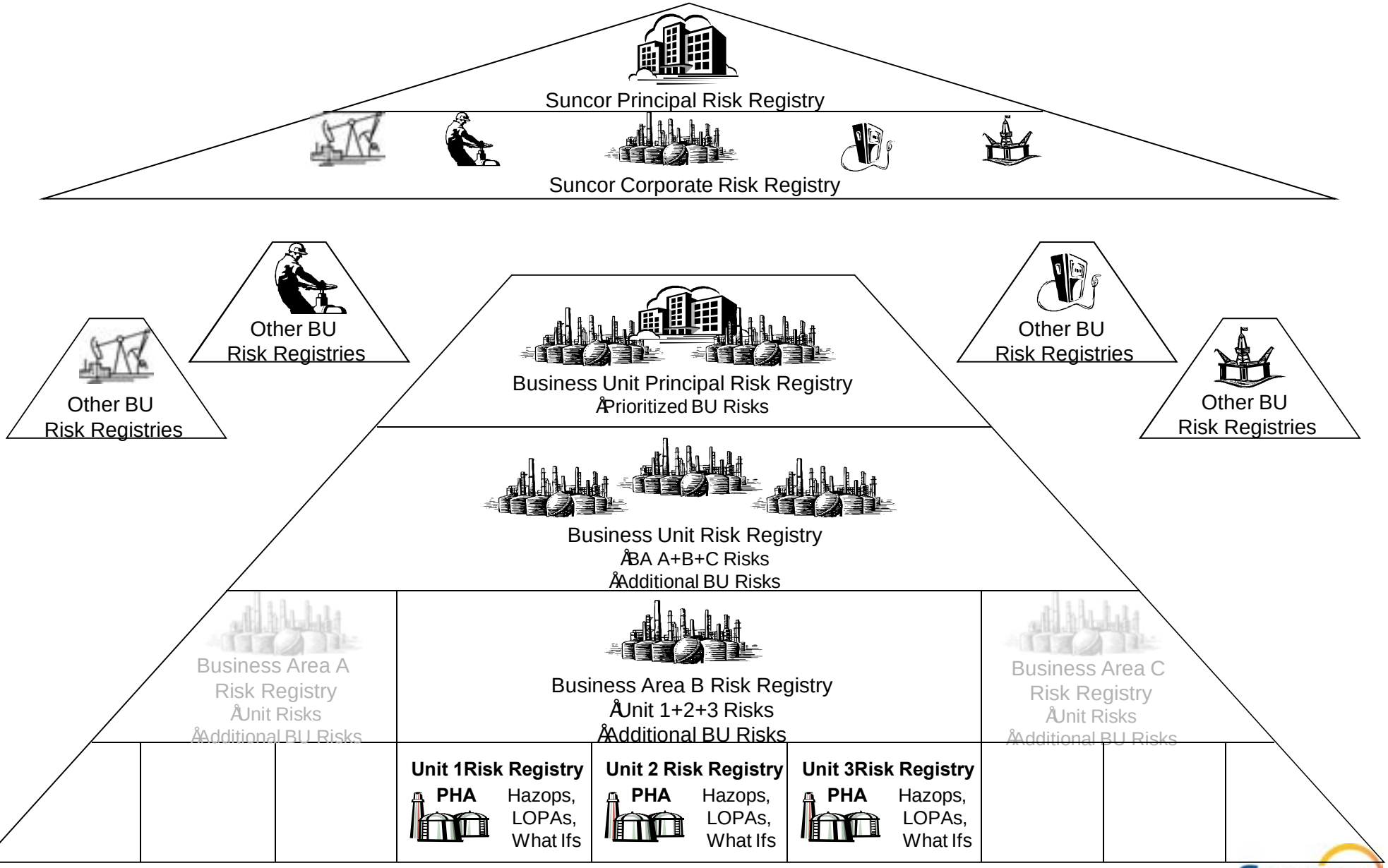
Action Priorities	
Residual Risk Level	Risk Responsibility
I	Responsible Senior Leader in BU is made aware of risk and assures mitigation and risk reduction plans are implemented.
II	Responsible VP ensures preventive controls and mitigation plans are established and maintained, and risks are re-assessed at appropriate intervals.
III	Line management monitors the risk, ensures operational controls and mitigation plans are functioning and procedures are followed.
IV	Front line leaders ensure that employees and contractors are aware of the risk, and follow established procedures & operational controls.

