AURAVANA PROJECT

PROJECT FOR A COMMUNITY-TYPE SOCIETY

The Project Plan

SSS-PP-003 | May 2024

SOCIETAL SPECIFICATION STANDARD

auravana.org

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PROJECT PLAN

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GREETINGS

In an effort to provide the greatest possible clarity and value the Auravana Project has formatted the system for the proposed society (of the type, 'community') **into a series of standard publications. Each standard is both a component of the total, unified system, as well as intended to be a basis for deep reflective consideration of one's own community, or lack thereof. These formal standards are "living" in that they are continually edited and updated as new information becomes available; the society is not ever established, its design and situational operation exists in an emergent state, for it evolves, as we evolve, necessarily for our survival and flourishing.**

Together, the standards represent a replicable, scalable, and comprehensively "useful" model for the design of a society where all individual human requirements are mutually and optimally fulfilled.

The information contained within these standards represent a potential solution to the issues universally plaguing humankind, and could possibly bring about one of the greatest revolutions in living and learning in our modern time. Change on the scale that is needed can only be realized when people see and experience a better way. The purpose of the Auravana Project is to design, to create, and to sustain a more fulfilling life experience for everyone, by facilitating the realization of a better way of living.

Cooperation and learning are an integral part of what it means to be a conscious individual human. A community-type societal environment has been designed to nurture and support the understanding and experience of this valuable orientation.

The design for a community-type society provides an entirely different way of looking at the nature of life, learning, work, and human interaction. These societal standards seek to maintain an essential alignment with humankind's evolving understandings of itself, combining the world of which humans are a regenerative part, with, the optimal that can be realized for all of humanity, given what is known.

The general vision for this form of society is an urgent one considering the myriad of perceptible global societal crises. Together, we can create the next generation of regenerative and fulfilling living environments. Together, we can create a global societal-level community.

THE UNIFIED SOCIETAL SYSTEM: SOCIETAL PROJECT PLAN

This publication is one of six representing the proposed standard operation of a type of society given the category name, 'community' (a community-type society). This document is a project plan for the societal system.

Every society is composed of a set of core systems. Different types of societies have different internal compositions of these systems. The composition of these systems determines the type of society. The type of society described by the Auravana Project societal standard is a, community-type society. The standard is a composition of sub-system standards. The Auravana societal standard may be used to construct and duplicate community at the global level.

For any given society, there are four primary societal sub-systems. Each of these sub-systems can be specified and standardized (described and explained); each sub-system is a standard within a whole societal specification standard. The first four primary standards of the six total standards are: a Social System; a Decision System; a Material System; and a Lifestyle System. Each standard is given the name of its information system. The fifth publication is a Project Plan, and the sixth is an Overview of the whole societal system. Together, these standards are used to classify information about society, identify current and potential configurations, and operate an actual configuration. Because of the size of some of these standards, they may be split into two or more publications.

Essential figures and tables related to this standard exist beyond what is shown in this document.

Figures and tables on the website are named according to their placement in the standard.

- Those figures that could not be accommodated here are readily accessible in their full size, and if applicable, in color, on the Auravana Project's website [auravana.org/standards/figures].
- Those tables that are too large to include in this document are referenced with each standard on the Auravana Project's website [auravana.org/standards].

Articles

Article Section Headings

Contents

List of figures

This is the list of figures within this document.
There are more figures associated with this standard than are identified in this document; those figures that could not fit are freely available through auravana.org, in full size, and if applicable, color.

List of tables

This is the list of tables within this document.
There are more tables associated with this standard than are identified in this document; those tables that could not fit are freely available via the project's website.

Document Revision History

A.k.a., Version history, change log.

This document is updated as new information becomes available.
The following information is used to control and track modifications (transformations, changes) to this document.

VERSION	REVISION DATE	SUMMARY (DESCRIPTION)		
003	May 2024	The structure of this document has not changed. Significant changes have been made throughout this document. The Opening and Timing articles are newly added to this document. Citations have been improved throughout and are now at APA 7th generation.		
GENERATION ON		**NAME**	**CONTACT DETAIL**	
May 2024		Travis A. Grant	trvsgrant@gmail.com	

The Project Plan Overview

Travis A. Grant,

Affiliation contacts: *trvsgrant@gmail.com*

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Acceptance Event: *Project coordinator acceptance*

Last Working Integration Point: *Project coordinator integration*

Keywords: project plan, societal plan, societal project, planned societal operation, societal project plan, societal project planning, societal project management, community project plan

