

Beyond the Business Case Multi-Stakeholder Risk Assessment

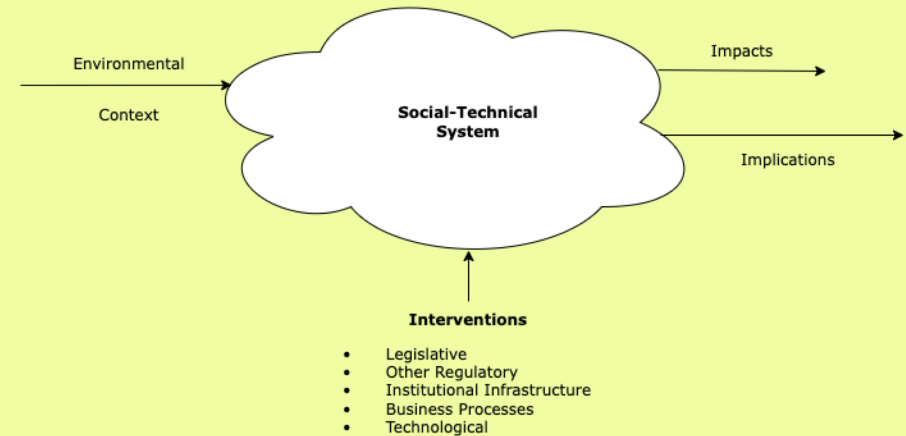
Roger Clarke

Xamax Consultancy Pty Ltd, Canberra
Visiting Professor, A.N.U. and U.N.S.W.

<http://www.rogerclarke.com/DV/MSRA-PIT.html>
<http://www.rogerclarke.com/DV/MSRA-PIT.pdf>

**ASU PIT Colloquium
Phoenix / Zoom – 1 November 2022**

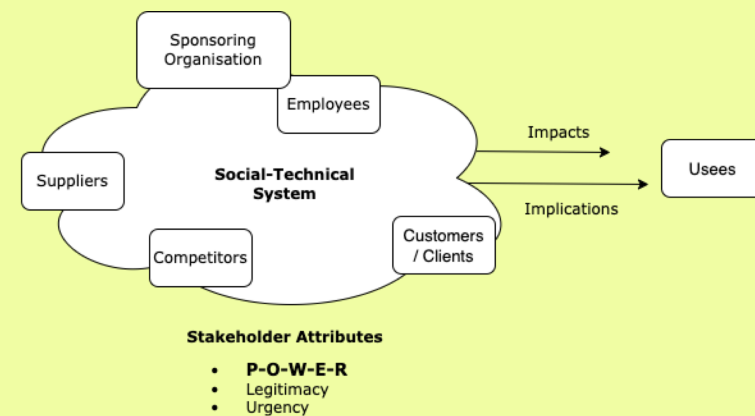
Interventions Affect Digital Society



Stakeholder Theory

- Created as a counterpoint to 'Shareholders'
Applied across many management contexts, incl.:
- **Users** of information systems
- **'Uses'** of information systems
Those impacted by it even though not participants in it
- Attributes of **Power, Legitimacy, Urgency**
- Sponsoring organisations consider only those Stakeholders capable of affecting project success
- **Legitimate-but-not-Powerful Stakeholders are not even seen as constraints let alone objectives**

Stakeholders in a Social System



Multi-Stakeholder Risk Assessment (MSRA)

Purpose

Seek a practicable mechanism whereby the interests of relevant players can be reflected in the assessment of interventions

Organisational Evaluation Techniques

- With a Focus on Quantitative Data:
 - Business Case Development (BCD)
 - Discounted Cash Flow Analysis (DCF)
Net Present Value Analysis (NPV)
 - Financial Sensitivity Analysis
 - Financial Risk Assessment
- Plus 'Non-Quantifiable' / 'Qualitative' Data:
 - Internal Cost-Benefit Analysis (CBA)
 - Risk Assessment (RA)

Evaluation Techniques within a Broader Frame of Reference

- External Cost-Benefit Analysis (CBA)
- Technology Assessment (TA)
- Environmental Impact Assessment (EIA)
- Privacy Impact Assessment (PIA)
- Social Impact Assessment
- Child Rights Impact Assessment
- Surveillance Impact Assessment