		Consequence Category → Increasing Consequence					
		C1	C2	C3	C4	C5	C6
Social	Health & Safety (Public and Employees)	Incident - no treatment	Single first aid injury / illness or multiple no treatment cases	Single restricted work case or a medical treatment injury / illness or multiple first aid cases	Single temporary disability or a lost time injury / illness or multiple medical aid cases	Single permanent disability or multiple lost time cases	Fatality or multiple permanent disabilities
Social	Reputation (Legal requirements & commitments)	Individual concern - single stakeholder complaint. No media involvement.	Multiple stakeholder complaints / local media attention/ no impact on Suncor's reputation	Community concern/ regional news/ adverse impact on Suncor's reputation at regional level	Provincial or State news/ adverse impact on Suncor's reputation at provincial/ state level	National news/ public outrage/ short-term drop in market share and share price	Recurring national / International media attention / punitive action by government against company/ long-term major impact on market share and share price.
Social	Regulatory Consequence	Below regulatory limits	Regulatory notification required	Regulatory Limit / Requirement breached; formal regulatory reporting triggered	Regulatory Limit / Requirement breached. Moderate response from authority	Regulatory investigation and response with penalties	Significant regulatory response with significant penalties.
Environmental	Environmental Consequence	Release to on-site environment, controlled by passive controls	Release to on-site environment, controlled by active controls	Release with minor impact to significant receptor	Release off-site with moderate impact to significant receptor	Release off-site with major impact to significant receptor	Significant release with catastrophic impact to significant receptor
Economic	Economic Consequence (Business / Operating Loss - Financial / Asset Damage / Reliability / Business Interruption)	C < $100k	$100k =< C < $1M	$1M =< C < $10M	$10M =< C < $100M	$100M =< C < $500M	C > $500M
Economic	Project Costs % of total Project	C < 1%	1% < C < 3%	3% < C < 5%	5% < C < 7%	7% < C < 9%	C > 9%

