



SHADES OF SYSTEMIC DESIGN

RELATING SYSTEMS THINKING & DESIGN

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Symbiotic Design Framework Workshop

A systemic approach to relational diagnosis and transformation

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The Symbiotic Design Framework (SDF) workshop, led by Dr Gonzalo Raineri Bernain, offers a rigorous pedagogical transition from extractive, anthropocentric design toward autopoietic social systems. Grounded in the theoretical lineage of Maturana, Varela, and Luhmann, and validated at the World Design Congress (2025), the SDF addresses "wicked problems" by redefining design as a self-producing organism rather than a producer of inert objects.

Central to the workshop is the rejection of the "One-World World" paradigm. Drawing on Arturo Escobar's concept of the Pluriverse, the framework integrates epistemic justice and diverse knowledge systems to dismantle the colonality often embedded in design standards. Participants engage in a systemic audit of seven interdependent components—Humans, Commissions, Observations, Procedures, Partners, Technology, and Outcomes—to identify and transform relational pathologies. By mapping interactions through six symbiotic typologies (Mutualism, Commensalism, Neutralism, Amensalism, Competition, and Parasitism), practitioners develop a Systemic Diagnostic Report. This outcome empowers designers to shift from extractive practices toward mutualistic configurations, ensuring that design interventions contribute to a world where many worlds fit and foster collective flourishing (*Eudaimonia*).

KEYWORDS: systemic design, symbiotic design framework, autopoiesis, relational diagnosis, wicked problems, regenerative design.

Context and Theoretical Background

The contemporary design landscape faces an ontological crisis where traditional, linear "take-make-dispose" models contribute to the ecological and social degradation characteristic of the Capitalocene. The Symbiotic Design Framework (SDF) emerges as a response to these "wicked problems"—complex systemic challenges that are interconnected, non-linear, and resistant to traditional problem-solving.

Central to the SDF is the rejection of the "One-World World" (OWW)—the Western-centric, colonial paradigm that imposes a single way of existing and knowing upon the globe. Drawing heavily from **Arturo Escobar's** work on the **Pluriverse**, the framework advocates for an "ontological design" approach that recognises a world where many worlds fit. This requires a commitment to **epistemic justice**, integrating diverse knowledge systems—including Indigenous cosmologies, feminist ethics, and perspectives from the Global South—to dismantle the hidden coloniality embedded in seemingly "neutral" design standards.

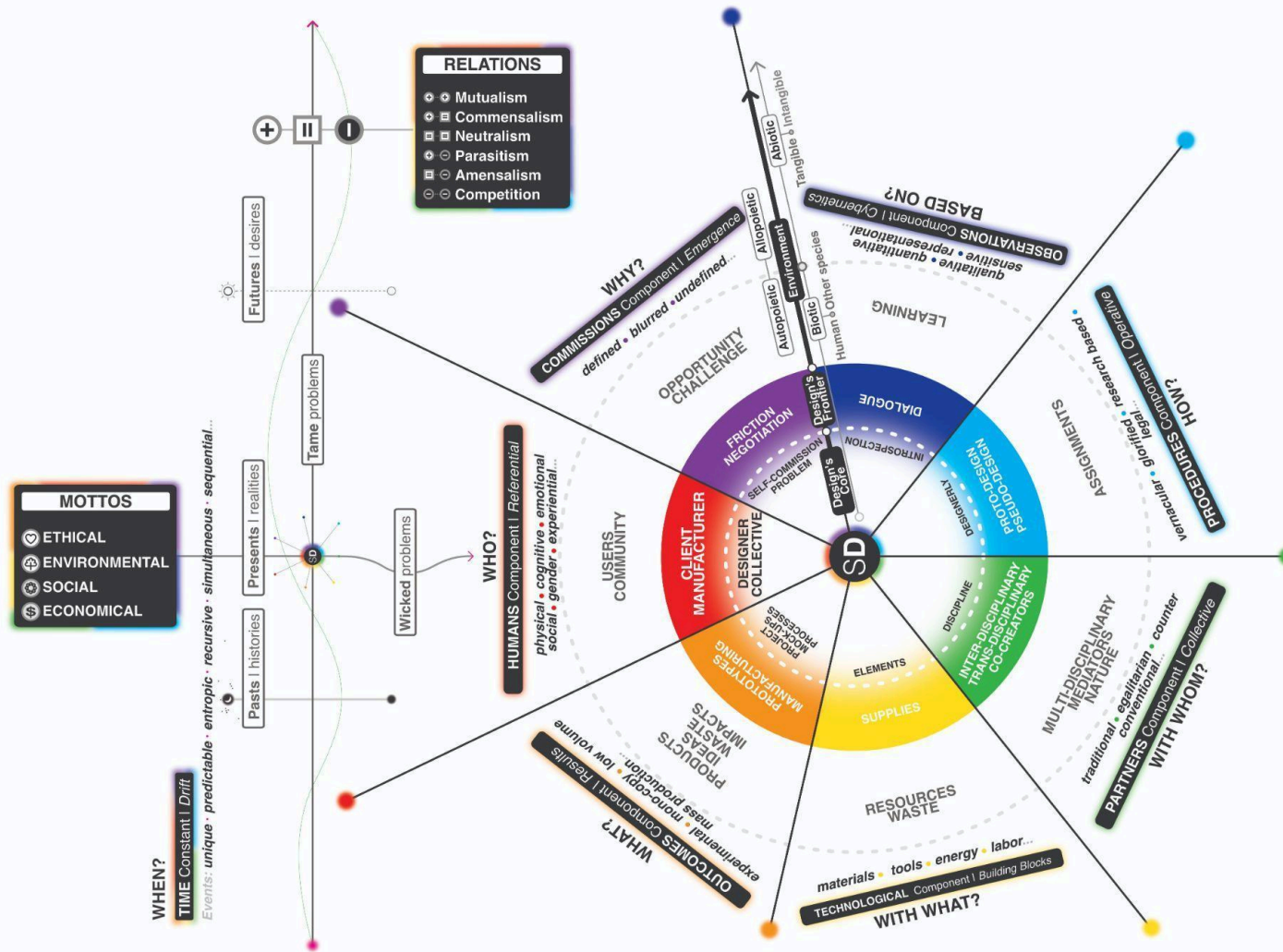
The SDF is further anchored in the theory of **autopoiesis**, derived from the biological work of Humberto Maturana and Francisco Varela. It views design not merely as a set of tools or artefacts (which are **allopoeitic**, or other-produced) but as a living, self-maintaining social system. By combining Escobar's pluriversal ethics with autopoietic systems thinking, this workshop aims to "rip the veneer" off extractive design practices, providing practitioners with the tools to steward regenerative, mutualistic relationships within a diverse and interconnected global fabric.