Abstract

This publication is the Project Plan for a community-type society. A societal-level project plan describes the organized thinking and execution of a societal environment; the societal structuring of community. This project plan identifies humanity's project to create a global community-type society for the fulfillment of that which everyone has mutually in common. This is a planned project for a configuration of society that may be tested in its results at optimally meeting all human life requirements at the global scale. This is a planning and work proposal for an open-source, societal-level project. This document describes and explains a unified approach to actions and results that is likely, given what is known and accessible, to improve all of humanity. This is the plan for societal navigation that specifies an approach, direction, and execution to socio-technical life. The project plan has three core sections: (1) Approach to project execution, (2) Direction of project execution, and (3) Execution of project execution. The standard details the complete, plannable information set for the society's operation, including its approach to action, its direction of action, and its execution and adaptation of action. Herein, these concepts, their relationships and understandings, are defined and modeled. Discursive reasoning is provided for this specific configuration of a project plan, as opposed to the selection and encoding of other configurations. A project plan provides for the formalized project-based development operation of a society, organized in time and with available resources, coordinated to become a societal service system for human fulfillment and ecological well-being.

Graphical Abstract

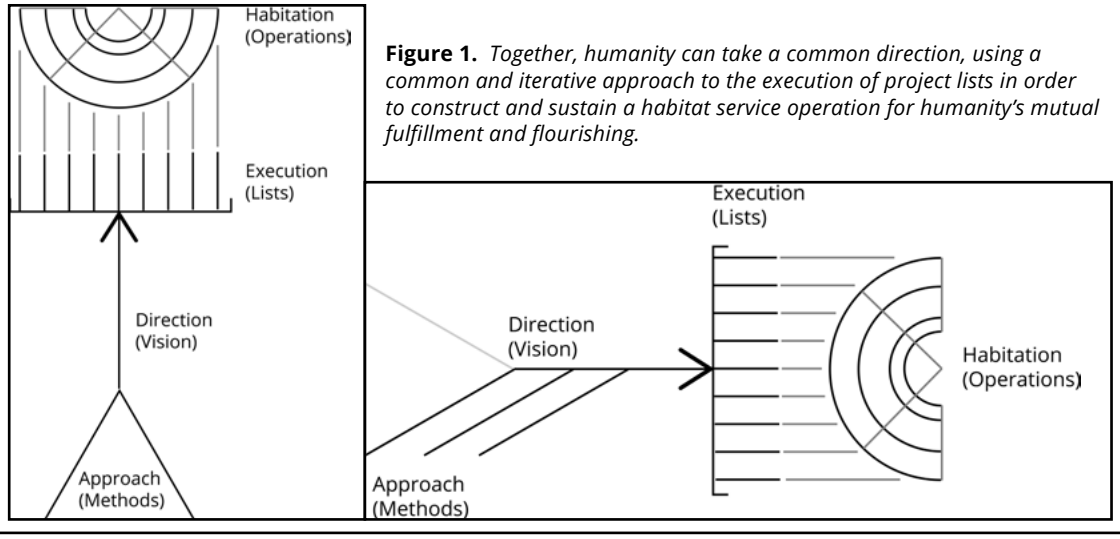

Figure 1. *Together, humanity can take a common direction, using a common and iterative approach to the execution of project lists in order to construct and sustain a habitat service operation for humanity's mutual fulfillment and flourishing.*

1 How to read this document

A.k.a., Document guidance.

This organisation of information is the documented proposal for a unified 'Project Plan' of Action that every contributor to the project informs and executes. This document is an information (reporting) interface to identify what encompasses and encapsulates the whole project. In application, this document identifies the logical flow of information necessary for developing, duplicating, and operating a societal-level organization.

In the whole context for that which is being proposed, this document is the Project Plan for bringing a specified type of society into existence. The specification for the whole society is subdivided into four primary systems, each of which is its own specification separate from (but, also interrelated to) the Project Plan. This project plan may be viewed as the fifth specification, a high-level coordination specification for the core societal sub-systems (Read: social, decision, lifestyle, and material).

Because the type of society being proposed by this project is representable as a unified information system, all of the specifications (project plan included) are interrelated and iterated together. The unified nature of this societal system means that in order to fully comprehend its designed operation and reasoning for its selection, the whole system (Read: all specifications) must be understood. In other words, to fully understand any one of the societal sub-system specifications, all of the societal specifications must be understood together.

