

The Sustainability Matrix©

Introduction

This piece outlines some basic perspectives on sustainability and how you can apply them effectively and pragmatically to your organization, projects or products and services.

Core sustainability issues

In the late 1980s, the UN sponsored a study whose conclusions coined the term “sustainable development.” At that time, the UN team did not offer a distinct blueprint for what this new term meant, but they did pose the following as foundation issues:

Stable and diverse local and global economies

- Sustainability recognizes the need for economic prosperity and resilience to maintain the health of the community, and notes that this involves both healthy local and global economic relationships. It encourages self-reliance, entrepreneurial activity and the generation of wealth and highlights the need for economic activity to occur in a manner that does not undermine the ability of individuals and communities anywhere to meet their basic needs.

Social and community health.

- At a local level, sustainability objectives highlight the need to provide a strong foundation for the economy by ensuring the provision of safe communities, healthy housing, employment, education, arts and culture, adequate access to health care and social support systems when needed, and a respect for other cultures, amongst other issues. Personal health issues including diet, exercise and other lifestyle choices are also important considerations with many economic linkages. At a larger scale, sustainability objectives also highlight the linkage the industrialized world has with the un/newly industrialized world and encourages ethical trade relationships that can be sustained and support the sustainability of the supply communities.

Climate change and air emissions

- Sustainability objectives highlight the need to reduce negative air emissions associated with economic activity to reduce impacts and avoid economic costs of mitigation of health and climate change impacts.

Energy supply

- Sustainability objectives highlight the need to use energy more efficiently and to shift over time away from reliance on non-renewable sources in favour of more renewable sources, to reduce emissions, increase energy security and insulate the economy from energy price shocks associated with real or perceived energy constraints.

Water and liquid waste

- Sustainability objectives suggest the need to use water more efficiently in our homes, businesses and landscapes, to manage runoff in ways that maintain natural hydrological

regimes and to manage liquid waste flows to minimize both the environmental and economic costs of pollution and infrastructure.

Resources and solid waste

- Sustainability objectives highlight the need to increase economic efficiency and performance by reducing the consumption of non-renewable scarce resources in favour of renewable resources, to reduce environmental and economic impacts of hazardous wastes and to essentially eliminate the concept of waste, in favour of principles of efficiency, re-use and recycling.

Ecosystem disruption

- Sustainability objectives highlight the need to address ecosystem planning and biodiversity in our projects by protecting ecologically sensitive areas / species and by developing areas in a way that minimizes negative impact. Sustainability approaches often are more 'multiple objectives' in this area than conventional "environmentalist" agendas which can often oppose any economic activity.

Food supply

- Sustainability objectives highlight the need to maintain a healthy local food economy and supply, as well as to encourage food production and processing methods that enhance health, such as organic methods.

Since that report, many have been working on operationalizing the concept of sustainability at all levels. There are now as many sustainability frameworks as there are organizations seriously working on the challenge. It doesn't matter what framework you are using, so long as all the core elements of the sustainability challenge are present. In some ways, developing unique frameworks can be useful, as they provide a perspective that is made within the organization that will be most compatible to its culture, mission and ethics. It's not a religion – it's a global challenge that is bigger than any one group and it will take us all to find and implement the solutions.

We have spent a decade working directly on sustainability as it is applied in the community and development sectors. The tool we have found to be the most effective in "making sense of sustainability" for our projects is what we have called, the Sustainability Matrix.

A description of the Sustainability Matrix©

The Sustainability Matrix© is a tool to provide you with a comprehensive exploration of sustainability implications you should consider for your project or organization.

All matrices are based on 2 axes. For all versions of the Sustainability Matrix©:

- one of those axes must contain the core sustainability goals we have discussed earlier; and
- The other axis contains the core elements of whatever topic you want to apply sustainability objectives to: an organization, a development plan, a product or service, etc...

One of the most important benefits of using the Matrix is that it will almost ensure there are few to no stones left unturned, and that there will be few surprises when engaging stakeholders in consultation on sustainability.

The second key advantage the Matrix can offer is in creating “made-in-your-organization-or-project” approaches to sustainability. There is no single approach to grappling with sustainability and opportunities and each project has different realistic priorities. One of the biggest mistakes organizations can make is to simply adopt someone else’s policies or approaches. Doing so can cause additional expense, confuse issues, and ultimately separate an organization from the creativity it needs to develop a prosperous and effective path toward sustainability for themselves – one built out of the culture of their own organization.

Each project contains its own challenges and opportunities. For instance, policies regarding water management may vary greatly from project to project, depending on the characteristics of water supply and treatment. Community projects in a desert need to take a different approach to those in a rainforest. You need to grapple with the specific conditions of your project to identify the most appropriate priorities and responses to the sustainability challenge.