Topics covered

The Symbiotic Design Framework (SDF) offers a rigorous theoretical and practical exploration into the transition from anthropocentric, extractive design paradigms toward regenerative, autopoietic systems. Directed by Dr. Gonzalo Raineri Bernain, the framework represents a significant departure from conventional design methodologies by redefining the discipline as a self-producing social system capable of addressing "wicked problems" through the lens of biological and social symbiosis.

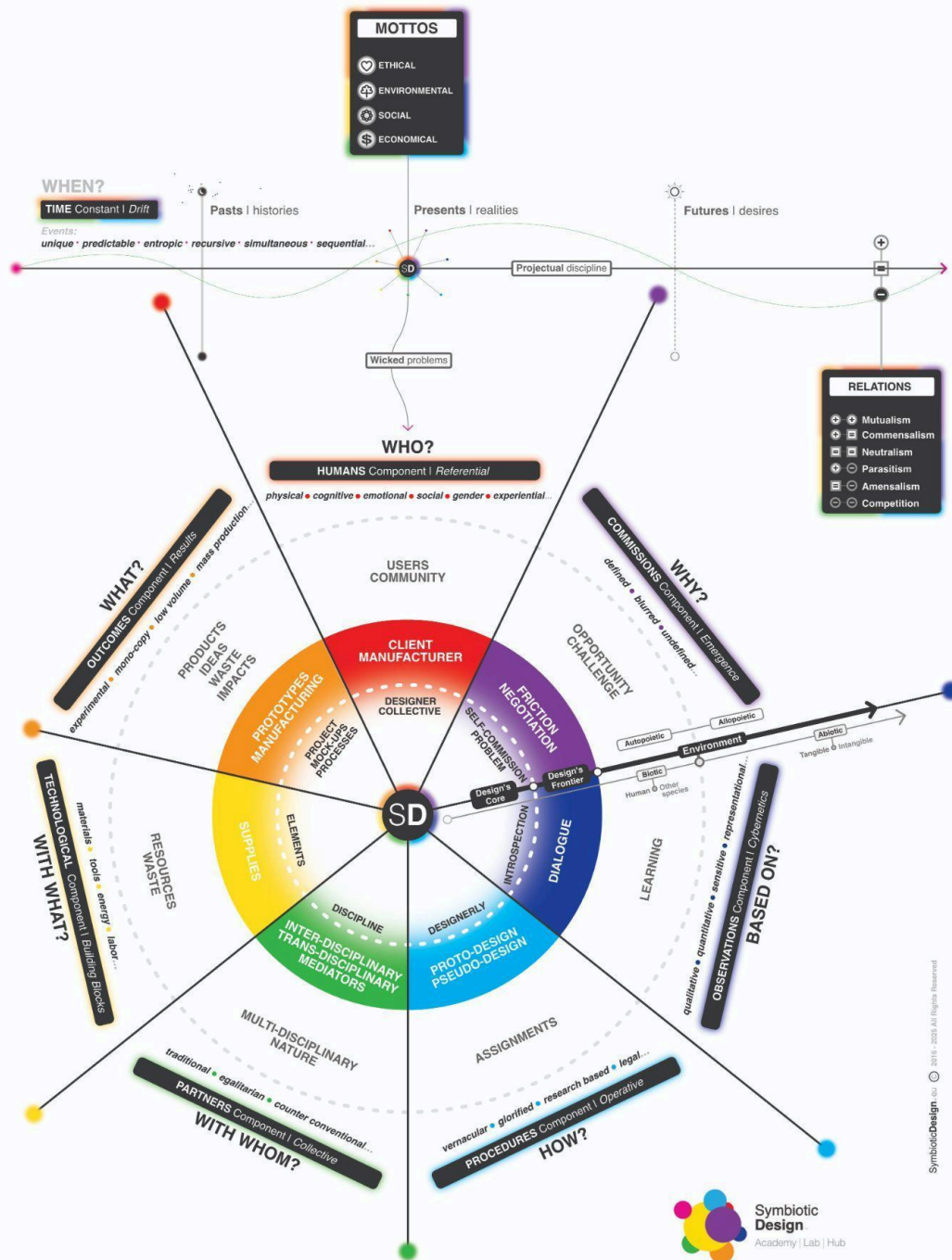
This workshop introduces participants to the SDF's core analytical logic, which posits that all relationships within a design system are dynamic and can be categorized through six primary types of symbiotic relationships: Mutualism, Commensalism, Neutralism, Parasitism, Amensalism, and Competition. Utilizing a diagnostic lens, participants will evaluate seven interdependent components of design; Humans, Commissions, Observations, Procedures, Partners, Technology, and Outcomes, across three dimensions: the Core, the Frontier, and the Environment.