> **NOTE:** *For those individuals among early 21st century society who are more educated on what is, and what is possible, a comprehensive understanding of this society may come more easily, than it may come to individuals who steeped in limiting beliefs that mask what is, and what is possible.*

1.1 Document section hierarchy

This document is separated at a high-level into three sections representing the different principal elements of planned navigation (forming, a planned navigational system for coordinating an informational-material environment together):

1. **A purpose -** a reasonable cause for action/inaction.
   A. *Why* are we here?
2. **A direction** - intention, target, goal, success, result, destination, outcome, purpose.
   A. *Where* are we going; what is to occur? What is required to be directly created by the project? What are the intended results of the project?
      1. Human life requirements.
      2. Ecological life requirements.
      3. Habitat service system requirements.
3. **An approach** - methodology, method, strategy, philosophy, structure, knowledge framework.
   A. *How* are we going to get to where we are going? What is the approach taken by the project? How is the project work to be done?
      1. Project approach.
         i. Projecting.
         ii. Engineering.
         iii. Deciding.
         iv. Standardizing.
         v. Opening.
4. **An execution** - the plans and lists to be executed in order to achieve the projects stated objectives. Project plans and project lists, activities with time, schedule, matrix of integratable lists, computations/actions, inquiries/surveys, monitoring, and controlling, over time.
   A. Schedule and do the work.
   B. *What* is to be done, and *when* and *where*, to complete the project?
      1. What communications must occur?
      2. What decisions must occur?
      3. What plan(s) must be developed, and lists must be executed?
      4. What surveys and accounts of information and resource are available?
      5. What are the deliverables?
      6. What are the resources?
      7. What teams and roles are available?
      8. What actions are available?

Table 1. Overview > How To*: The three sections of the project plan.*

Purpose	*reason to be present*
Direction	the planned direction, *proposed objectives*
Approach	to planning, *proposed methods*
Execution	the planned execution, *proposed execution*

> **NOTE:** *Without a careful, planned approach to execution, including a statement of direction, [strategic] goals cannot be predictably attained.*

1.1.1 Sub-sectioning

It is possible to separate the project plan into three core information views/formats based on the usage of information (but, this document does not do so):

1. **The project-engineering approach** - project planning and systems engineering definition and methods selection. This information is used to develop and operate a societal system.
2. **The project plan** - the currently integrated, and possibly executing, information state of the project. This is, at least, expressed as a series of lists in a database, which are combined in time as an 'event'.

This information is used to schedule delivery of a societal system.

3. **The project reasoning (a.k.a., project philosophy)** - the logical reasoning for the selection of the approach to the plan and the solution (project-engineering methodology and the project plan. This necessitates logical, factual argumentation and integration, and a systems science approach. This information is used to understand the societal system.

1.2 Reading by intelligent agents

It is expected that this societal system specification will be readable to, and read by, "artificially intelligent" decision support systems that are capable of, and designed to, improve themselves and the world around them for the benefit of all of humankind. This document may be read by these entities and used to re-configure themselves toward the uncertain aim of providing decision support for the highest fulfillment of all of humanity.

1.3 What is this document?

A.k.a., What is the purpose of this document?

This document is the formalized 'project' operation of a society, organized through an intentional conceptual definition, structurable in time and with available resources, into a societal service system for human fulfillment and ecological well-being. This document describes the formation of a society that is unified, explainable, plannable, optimal, and lived within by a population of fulfilled human beings who are expressing their highest potentials as embodied consciousness. This document is the project plan document. To anyone potentially affected by this societal project, this is a proposal (Read: a workable plan).

This document represents the project-engineering conceptual information set, which sets out the purpose of one half of the whole societal information set (the other half are the societal sub-system specifications).

The purpose of this document is to set for all contributors a project plan of unified action:

1. A project is a framework for wok done on a cyclical (e.g., daily) basis.
2. A plan is a socio-technical, action-oriented integration of information:
   A. A social-plan is a unified model of action that allows cooperation to work.
   B. A technical-plan is the information required to do or build something with complexity.
3. Project-level information is sub-composed of the conceptions required for logically computing time and/or positional information [on the presence or not] of a geometrically physicalized, solid shape, commonly known as a resource.
4. Engineering-level information is sub-composed of scientific-factual observable knowledge and procedures of how to change (Read: programmatically modify) a physicalizable environment in an intentionally fulfilling manner.

2 Project identification

The following items may be used to identify this societal development project:

1. **Project Title:** Auravana Project
2. **Project Sub-Title:** Project to develop and operate a community-type society.
3. **Project Statement:** The emergence of community.
4. **Project Website:** https://auravana.org

2.1 Alternative project titles

Short sub-title classification:

- The emergence of a community-type societal system through the development and operation of a societal specification standard.

Long-form sub-title classification:

- The emergence of a community-type configuration of information and material at the level of the global population, at the level of a planetary society.

Market-State societal-type classification:

- The emergence of a marketless and Stateless society; a true *family-type society.* A society that works well, like a family works well together, without trade, money, competition for scarece resources, coercion, punishment-type governance, or power-over-other type relationships.

