SUSTAINABILITY OUTLOOK
SCENARIO PERSPECTIVES 2009-2020

Open Sustainability

After a decade of rapid evolution to meet the challenges of climate change, a post-peak oil energy economy, and a burgeoning global population, open sustainability is the strategy of choice across sectors and around the world. In 2020, the experiments in open science, open health, open standards, open design, and open innovation have coalesced into a new economy in which innovation is rapid, manufacturing is distributed, and the most successful big companies are those that can quickly aggregate innovative products and services, and bring them to market as systems solutions. From patent pools to standards and protocols, open initiatives have created an infrastructure of sustainable building blocks for all aspects of our material—and not-so-material—lives.

- Open sustainability frameworks provide a transparent roadmap for organizations to integrate sustainability practices—including target setting, dashboards, and measurement protocols—into their operations. They also provide a basis for comparable sustainability certifications on a product-by-product, service-by-service basis.

- Open eco-patent pools provide modular building blocks for sustainable products and processes, including new materials, energy-efficient components, and sustainable manufacturing tools and processes. These pools are a resource to innovators—both big and small—and reduce the time to innovate by large measure.

- Open science networks function as an alternative infrastructure for basic R&D, often leveraging expertise that is dispersed across more traditional institutional and geographic boundaries. These networks have a high ratio of "surprise" discoveries.

- Place-based solutions markets challenge companies, governments, and citizen innovators alike to come up with rapid innovations that meet local needs and match local cultures.

- Standardized sustainability protocols for monitoring and quantifying upstream and downstream environmental impacts of products and services are updated by open science measurements of these impacts in different environments around the world—making local needs and cultures visible.

- Citizen scientists and citizen cartographers contribute to an ever-growing body of knowledge about the state of the planet, mapping both deep changes in specific places (such as shifting lifecycles of species in the predator-prey chain) and human interventions that are making a difference across the natural and built landscape.

- Open energy initiatives leverage distributed energy technologies and smart grids to provide smarter, more resilient energy strategies for communities worldwide.

- Open-source strategies continue to dominate policies in the Global South, allowing these countries to enjoy the benefits of material innovation without extreme capital debts—and creating new centers of innovation.

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THE GREEN XCHANGE:

HTTP://SCIENCECOMMONS.ORG/PROJECTS/GREENXCHANGE

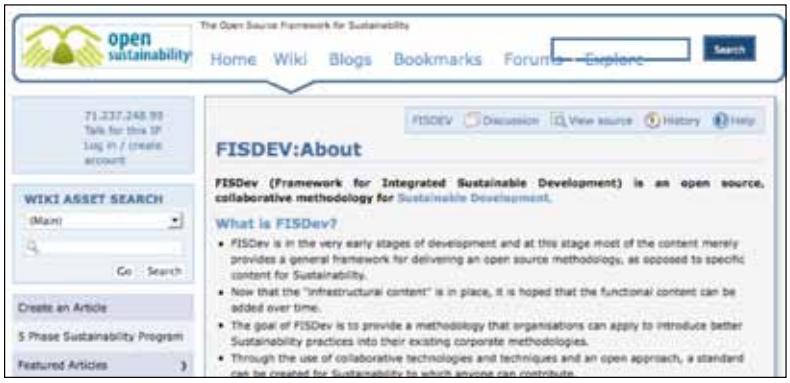
Patent law shapes the way innovation happens, and a few years ago, U.S. courts removed the "research exemption" that allows researchers to use patented tools and processes. A new project of Creative Commons, in collaboration with Nike and Best Buy, seeks to restore the research exemption by creating an innovation network designed to share patents, policy, people, and technology related to sustainability innovation.

