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Paper Title: Successful Projects created through Advancing Community Resilience

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Resilience: the capacity to recover quickly from difficulty (Merriam-Webster.com)

Historically, successful industrial projects were those with an economic benefit to corporations. As the globe has evolved stakeholders and communities have been shifting the paradigm; asking for more considerations for local concerns and sustainable development, which can be seen in the inclusion of these requirements in directives from governments such as the *Cabinet Directive on the Environmental Assessment of Policy, Plan and Program Proposals* (Privy Council Office and CEAA, 2010). With changes in society and the increase in focus on sustainability and resilience the relationship between industry and communities is evolving out of necessity to consider mutually beneficial arrangements. Sometimes referred to as corporate social responsibility, sometimes as shared value, the intent is to create partnerships that address the need for a symbiotic relationship between the two parties to create successful projects and resilient communities.

Based on the collective experience of the authors the following has been observed. Corporations have struggled in recent years to balance economic pressures with the strengthening pushback from communities who want more from a proposed project than the promise of short term jobs. Communities also struggle with higher social, infrastructure, and environmental pressures and lower tax bases. While companies work to make new projects fiscally conservative, communities and government view these projects as potential sources of much needed injections of cash. While these two sides seem at odds, in our experience successful communities and projects only develop when symbiotic relationships are formed.

This paper explores the next steps in the evolution of industry and community relationships. It proposes methods for coordination between industry and communities at stages of a project development to identify opportunities for mutual benefits in early project planning and siting; design; procurement; construction; operation, and closure of a facility and its associated infrastructure.

Changing Community Pressures

Leaders and planners balance the requirements of the community for infrastructure and services with the limits for their tax base. Requirements for updated infrastructure (i.e., roads, internet, healthcare), changes to climate based infrastructure requirements (i.e., storm water management), and changing demographics have placed increasing pressures on communities. Within Ontario, Canada this has become pronounced in rural, northern and Aboriginal communities where populations struggle for basic infrastructure such as drinking water and sewage works, healthcare facilities, and educational tools as reported widely by the media. As people move toward larger cities to take advantage of employment and infrastructure, outlying communities are further depleted of funding to address local needs.

While the local siting of industrial projects may seem like a winning solution to remote communities the populations are also keenly aware of the challenges that may have historically followed facilities. Some

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challenges may be more obvious, such as tailings dam failures, spills, increases in illicit drug use, and long term contamination from derelict facilities. Other challenges may be less obvious and relate to creating a resilient society such as long term success of the community post facility closure.

Project Planning and Design

When corporations consider a project there are stages to the development of the project. As an example, the Centre for Excellence in Mining Innovation identifies the following (Wright, 2012):
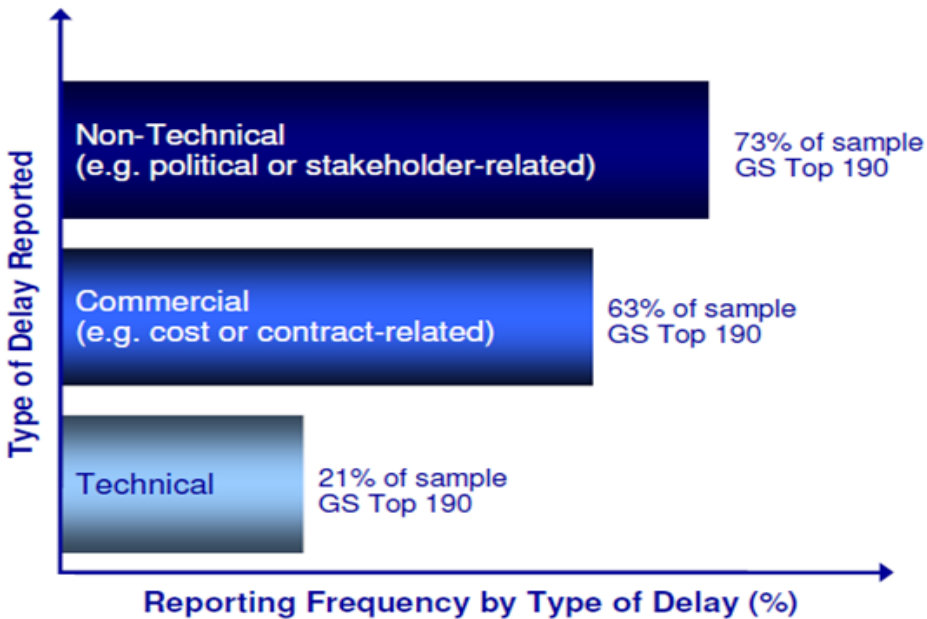
- Pre-evaluation Study : minimal engineering, cost estimate in an order of magnitude, general time lines
- Scoping: 2% to 5% engineering, cost estimates to +/- 50%, contingency +- 30%
- Pre-feasibility: 5% to 15% engineering, cost estimates to +/- 30%, contingency +- 20%
- Feasibility: 25% to 50% engineering, cost estimates to +/- 10 to 20 %, contingency +- 15%

Detailed design follows feasibility and generally develops the final design and procurement strategies for the facility after which the project moves into construction, operation, and closure.

During the pre-evaluation or conceptual study a company may consider multiple locations with respect to existing infrastructure, local political issues, government taxation and subsidies, and community acceptance of a project.

Assessment of location and political and social risk are often considered at the very beginning of the process, but only from the view of the proponent. The risk is carried through the analysis process until permitting and approvals are complete. Community engagement can often represent a major exposure and risk in project planning and therefore may be put off until a project is well into design and entering the approvals phase. The approach of delayed community involvement results from concerns that communities will challenge projects and shut down the development.