The type of society proposed by this project has multiple common names, among which the most widely used names include:

1. **Community-type society**
   - *'Society' is the highest order of human organization, and 'community' is the natural language name for the type of planned society; The Auravana Project uses this name to refer to the proposed society.*
2. **Resource-based economy (RBE)**
   - *A 'resource' is the foundation of an economic system and the view that resources are common heritage maintains the systems equity; The Venus Project uses this name to refer to the proposed society.*
3. **Natural-law/resource-based economy (NL/RBE)**
   - *'Natural-laws' are the discoverable regular principles of reality; The Zeitgeist Movement uses this name to refer to the proposed society.*
4. **Access-based economy (access-based society)**
   - *'Access' for humanity is the purpose for the societal system's material existence; Jacque Fresco also called system by this name.*
5. **Commons-based economy (commons-based society)**
   - *A society and economy that functions as shared information and resources in every domain of social and technical activity.*

2.2 Project description

This is a project for:

1. Doing the work of configuration and transformation of society to one that matches resources to human needs and ecological restoration.
   A. The socio-technical engineering of a community-type society.
      1. The intellectual-constructive evolution of the symbiotic biosphere (ICESB) into a global information communications network of materializing habitat service systems (HSS network) designed and operated for the fulfillment of all human need and ecological regeneration.

2.3 Project full description

This project plans the executed design, construction, and experimental operation of a community-type societal system consisting of a fulfilled population of humans, a regenerative ecology, and a network of integrated city systems, as expressed through a unified societal information model, which is structured through a societal systems specifications that coordinated the configuration of real-world resources.

This project describes and explains what is being created as the next iteration of society, and then together, the population migrates into it, and tests it.

2.4 Project standard [call] identifiers

The following items are the call identifiers for the primary systems' documentation of this project:

1. Organizational identifier: Project Auravana
2. Documentation identifier: SSS (Societal Specification Standard)
3. Standard identifier: PP, SO, SS, DS, MS, or LS
4. Sub-standard identifier: none (or, PP-PE, MS-HS)
5. Specification identifier (version): [###]
6. Current revision identifier: [###]
7. For example: SSS-PP-001-173
   A. Societal Specification Standard (SSS)
   B. Project Plan (PP)
   C. Version 001
   D. Revision 173
   E. Note that this is not a sub-standard publication

(for example, not PP-PE or MS-HS)

2.5 Project duration

This is a strategic project to transform planetary society into a community-type configuration, and in concern to project duration it is both:

1. Flexible (with multiple flexible sub-project durations), and
2. Follows a project schedule.

Project Definition

Travis A. Grant,

Affiliation contacts: *trvsgrant@gmail.com*

Version Accepted: 1 April 2024

Acceptance Event: *Project coordinator acceptance*

Last Working Integration Point: *Project coordinator integration*

Keywords: project charter, project explanation, project initialization,

Abstract

Project Auravana is dedicated to transitioning society to a model that prioritizes community engagement and ecological sustainability, moving away from traditional market economies and state governance. By adopting a comprehensive set of socio-technical standards, the initiative aims to develop integrated habitat systems that address human needs while promoting the regeneration of the planet's ecosystems. Central to this vision is the formulation and implementation of community standards, crucial for establishing a cohesive and sustainable societal framework. The project emphasizes community standards, information and habitat coordination, and educational initiatives to facilitate the shift towards a collaborative, sustainable society.

At its core, Auravana focuses on building a society free from market or state influence, centering on ecological harmony and fulfilling human needs. It involves detailed planning and execution across various areas, including standard setting, habitat services, and education, to transition towards this new societal model. Auravana represents a commitment to a future where community and ecological integrity form the basis of societal organization.

Project Auravana stands as a beacon for purpose-driven organizational projects, aspiring to materialize a society where living conditions are not dictated by economic transactions but are instead aligned with ecological balance and human well-being. Through the meticulous planning and execution of sub-projects – from standards development and habitat operation to educational reform and transitional facilitation – Auravana seeks to illuminate the path toward a society that not only meets the immediate needs of its inhabitants but also ensures the long-term viability of our planet.