OPEN SUSTAINABILITY:

HTTP://OPEN-SUSTAINABILITY.ORG/WIKI/OVERALL_TASK_LIST_FOR_A_SUSTAINABILITY_PROGRAM

URBANORE.YPGUIDES.NET/

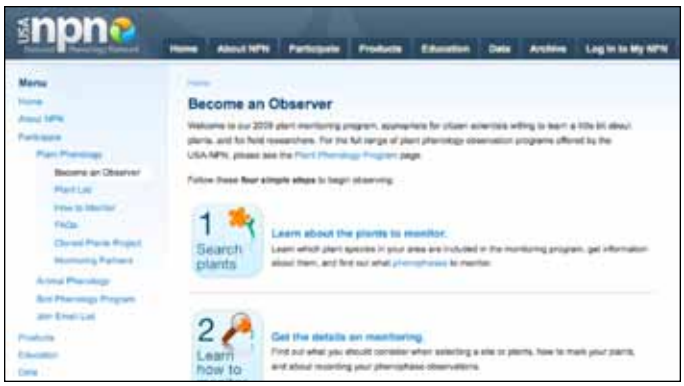
Open Sustainability is a nascent platform for developing a free and open standard for sustainability. One of its key projects is developing a framework for integrating sustainability practices into existing corporate methodologies.



USA NATIONAL PHENOLOGY NETWORK:

HTTP://WWW.USANPN.ORG/?Q=HOW-OBSERVE

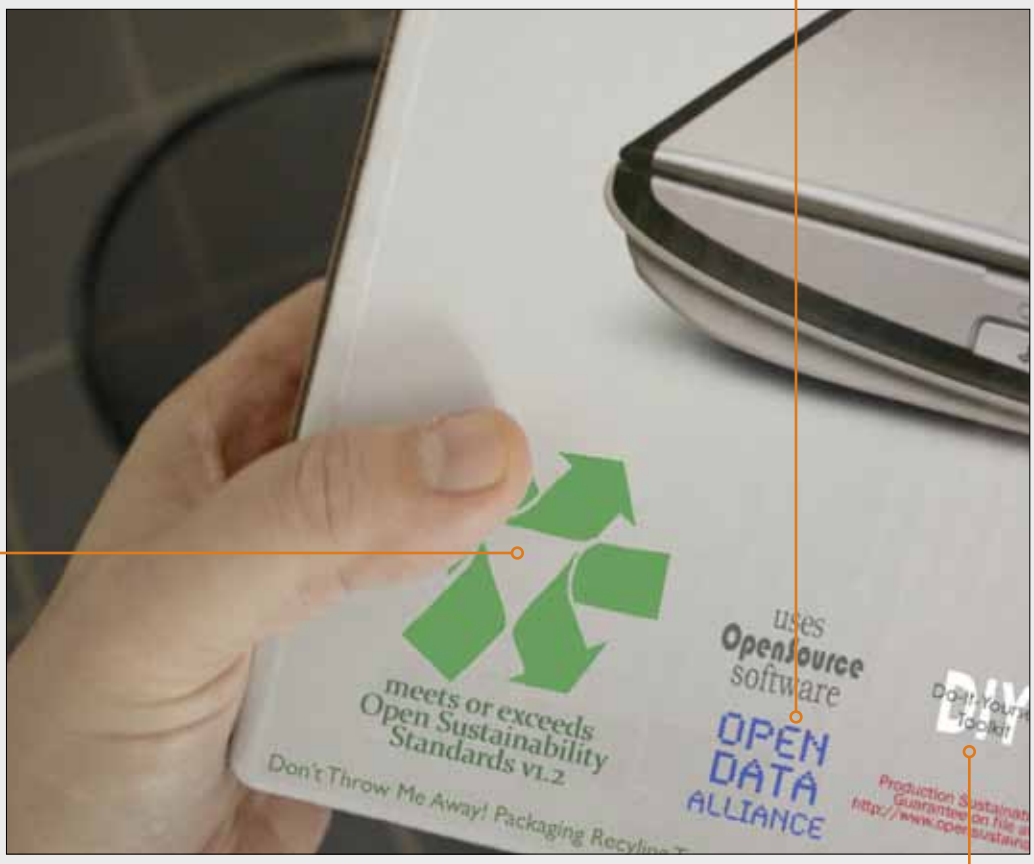
The USA National Phenology Network (NPN) leverages citizen scientists to monitor the impacts of climate change on plants and animals in the United States. According to the Network, phenology is the study of recurring plant and animal life cycle stages, or phenophases, which are sensitive to climatic variation and change. NPN observers help scientists identify and understand environmental trends as an early warning system, designed to help the world adapt to climate change.