The risk of project shut down is well documented. In 2008 Goldman Sachs Investment Research published an assessment of the effects of non-technical risk on their top 190 oil and gas projects. Of the 190 projects assessed, an average delay of 12 months was realised due to non-technical risk (Goldman Sachs, 2008).

The community concerns such as industrial disasters that lead to public unrest and distrust of industry are also well documented, even in very recent history. News of project concerns reach communities quickly through internet news readers and search engines.

Community Resilience

Community resilience relies on the ability of the community to fund services and infrastructure over the long term under changing economic, social, and environmental conditions. In communities where populations fluctuate based on local industry, methods to improve resilience are critical to long term viability of the community to avoid the boom-bust cycle. Partnerships with a specific incoming industry project can provide shorter term solutions to concerns with key infrastructure and services, as well as the educational programs required for a facility's operation. Community planning for resilience must also consider long term sustainability of the community after the facility closes.

Short term community improvements:

- Jobs from a specific facility/project
- Health, education, and services improvement
- Local infrastructure improvements
- Population and tax base increases, which improve diversity and available funds

Long term community improvements for resilience:

- Community design for future use including industry lands that consider diverse usage
- Environmental risk management of changing climates
- Increased education and health levels
- Evolving technology-based infrastructure

- Attracting diverse businesses and populations to improve a community's ability to survive changes in one industry's economic outlook and facility closure

While communities can look to a potential industry to assist in the development of shorter term and smaller infrastructure and social benefits, the community must develop a long term plan that considers the requirements of the long term resilience for future generations and the ability of the community to transform over time. Development of a long term community plan can help focus project benefits to meet the goal of long term community resilience.

Successful Projects and Community Resilience

Community buy-in to a project involves trust and the development of a shared goal. Porter and Kramer in the *Harvard Business Review* article "Creating Shared Value" (Porter & Kramer, 2011) state that *Companies could bring business and society back together if they redefined their purpose as creating "shared value"—generating economic value in a way that also produces value for society by addressing its challenges. A shared value approach reconnects company success with social progress.*

For industry, early engagement with local communities can improve the outcome of the scoping exercise and reduce potential risks identified in the pre-evaluation study and other engineering phases. Shared value can be realised through:

- Public/private partnerships on mutually beneficial infrastructure (road development, technology requirements (i.e., internet), clean water, sewage works)
- Project siting in industry appropriate locations to avoid locally sensitive areas and take advantage of already planned industrial infrastructure
- Reduced risk of community backlash
- Potential commercial benefits (tax or incentive based) through project partnership with Aboriginal communities or local government
- Increased cooperation from government
- Reduced risk and uncertainty in project development
- Diverse economic development of a community can:
  - improve customer bases available to an industry
  - reduce the long term dependence of a community on a specific industry, reducing the reliance of the community on one industry

For communities, early engagement in facility and infrastructure siting and design can mean added consideration of issues such as:

- Community planning initiatives (i.e., residential housing, hospital, services and industrial zone planning)
- Existing infrastructure challenges
  - Storm water management concerns due to increased storm events
  - Lack of potable water
  - Insufficient sewage works
  - Commercial traffic management
  - Historical industrial site contamination
- Emergency response requirements (i.e., fire)
- Cooperation on procurement
- Potential public/private partnerships on mutually beneficial infrastructure

While the initial shared values of a company and community may revolve around short term goals such as training for facility employment and coordination of procurement, the longer term goals should look toward the long term resilience of the community beyond the current facility and the integration of the project/company into the community. To prevent the destabilisation of the community as a company winds down operation, community planning and economic growth unrelated to the facility needs to occur over the course of the facility operation. While a company may not immediately see the benefits of engaging in long term resilience planning with a community, the decommissioning of a facility can represent substantial non-technical risk in relation to reputation, long term financial dependence, and liability. Development of education and infrastructure beyond the immediate need of the facility should be part of the shared goals.

This approach can only be successful if the goals are shared and mutually beneficial and all parties respect the chosen path forward. An example of a tool currently being used for community benefits is an Impact Benefits Agreement (IBA). The development of an IBA can formalize an agreement and build trust with communities, but only if both parties respect the terms. While the name itself suggests a negative outcome to the project (*impact*) the intent is to *build positive relationships and trust, and secure local benefits* (Prno, Bradshaw, & Lapierre, 2010). In their review of IBAs negotiated for three northern Canadian diamond mines, Prno, Bradshaw and Lapierre (2010) noted that IBAs were generally found to be effective in meeting their intent of delivery of benefits (Prno, Bradshaw, & Lapierre, 2010). It was noted in the assessment that community members felt that the IBAs focus primarily on benefits directly linked to the project and therefore did not necessarily provide benefits to the greater community. For shared value projects IBAs may need to evolve to meet the intended goal of broader community benefits.

Agreements developed for shared value will only be successful if they consider the long-term community and company benefits that can be realised through the shared goal. Successful long term operation of a facility within a community requires a continued commitment to the shared values agreement and recognition that the relationship must be symbiotic to be successful. This approach requires transparency in planning and cooperation of both parties as well as understanding the economic, operating, and social challenge of both parties. As the facility and community relationship ages the shared goals and sense of value must evolve to address the long term resilience of the partners. This is particularly true as facilities move toward closure and the success of improved community resilience is tested.

Cooperative planning of improvements to local infrastructure, enhancement of technology, and public education programs can create a welcoming environment for other industries, which can diversify the local economy. As the economy diversifies there is less reliance on a single industry, avoidance of the boom-bust cycle associated with a one-industry supported community, and increased capacity for the community to recover when the facility is no longer in operation. As communities thrive beyond one industry, cooperative planning can take place in the cycle of decommissioning and closure, and companies are able to maintain their reputation and social licence to operate.

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