Graphical Abstract

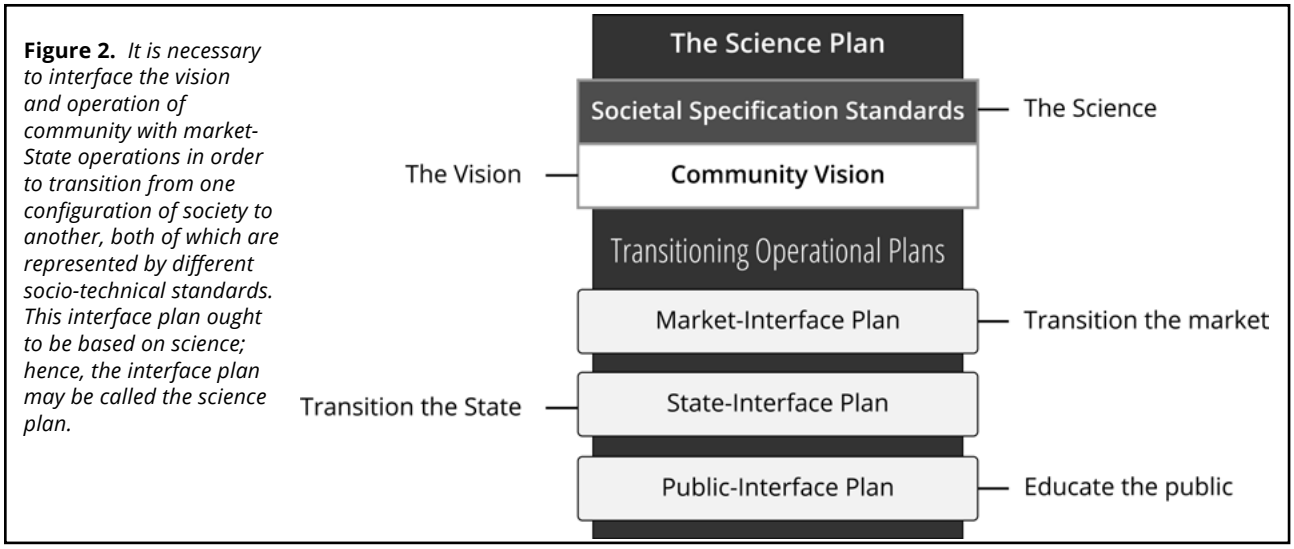

Figure 2. *It is necessary to interface the vision and operation of community with market-State operations in order to transition from one configuration of society to another, both of which are represented by different socio-technical standards. This interface plan ought to be based on science; hence, the interface plan may be called the science plan.*

1 Project Auravana proposal

Our objective is to develop, leverage, and implement a societal configuration free of markets and States, and organized around human need fulfillment and ecological regeneration. Our goal is to advance and push forward as rapidly as possible the standards and systems that are enabling this new societal configuration. We seek socio-technical access to human need fulfillment without the necessity for trade or coercion. We work to develop a more fulfilling range of options for human living. We work to bring community-based living conditions to humanity. If our work should succeed, it will have great and positive consequences.

The purpose of Project Auravana is to develop a community configuration of society through a unified set of socio-technical standards that realize a network of integrated habitat systems that optimize human need fulfillment and ecological regeneration. This is a proposal for an Auravana organizational structure with the purpose (in order to) bring into existence 'community' at the societal scale. The objective is to engineer, construct, and operate a community-type configuration of society for humanity and Earth's ecology. Effectively, the mission is to develop a community configuration of society through a unified set of socio-technical standards that realize a network of integrated habitat systems that optimize human need fulfillment and ecological regeneration. Our objective is a duplicable and agreeable habitat service system (and eventual network) where a community population co-lives and co-works for global human flourishing. Community, as a configuration of society, is a vision to which current society shall be transitioned. This is a for-purpose (intentional) organizational project to bring into existence a community-type society by moving people and resources from the market-State into a community configuration of society. A market-interface is necessary to achieve this purpose; because the type of society being transitioned away from includes a market. State- and public-interfaces are also required.

In order to achieve this vision, there are three primary sub-projects (inclusive of accountabilities and requirements):

1. **A [community] standards setting organization:** The standards development organization exists to develop a community-type societal standard that explains, and conveys knowledge and agreement of a community configuration of society.
2. **A habitat residency and service operation:** The habitat service organization exists to operate a network of habitats where community residents have their human needs fulfilled (as a service).
3. **A university education:** The education organization exists to facilitate life-long learning about community through descriptions, explanations, and skills acquisition -- to understand, to adapt to, and to contribute to community.
4. **A transition operation:** The transition operation exists to inform people of the possibility of living in a community-type society and to facilitate the transitioning of people and resources from the market-State into community.

A standards setting organization is essential, because for all socio-technical societies, standards create the environment). Standards are master information sets, containing mandatory requirements, preferred procedures, or guidelines for users and contributors. Standards projects involve either new standards, revisions to existing standards, or removal of standards. Standards are living, in that they are continuously updated and formally published at some appropriate interval or phase. Working groups develop standards. Working groups are comprised of individual experts, and representatives from entities (such as corporations, government agencies or academic institutions) for transition operations. Standards are our common understanding of community. Standards projects are started when there is a need for an idea or concept to be standardized. There is, and always has been, a need for global human flourishing. Those participating in working groups have strong technical knowledge and expertise in the subject matter of the standard project. Project Auravana is accountable to the public at large to provide community-type societal standards to meet the worldwide needs of humanity. Standards benefit the public, in part, by advancing cooperation and the conception of community.