The framework operates under a strict ethical hierarchy, ensuring all inquiries are filtered through the "Four Mottos": Ethics, Sustainability, Social Responsibility, and Economics. Participants will learn to move beyond superficial problem-solving by developing a "Systemic Diagnostic Report," identifying structural misalignments and shifting parasitic dynamics toward mutualistic, regenerative configurations. By the end of the session, practitioners will be equipped with the intellectual scaffolding necessary to integrate design into the broader fabric of life-sustaining global systems.



Symbiotic Design Framework | SDF

2.0 Version



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Objectives

Participants will achieve the following learning goals:

- Systemic Literacy: Mastery of the SDF vocabulary, including dimensions (Core, Frontier, Environment) and symbiotic typologies.
- Diagnostic Proficiency: The ability to perform a "Symbiotic Audit" of a design project to detect hidden parasitic loops or externalised costs.
- Ethical Integration: Learning to apply the "Four Mottos" (Ethics, Sustainability, Social Responsibility, and Economics) as a non-negotiable evaluative compass.
- Outcome: The creation of a preliminary Systemic Diagnostic Report that identifies points of leverage for regenerative intervention in their own practice.

Every iteration of the workshops is used as feedback to further create the framework.

Methodology

The workshop utilises a multi-stage process of inquiry and action:

- Situating: Deep immersion to achieve contextual awareness in space and time, distinguishing between "Tame Problems" and "Wicked Systems".
- Diagnosis & Relational Mapping: Analysing the seven core components (Humans, Commissions, Observations, Procedures, Partners, Technology, and Outcomes) to identify their symbiotic state.
- Intervention: Conceptualising strategic perturbations to shift unsustainable relationships (Parasitism, Amensalism, Competition) toward sustainable ones.
- Calibration: Committing to long-term stewardship and adaptation within the river of time.

Agenda (120 Minutes)

00:00 – 00:20: Introduction: From Anthropocentrism to Autopoietic Design.

00:20 – 00:40: Situating the System: Mapping the Seven Components and the Four Mottos.

00:40 – 01:10: Relational Diagnosis: Identifying Parasitic vs. Mutualistic loops in a Case Study.

01:10 – 01:40: Generative Intervention: Proposing "Strategic Perturbations" for Transformation.

01:40 – 02:00: Plenary & Calibration: Presentation of Systemic Diagnostic Reports and closing reflections.

Number of participants

Minimum: 10

Maximum: 30

Format and delivery mode

Mode: Interactive In-person Workshop.

Requirements: Workbooks provided by us. Projector required.

References

Raineri, G. (2025). *Symbiotic Design Framework: Rethinking Design from Within*. Eindhoven: Symbiotic Design Academy.

<http://www.SymbioticDesignAcademy.com>

Facilitator/organiser profile

Gonzalo Raineri Bernain, PhD in Design, Architect, and Founder of the Symbiotic Design Academy. Based in Eindhoven, Netherlands, Dr. Raineri has three decades of experience in sustainable design practice, curricula and consulting for zero-carbon futures.

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framework. This work is dedicated to future generations, seeking a world where many worlds fit.

AI Usage Statement

Generative AI was used as a text processor and assistant for English phrasing and to assist in the filling of this document based on the seminal text of the framework. It was not used to generate the core theory of the Symbiotic Design Framework, which is the result of over a decade of doctoral and field research by the author.