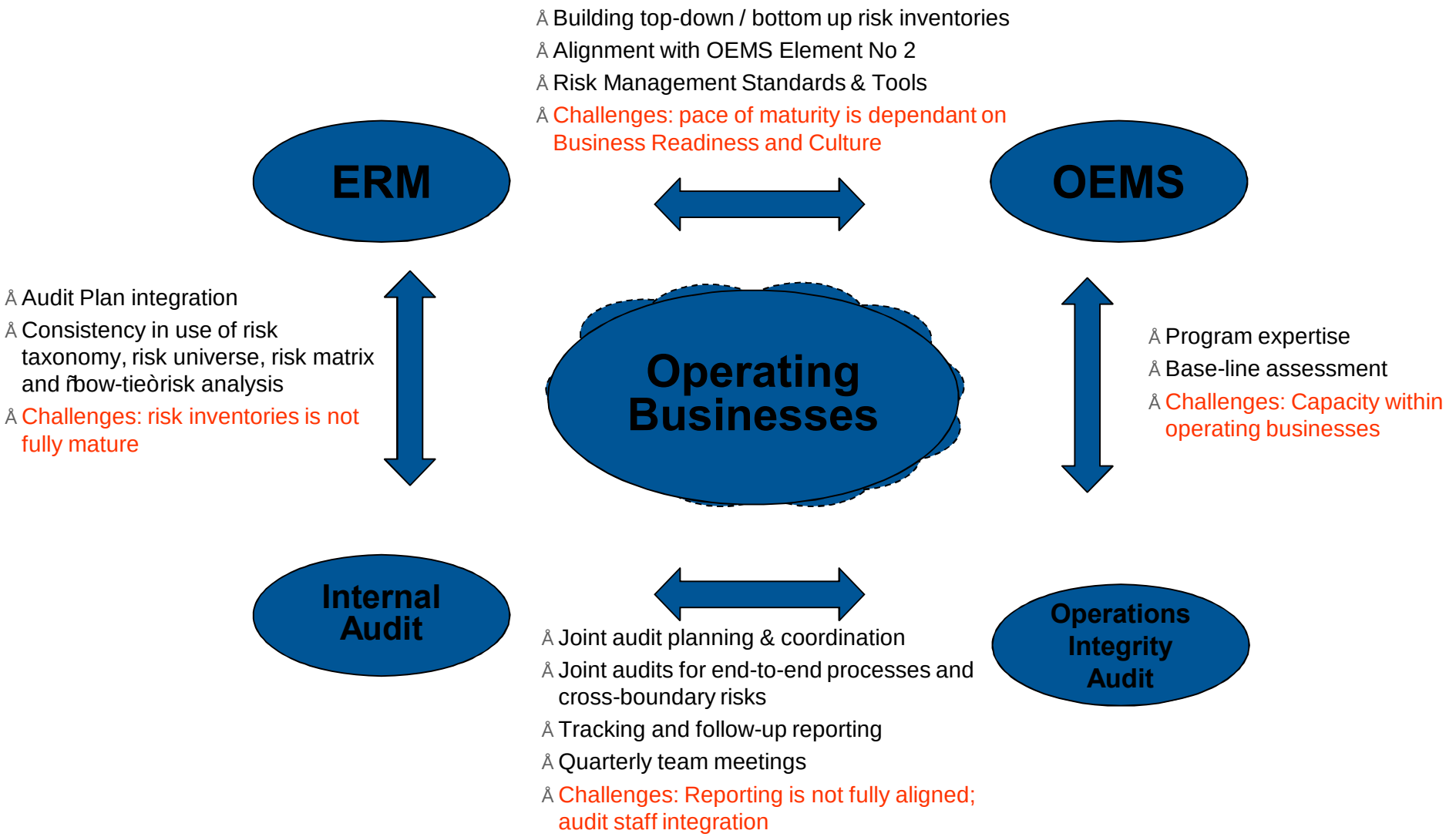
Authorized 2 February 2010, Suncor Energy BOD meeting