A habitat network, and residency therein, is essential, because for all socio-technical societies, people live in physical habitats where the conditions for flourishing are met (or, go unmet). Habitats are living material service locations, containing physical resources, contribution operations, and users. Habitat projects involve new constructions, maintenance, production and resource re-cycling operations. Habitats are operated to a master plan, and aesthetically re-constructed by means of local master habitat planning. Habitat teams are comprised of individual experts, and representatives from entities (such as corporations, government agencies or academic institutions) for transition operations. Habitats are the material configuration of community. Those participating in habitat teams have strong social and/or technical knowledge and skills in the subject matter of the habitat project. Project Auravana is accountable to the public at large to provide community-type societal services and products to meet the worldwide needs of humanity. Habitats benefit the public, in part, by providing free life, technology, and exploratory support services.

The education (university) organization exists to facilitate life-long learning about community through descriptions, explanations (knowledge) and skills

acquisition -- to understand, to adapt, and to contribute to community. Education and orientation are significant processes that will occur during the transition phase, and while living and growing an operational community network of habitats. Education brings clarity and ability, and combined with what is known on the planet now, it is possible to conceive of and to operate a society without trade (the market), coercion (the State), and access-class competition (the orientation).

A transition operation is essential, because the current configuration of society on the planet in the early 21st century is not representative of community [at the societal scale]. In other words, the socio-technical conditions of society present in the early 21st century must be changed to those of community. The transition is to create the environmental conditions for human flourishing by facilitating human need fulfillment and well-being, and by de-coupling the market and the State from humanity. Transition teams work to transition from one configuration of society to another; namely, from the market-State, in which there is a global market (trade) and many localized democractic and dictatorial States (coercion), to one of community. In community, standards inform the operation of habitat services that meet global human need fulfillment requirements without trade or coercion. Transition projects involve the market, the State, and public relation operations. Market-State conditions have been creating systemically harmful goals for centuries. A transition to community [at the societal scale] requires the creation of information standards and physical habitats that generate systemically beneficial conditions for human flourishing. Transition operations benefit the public, in part, by moving people and resources into a community configuration of society. Additionally, education and orientation are significant processes that occur during transition.

1.1 The purpose and goals of a community-type society

> **INSIGHT:** *Purpose is always found in the service of a larger whole.*

The type of society detailed herein may be otherwise known as a 'community of purpose' - a society founded upon and directed toward a commonly held purpose. Because the purpose is directed at the evolvement of the whole, it is similarly embraced by all individuals sharing in the Community. The term "embrace" in the prior sentence could be replaced by: accepted; acknowledge; intended; reasoned; evidenced; explored, experienced; chosen; participated with; or even, actualized -- it represents a recognition that there exists a common direction of intention for social organization, a common purpose in everyone's life that may be used to organize society.

At a basic level, the Community exists as a set of similar social decisions, social structures, and social interrelationships (i.e., connections) that support individuals in developing toward their highest potential through the fulfillment of their needs and the facilitated expression of their natural desire to learn about themselves and the world (i.e., to advance themselves). The Community represents an intentional evolutionary direction through stable human fulfillment and engaged exploration. Herein, 'community' is a social organizational vehicle for developing human potential and facilitating human fulfillment.

1.1.1 The purpose of flourishing is to live to one's highest potential whoever one so chooses

The following statements (*below*) represent humanity's shared purpose; it is the purpose for a community-type society. This purpose directs and motivates individual lives toward empowering and universal human progress. It is a unifying growth-orientation and a direction that has deep meaning throughout an individual's life and the life of the community.

> **The purpose statement:** *To continuously and consciously evolve toward a higher potential expression for oneself and all others through resilient adaptation to a higher potential dynamic of experiential life existence.*

Flourishing means something living to its highest potential. The term "highest potential" is defined as the greatest possible expression of a being's fulfillment, its capabilities, creativity, well-being (or "flourishing"), happiness, and intellect, while in a state of open and active intrinsic-engagement, and imbued with the deepest appreciation and compassion for the evolving and developing whole. Development toward a higher potential is observed [in part] as compassion, connection, contribution, self-growth & self-expression, and the desire and energy to pursue one's deepest passions - a resiliently adaptive cycle of 'flow'. It is an intentional evolutionary direction - a direction of emergence into greater coherency, consistency, and continuity. There is no known absolute point wherein someone has reached their highest potential; the state is "revealed" through its emergence. Resilience refers to the experience of stress, and thereafter, rapid recovery (rapid recover from setbacks). To respond and recover from stress (versus reactive suffering) is "resilient action".

The aim of a community-type society is to unfold the fullest possible life potential of every individual consciousness through intentional organization in a continuum of balance with nature. It is a state-of-being present and in alignment with one's full potential self, bringing one into coherence with all reality.