In 2020, open source is as much a part of a sustainable brand as today's green marketing labels. But it is more than a so-called "green wash." Open Sustainability certifications tell users that products and services conform to cross-sector sustainability standards for design, materials, energy efficiency, global sourcing, reuse and recycling, and corporate practices. "Open" also signifies a commitment to rapid innovation, engaging global networks both inside and outside corporate institutions. This product packaging suggests the brand advantage that a variety of open standards and certifications confer on a product in an age of sustainability imperatives.

An Open Sustainability Standards seal provides not only an umbrella certification for sustainable practices—it also explicitly links openness and sustainability as complementary components in a resilient strategy.

An Open Data certification assures the buyer that the product conforms to architectures that allow the owner to leverage open data—the opposite of today's digital rights management architectures.



Explicit in a world of rapid, open innovation is the role of do-it-yourselfers, and products and services are designed with specific architectures, interfaces, and processes for DIY users to adapt and extend the product—and share those innovations with the product community.

how to live this scenario: try one or more

Extend your innovation network

In a world of open sustainable innovation, how will you reach beyond the borders of your organization to engage with innovators across disciplines, across sectors, and across national boundaries? Do you have a strategy for leveraging open solutions markets? What do you know about do-it-yourself innovators who are repurposing, adapting, and extending your products or services—and how will you leverage them for sustainability in the future? How will you need to change your innovation process to take advantage of smaller units of contribution by many more people?

For every meeting that you attend today or this week, imagine that you could bring an entire network of dedicated people from around the world, each with at least 20 minutes of time to give you. Then think about how you could leverage that network to achieve the goals of your meeting.

Inventory your sustainable IP

In this scenario, where sharing your IP becomes the key to rapid sustainable innovation, how will you decide what to share? How broadly could you share? What could you gain if others built on your processes, designs, and technologies? How can you best engage these "others" in innovations that help you become more sustainable? How will your secrecy policies change in this world?

As you go through your day or your week, make a mental list—or an actual list—of all the ways that you're currently building sustainability for your organization, from operational procedures to sourcing to new product designs that improve efficiency and reduce waste. Then think about which of these could actually give you a market advantage if others used them as well.

Get an "Open Sustainability" seal of approval

When open standards for sustainability emerge—and when open IP for sustainable components gives you a jump-start on creating more sustainable offerings—how will you integrate these into your products and services? Who will have responsibility for representing you in developing these standards? How will you integrate these standards into your organization and its products and standards, especially if they compete with your current best practices? How will you link these standards to actual sustainability outcome measures—and how could you leverage open measurement to help? Finally, how will you leverage your compliance as part of your market brand?

As you wander around your office or meet with others in their own offices, look at all branded objects, from products and packaging to marketing materials to storefronts. Imagine what it might take for each of these objects to get an Open Sustainability seal of approval and what that seal might come to mean.

Join GreenXchange

GreenXchange is one of the most interesting corporate-sponsored, open-sustainability initiatives today. It addresses the multiple challenges of sustainability for any organization—from rapid innovation to restructuring your organization for a more connected, more adaptive world. What could you contribute to this exchange? What new kinds of IP would you hope to get from it? How would it change the way you do business—and business innovation?

Go to http://sciencecommons.org/projects/greenxchange and watch the video. Then to your colleagues about the kinds of IP that you could put in the GreenXchange patent pool—and how you would like academia, other corporate research organizations, and commercial enterprises to build on it.