The sustainability axis

One can structure the sustainability goals into the conventional categories of social, economic and environmental. We find that structure useful sometimes and at other times not so. For the matrix, we do not use that structure explicitly. We have found that too many of the pragmatic sustainability issues cross over all 3 and as such, it can be a hindrance rather than a help at times. For instance, the sustainability issue of “food” has significant economic, social and environmental dimensions, as does energy and emissions or water. As such, we tend to recommend for the purposes of the Matrix to go directly to the issues and not worry which of the “big three” it belongs in.

The axis of the Sustainability Matrix© which contains the sustainability goals typically contains at a minimum the following, and you can add additional ones if you must to address particular conditions in your project, including political.

- Energy and Emissions
- Water, Stormwater and Liquid Waste
- Resources and Solid Waste
- Ecosystem Integrity
- Food
- Individual and Community Health (incl safety, healthcare, education, relationships, etc...)
- Local Economic Vitality and Stability (businesses, jobs and investment)

The key to the Sustainability Matrix© is that every one of the above goals applies to all aspects of your project, product or organization – and thus, a matrix-based analysis tool is the simplest way to approach the challenge of identifying “what sustainability means to your project or organization.”

The other axis

The other axis of the Sustainability Matrix© contains the elements of your project, product or organization. It is up to you to define what those are, but we offer below a sample list of the ones we often use. .

The Sustainability Matrix© for (more) Sustainable Communities:

- Land Use and Layout
- Transportation
- Buildings
- Open Space / Landscape
- Infrastructure (several types)
- Community facilities and programs
- Economic and commercial elements

<i><u>Sustainable Communities Matrix</u></i>	<i>Energy & Emissions</i>	<i>Water, Stormwater and Liquid Waste</i>	<i>Resources and Solid Waste</i>	<i>Ecosystem integrity</i>	<i>Food</i>	<i>Individual and Community Health</i>	<i>Economic Vitality and Stability</i>
Land Use and Layout							
Transportation							
Buildings							
Open Space / Landscape							
Infrastructure (several types)							
Community facilities and programs							
Economic and commercial elements							

The Sustainability Matrix[©] for (more) Sustainable Organizations:

- Strategy & positioning or posture
- Branding & Marketing
- Products and Services
- Facilities
- Transportation, fleets and shipping
- Procurement
- Finance and Asset Management
- Organizational capacity (HR; Expertise; Structure; Culture)
- Risk management
- Partnerships
- Measurement and Reporting
- Change management strategy

<u>Sustainable Organization Matrix</u>	<i>Energy & Emissions</i>	<i>Water, Stormwater and Liquid Waste</i>	<i>Resources and Solid Waste</i>	<i>Ecosystem integrity</i>	<i>Food</i>	<i>Individual and Community Health</i>	<i>Economic Vitality and Stability</i>
Strategy & positioning or posture							
Branding & Marketing							
Products and Services							
Facilities							
Transportation, fleets and shipping							
Procurement							
Finance and Asset Management							
Organizational capacity (HR; Expertise; Structure; Culture)							
Risk management							
Partnerships							
Measurement and Reporting							
Change management strategy							

The Sustainability Matrix© for a (more) Sustainable Product or Service:

- Basic policy and strategy behind it
- Materials used (various)
- Finishes (incl cleaning requirements)
- Transportation (throughout its life)
- Labour practices and wages
- Waste management
- Deconstruction strategy (cradle to cradle)
- Packaging
- Marketing
- Others.

<u><i>Sustainable Product or Service Matrix</i></u>	<i>Energy & Emissions</i>	<i>Water, Stormwater and Liquid Waste</i>	<i>Resources and Solid Waste</i>	<i>Ecosystem integrity</i>	<i>Food</i>	<i>Individual and Community Health</i>	<i>Economic Vitality and Stability</i>
Basic policy and rationale							
Materials used (various)							
Finishes (incl cleaning requirements)							
Transportation (throughout its life)							
Labour practices and wages							
Deconstruction strategy (cradle to cradle)							
Waste management							
Packaging							
Marketing							
Others							

You can use or change these, add or subtract from them. The purpose of the Matrix is to be applicable to your business and as such, you need to customize the matrix for yourself. Provided the core sustainability issues stay on that axis, the rest is up to you.

Filling in the cells

To use the Sustainability Matrix©, merely fill in each cell with ideas and Best Management / Design Practices (BMPs). Some will repeat themselves in many cells and that means these should be the highest priority. In some cases, there won't be

immediate ideas or BMPs that come to mind, and its fine to leave them blank – more ideas may surface later.

Conclusion

We have copyrighted the Sustainability Matrix© as its fundamental concept we created and as such it is our intellectual property. However we offer it to you to use in your projects to assist you in getting real traction on making our world more sustainable.