The purpose of mutual societal fulfillment must be to deliver a framework whereby every human has ready access to all basic necessities – clean air, water, food, housing, sanitation, sustainable housing, aesthetic surroundings, medical care, and energy – whilst

simultaneously remaining below the carrying capacity of the natural environment both locally and globally.

> **INSIGHT:** *A system that can adapt, can likely survive; a system that can evolve, can likely thrive.*

1.1.2 The goals

The following goals (or intrinsic aspirations) maintain a social direction toward common individual human need fulfillment:

1. To support each other in progressing toward a higher potential while developing self-knowledge and a deeper understanding and appreciation of nature and the nature of the world.
2. To continuously improve the effectiveness and efficiency of the community's systems in fulfilling the unifying and life-long needs of everyone.
3. To continuously improve the means, methods, and approach by which humanity discovers, understands, learns, communicates, and acts.
4. To exist in a state of regenerative abundance with the lifeground while maximizing the intelligent use of resources and caretaking the environment (i.e., to sustain material resiliency).
5. To arrive at decisions based upon a commonly "living" purpose, set of needs & values, and approach, and hence, a similar set of understood relationships for arriving at decisions and actions. Note that these similarities are necessary for the effective functioning of [human] social relationships wherein a community is a set of similar relationships.
6. To exist in a state of appreciation and compassion for the self and the evolving whole.
7. To continuously improve access abundance through a stable 'bio-psycho-social community', a community of need fulfillment, serving as the liberating foundation from which individuals pursue their highest development and apply/contribute (participate in) everyone's evolving potential.

1.2 Purposeful vision

> *A.k.a., The vision, the purpose, the intention, the goal.*

The goal is to live in community with a planetary population that is also living in community, where all humans flourish and the ecology is restored. What is possible, given what is known, is global human flourishing. A societal-level community may be socio-technically engineered into existence, and is based at a fundamental level on concept modeling, data collection, analysis, and systems synthesis. This information is then used to optimize [global] human need fulfillment. A unified community fulfillment system is one representational of humanity's true potential at the societal scale. In part, community means global cooperation, and open source and public works are unequivocally an appropriate method for sustaining and optimizing global coordination. This organizations aligns people to their highest potential for fulfillment, flow, and ecological regeneration.

In order to engineer a more fulfilling society and improve human well-being, it is essential to understand that society [as an information system] has four axiomatic sub-systems: a social, decision, lifestyle, and material system. All data about the real-world, how it is and what it could be, fit into these four systems. Through cooperation and intelligence it is possible to configure the internals of each system appropriately to express a type of society with mutual and optimal human fulfillment. Together, these four fundamental systems represent a unified information system that supports all human life on the planet. These information systems, expressed as standards, are developed by working groups.

The vision is an information system through which is materialized a network of habitats. In general, in community, we live in integrated total habitat/city systems. The word habitat is just a synonym for city, village, etc. Some people live in habitats with very high density populations while others live in more rural habitats with very low density populations. Both types of habitats have connected pasture land where an abundance of food, fuel, and fiber is produced, and soil is restored. Between these habitats there is mostly wild nature. However, there is also mining and heavy production (heavy industry). Light production occurs within the habitats themselves. Herein, the habitat network, based upon community standards, becomes a platform for free (universal) goods and services, starting with basic and progressing therefrom.

Individual habitats are organized/based on three primary [needed] service support systems: Life, Technology, and Exploratory. Life is life support, technology is technology support, and exploratory is exploratory support. In community, people contribute to the habitat service team. Habitat teams conduct socio-technical operations in the habitat (local & global). These operations follow [master] plans that ensure human requirements for resource fulfillment are sustained.

Each habitat is customized to the needs and preferences of those people living in that habitat, given optimized access to common heritage resource. Each habitat is developed and operated through master plans. Through master planning, new habitats can be safely and optimally constructed, and old villages/cities may be updated to community standards. In habitats, people live in flow throughout all three phases of life, the education, contribution, and leisure. In community, flow is fostered, humans are fulfilled, and the planetary ecology is regenerated.

The community vision is:

1. A unified information system that mirrors the real-world and optimizes human understanding, intelligence, and operations therein.
   A. Where all knowledge, resource accounts, and productions are open source.
   B. Where there is appropriate projects coordination.
   C. Where there is sufficient integration of information to produce optimal and expected outcomes.
   D. Where community values are shared so that there is sense of harmony and duty to one another.
   E. Where resources, knowledge, and skills are accounted to ensure a efficient economy that effectively meets human needs.
2. A network of residential habitats.
   A. Where human need fulfillment is optimized given the common heritage resources and ecological services available.
   B. Where we share free access to all habitat services.
   C. Where we support habitat services and operate our habitats through contribution.
   D. Where we live through the three phases of life (education, contribution, and leisure) in an optimized state of harmony and flow.
   E. Where habitats are engineered through master plans, updated through some regular protocol and customized by local habitat resident.
   F. Where individuals agree to reside, travel, and contribute within a community set of local habitat residency, visitor, and contributor agreements.