SUNCOR ENERGY

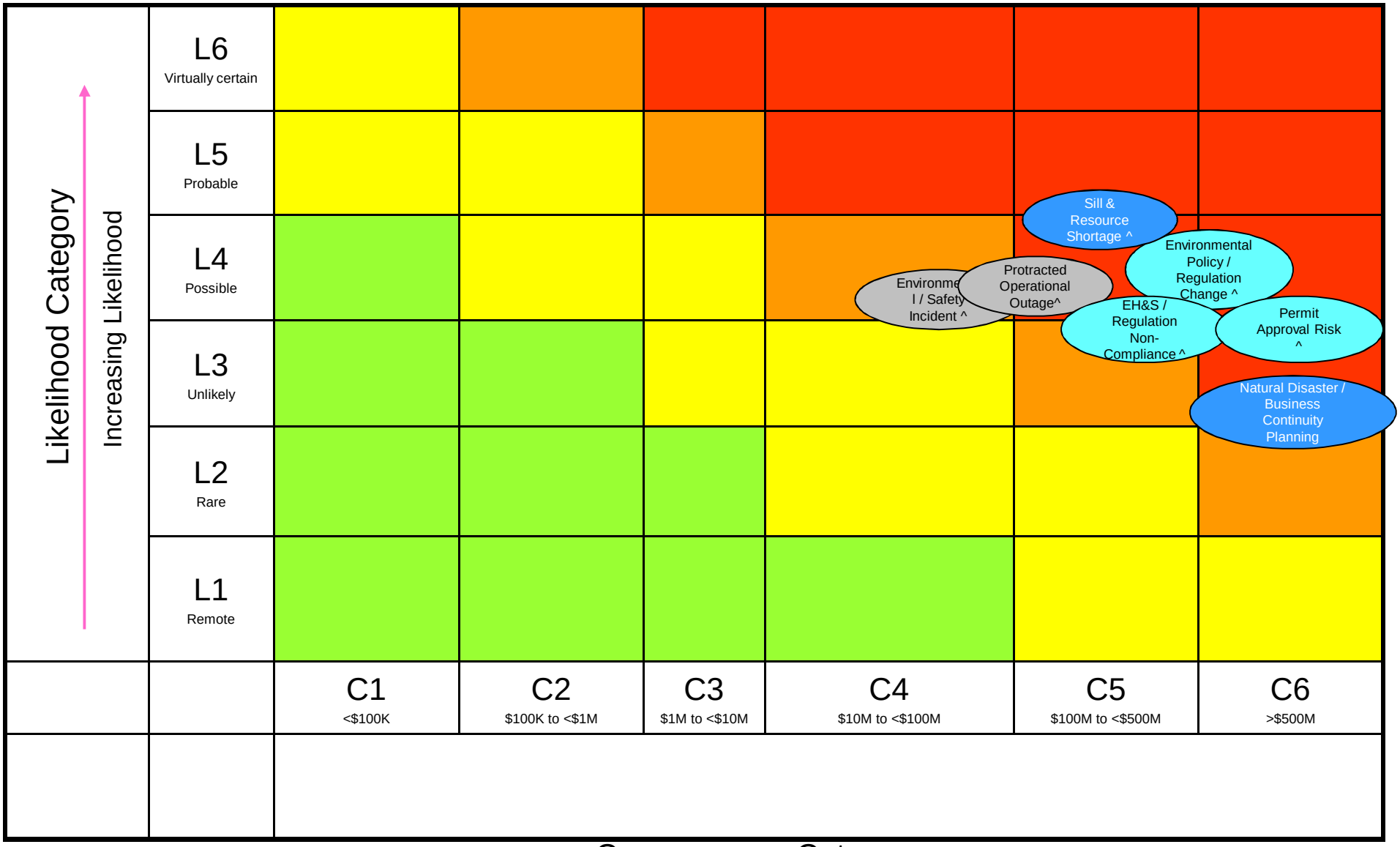
Suncor Risk Registries



Å Overall governance model is organized well for providing risk assurance. Execution challenges will require leadership drive and business unit maturity on Enterprise Risk Management (ERM) and Operations Excellence Management Systems (OEMS)



Principle Risk Registry for a Hypothetical Oil Sands Operation



Legacy SU

Operational

Financial

Strategic

Reputation

Legal & Regulatory

NOTES:

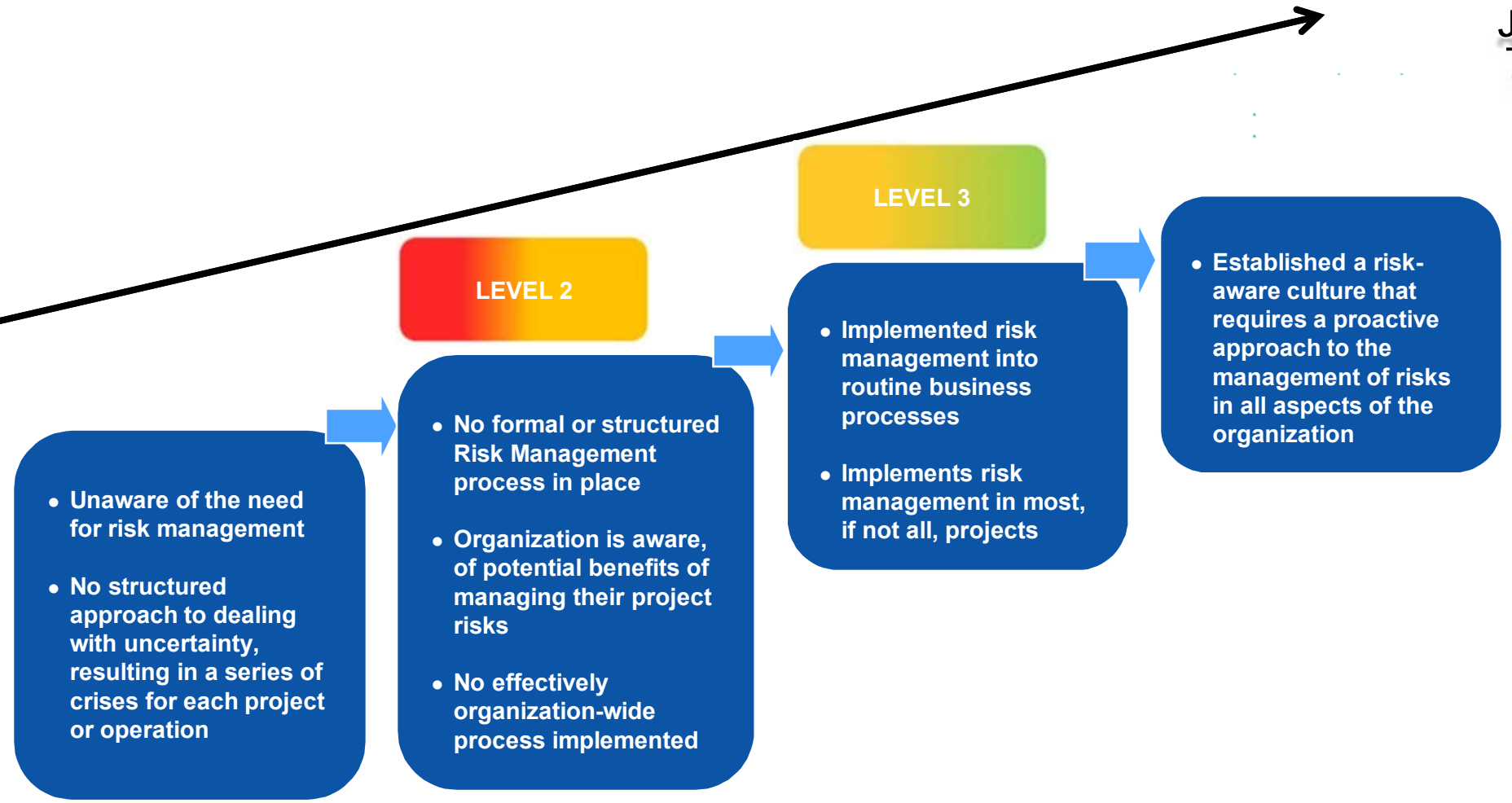
ÂBased on risk assessment for YE 2008 for legacy SU and legacy PC

^ Identified as a principal risk for legacy Suncor

Enterprise risk Management

- Principle risks in each area are reviewed at least annually, looking at pure risk and mitigated risk rating taking into account the operational controls used to manage the risk
- These controls are often the focus of self assessments, 2nd party and 3rd party audits to validate their effectiveness
- Operational Risks are also identified from the bottom up, with legal and other requirement registries and risk registries part of the OEMS
- These registries (which include environmental risks) are based on professional judgment, hazops, PHAs, and other hazard and risk identification methodology
- All level 1 and 2 risks must be managed by the affected leadership team
- Intent over longer term is that Company wide risk data will be entered and managed in one software tool to facilitate analysis and trending of lower level risks

Risk Management Maturity Road Map



OPERATIONAL EXCELLENCE

every day, a better way

SUNCOR ENERGY