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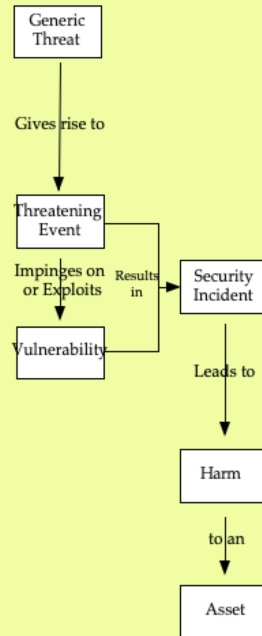
**Board directors of Sponsoring Organisations
must serve the interests of shareholders**

Risk Assessment: An Organisational Evaluation Tool

based on

The Conventional Security Model

[http://www.rogerclarke.com/
EC/SSACS.html#App1](http://www.rogerclarke.com/EC/SSACS.html#App1)

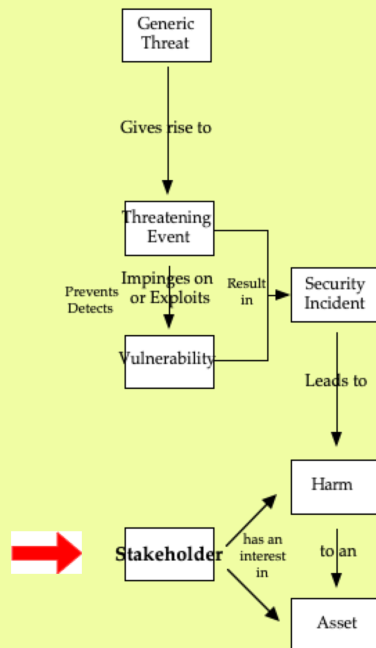


Categories of Threat

- **Environmental Events** (Acts of Gods or Nature)
- **Accidents**, caused by:
 - Humans who are directly involved
 - Other Humans
 - Artefacts and those Responsible for them
- **Attacks**, by:
 - Humans who are directly involved
 - Other Humans
 - Artefacts and Designers, Owners, Operators

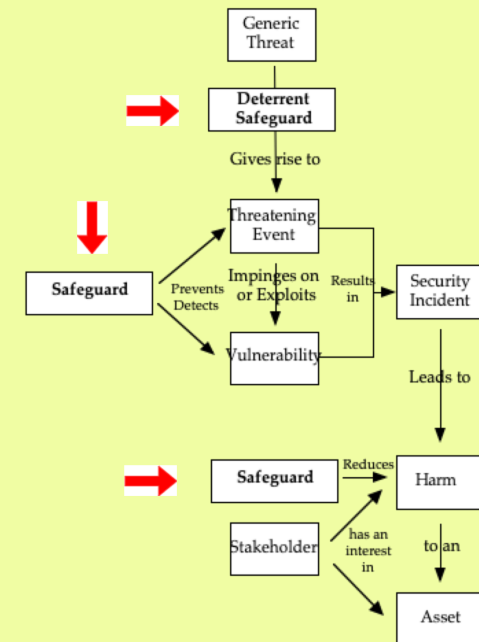
The Conventional Security Model + Stakeholder

[http://www.rogerclarke.com/
EC/SSACS.html#App1](http://www.rogerclarke.com/EC/SSACS.html#App1)



The Conventional Security Model + Safeguards

[http://www.rogerclarke.com/
EC/SSACS.html#App1](http://www.rogerclarke.com/EC/SSACS.html#App1)



Risk

The perceived likelihood of occurrence of Harm arising to an Asset as a result of a Threatening Event impinging on a Vulnerability

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The Focus of Risk Assessment: Residual Risk

The Risks that remain despite existing design features, safeguards, and mitigation measures

Risk Assessment

&

Risk Management

1. **PERFORM RISK ASSESSMENT** (The Analysis Phase)

- 1.1 Declare Objectives and Constraints
- 1.2 Identify the Stakeholders
- 1.3 Describe the Intended Intervention
- 1.4 Adapt Objectives and Constraints
- 1.5 Study Assets, Values, Harm
- 1.6 Study Threats, Vulnerabilities
- 1.7 Study Existing Safeguards
- 1.8 Evaluate Residual Risks
- 1.9 Summarise the Results

2. **PREPARE RISK MANAGEMENT** (The Design Phase)

- 2.1 Consider Alternative Designs, Additional Safeguards and Mitigation Measures
- 2.2 Evaluate against Objectives and Constraints
- 2.3 Select / Adapt / Refine the Design

3. **PERFORM RISK MANAGEMENT** (The Implementation Phase)

- 3.1 Plan the Implementation
- 3.2 Execute the Implementation
- 3.3 Review the Implementation

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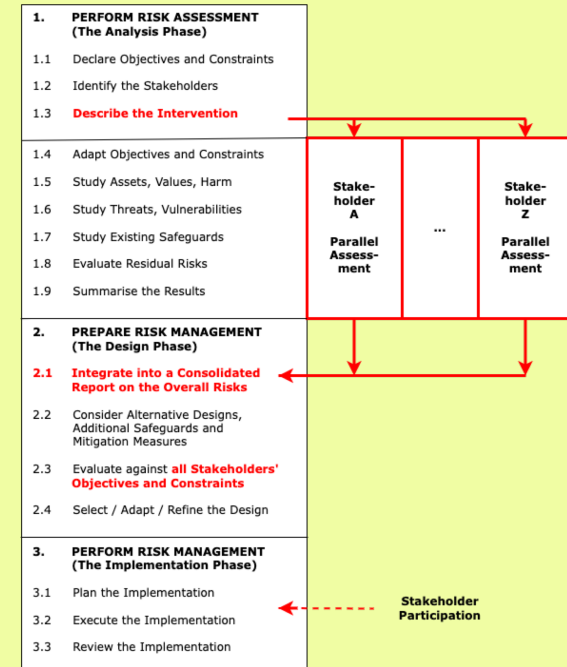
A Possible Approach

Adapt conventional Risk Assessment / Management to enable the factoring in of the interests of other stakeholders

Precursor The Responsible Application of AI

- Responsible application of AI is only possible if stakeholder analysis is undertaken, and insight is gained into their interests
- Risk Assessment processes that reflect the interests of stakeholders need to be broader than those commonly undertaken within organisations
- Responsible application of AI depends on Risk Assessments from the perspective of each stakeholder group complementing that undertaken from the organisation's perspective

Multi-Stakeholder Risk Assessment & Risk Management



Important Features of MSRA

- Identification of stakeholders**, including:
 - External as well as internal parties
 - Both users and useses
- Inclusion on the basis of **legitimacy, not just power**
- Engagement with the stakeholders** through:
 - Transparency
 - Facilitation of risk assessment by multiple stakeholders
 - Consideration of all stakeholders' risk assessments
- Assimilation** of input by the sponsoring organisation
- Evaluation of alternative designs, additional safeguards and mitigation measures informed** by the consolidated appreciation of the risks
- { Stakeholder Participation in implementation }

Illustration of MSRA Exemplars

- Small-Scale Environmental Impact Assessment
- Access to Mineral Ore-Bodies
- Closure of a Large Regional Facility
- Inherently Dangerous or Intrusive Interventions
- Overcoming Harmful Monopolies
- Creating an Open Marketspace
- Balancing Interests in a Networked Industry Sector
- The Platform-Based Business Sector

Illustration of MSRA A Case Study: Robodebt

- Context
- Narrative
- Outcomes
- What-If MSRA had been applied?
 - Strategic Approach
 - Defensive Approach
 - Reactive Approach
 - Proactive Approach

Robodebt – Context – as at 2015

- Welfare-benefits administration agency
DHS / Services Australia / Centrelink
- Very large and very experienced in IT
- Focus on fraud / error / waste management
- Fortnightly statements of income by clients
- Data-matching against taxation authority data
- The hype about 'transformative IT'

Services Australia

We deliver government payments and services



Robodebt – Narrative – 2016-2022

- Tax data 'averaged' to fortnights
- Material differences assumed to be evidence of overpayment
- Automated letters of demand sent to clients
- Onus of proof placed on clients
- Demand for specific evidence about earnings in periods between 2 and 7 years previously
- In the absence of a response, or of evidence, debt raised and debt collection undertaken

Services Australia

We deliver government payments and services

Robodebt – Outcomes

- In 2016-19, > 1 million letters sent to clients
- 433,000 clients issued with debt notices - \$1.7bn
- 381,000 pursued and \$750m collected
- No evidence available to clients or advocates
- Untenability clear to the public in Dec 2016
- Continued until Nov 2019
- Very harmful to users, and to useses
- The agency delayed court-cases until 2019-20
- Comprehensive defeat in the courts, and all actions were quashed
- Unwinding is still being completed in late 2022

Services Australia

We deliver government payments and services

Robodebt – Categories of 'Uses'

- Dependents of social welfare clients
- Householders of social welfare clients
- Carers
- Mothers
- Counsellors
- Lawyers
- ...

MSRA – The Strategic Approach

- Use a 'Reference Group' to:
 - Internalise appreciation of stakeholders' perspectives
 - Institutionalise channels of communication
- **Seed Conversations** by disclosure and briefings
- **Financially support** participation

- **Achieve Distant Early Warning** of:
 - Design issues
 - The scope for collateral damage
 - Possible mitigation measuresby means of:
 - Authentic anecdotes / segments / special cases

Categories of Advocacy Organisations in the Social Welfare Sector

- **Social Welfare Peak Body/ies**
- **Social Welfare Specialised NGOs**
Clients disadvantaged economically, physically, mentally
Clients in ethnic communities, low literacy groups
- **Population Segments**
Single parents, Tertiary students, Younger workers, Older workers, Indigenous people, Old-age, Disability pensioners
- **Consumer and Privacy Advocacy Organisations**
- **Service Providers**
Community legal centres, Legal aid offices
- **Professional Associations**
Social workers, Financial counsellors, Lawyers
- **Unions**
Public servants, Seasonal workers, Unemployed workers

MSRA – The Defensive Approach

- Avoid 'the barbarian inside the gates',
and disclosure of sensitive information
- Use a proxy to provide insights into stakeholders
i.e. consultants or staff-members
- Guess the key issues for powerful stakeholders,
and pre-plan for contingencies, especially:
 - media releases
 - design changes
 - mitigation measures

MSRA – The Reactive Approach

- Do nothing in advance
- If and only when needed, move fast, using a cut-down version of MSRA
- Brief the media
- Implement a ‘charm offensive’ with advocates:
 - summit meetings
 - promises of:
 - design changes
 - mitigation measures

MSRA – The Proactive Approach

- Apply MSRA in advance (or in parallel)
- Identify relevant (suitable) stakeholder reps
- Engage them, inform them (enough)
- Listen, assimilate their messages (or be seen to)
- Reflect advocates’ input in:
 - design features (choose harmless* ones)
 - mitigation measures (ditto)

* Harmless to the sponsoring organisation,
not necessarily valueless to stakeholders

Conclusions – 1 of 2

- Interventions have impacts now, and implications later
- **Impactful interventions need evaluation not just deployment**
- Organisational techniques support System Sponsors (Business Case Development is driven by prospects of profit)
- **There are few drivers for multi-stakeholder assessment**
Exception: Stakeholders recognised as having enough power (Legitimacy and Urgency are irrelevant to System Sponsors)
- **Often, harm to stakeholders can be avoided or mitigated with limited compromise to the sponsor's objectives**
- Impact Assessment variants are narrow (a category of impacts)
- Technology Assmt is broad (a technology, applied to anything)

Conclusions – 2 of 2

- **Risk Assessment** comes from rational enterprise management and **is familiar** in many organisations
- It is **theoretically capable of adaptation** to deliver the System Sponsor insights into the concerns of Stakeholders
- **Exemplars exist** of some MSRA features
- Mapping it into a large-scale failure case suggests that **all parties could have gained from any use of MSRA**
- At worst, MSRA informs and warns System Sponsors
- At best, MSRA results in:
 - more enlightened System Sponsor understanding
 - less harmful designs
 - compensatory mitigation measures

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