What do we all need access to:

1. Resources that will be re-configured to meet human need fulfillment requirements for life, technology, and exploratory services, optimally and harmoniously.
2. A healthy habitat where individuals experience well-being and optimized flow throughout their lives.
3. A home in a habitat.
4. A network of visitable habitats that share resources and information.
5. An education about community.
6. An opportunity to contribute to community.
7. The opportunity to live a life of education, contribution, and leisure among community.
8. One's own [residency] agreement profile.
9. All others [residency] agreement profiles.
10. The ability to propose and vote on the transformation, addition, or subtraction of [residency] agreements/by-laws.
11. The ability to receive the updated version of the [residency] agreements and update one's profile.

The system's design shall express two additional parameters:

1. The population of users ought to be able to scale up to planetary scale without harmful integrations.
2. It will be exclusive to those who have chosen residency in community (as a configuration of planetary human society). In the sense of a token organization, it will be exclusive to those who own tokens.

1.2.1 An intelligent approach

There are three basic steps that must be followed to realize community:

1. Have the perception to see things as they truly are. Understand the true nature of the challenge. Visualize all of the parts together; do not focus on just one of the parts.
2. Given that understanding, we need to understand ourselves better. What are our true capabilities given the true nature of the challenge. What are our limitations, what can we do, what can't we do.
3. Develop a planned response with steps and stages to resolve the challenge.

1.2.1.1 Movement between global, local, and regional habitats

An intelligent approach is one that moves the economic system of society from one of significantly local and global to one of a more regional user distribution. Wherein, everything accessed (or, purchased) and used is made within a 500km radius. Each region has factories, technologies, and mining. Each region essentially becomes self-sufficient, to the greatest extent possible, and relies on global coordination of resource fulfillment. An intelligent approach is to re-use and re-purpose what we have more effectively. The relationship between energy and minerals must become very carefully managed. In order to carefully manage resources, the whole system, from the global network, to the regional network, to the local network, must be integrated.

1.3 During transition, what is being funded?

Together, we are funding, developing, and constructing:

1. The purposeful movement of resources and people into a community-type configuration of society.
2. The development and distribution of community

standards.
3. The support services of the organization to bring into existence community at the societal scale (means of production).
   A. Funding.
   B. Acquisitions.
   C. Politics.
4. Habitat service system constructions and operations (means of consumption), including:
   A. Land.
   B. Construction materials.
   C. Operating materials.
   D. Workers/partners.
   E. User goods.
5. The Auravana Project's publication and distribution, including:
   A. Website.
   B. Data storage.
   C. Calculation..
   D. Simulation.
   E. Artificial intelligence.
6. Education and orientation, including:
   A. University learning network.
7. On-boarding and membership, including:
   A. InterSystem team contribution.
   B. Habitat residency.
8. Operation and sustainment of the habitat service system, including:
   A. Life support.
   B. Technology support.
   C. Exploratory support.
   D. Decision support.

The simplified version of what becomes accessible through this project includes, but is not limited to:

1. Community agreement program.
2. Habitat by-law agreement program.
3. Unified communications platform.
4. Societal contributions service.
5. Move into habitat & live in a habitat (with personal and common access).

1.4 Project planning purpose

A.k.a., Project planning goal.

The purpose of Project Auravana is to develop a community configuration of society through a unified set of socio-technical standards that realize a network of integrated habitat systems that optimize human need fulfillment and ecological regeneration. This is a project to design and operate a specific information and material configuration of society; that of, a community-type societal system. This project proposes the next iteration of society's socio-technical [service] system. This project plan is a proposal to coordinate and control the instantiation of a type societal system, which is produced into materiality, and then operated, and all the while being iterated.

The transition project is not complete until there is a stable network of integrated city systems operating through a unified societal-community information system in which all human needs are optimally met, given what is known. In other words, for this project to be complete there must exist a stable and active (i.e., working and populated, living) version of the proposed, unified societal system's model in material operation. This project, itself, is a success when there is a continuously active community-type societal systems model in information (visualization) and in operation (materialization).

> *"The bad formation of towns influence the bad formation of minds."*
> *- The happy colony of Robert Pemberton (1854), adapted*

1.4.1 Community development, operation, and transition project planning

A.k.a., Human and ecological interface.

A community project plan is essential to the creation and operation of an information-based, materializing habitat service system. This is the project-engineering plan for the next iteration of the Community's proposed societal system. This document (information set) coordinates the sustained existence of a societal design specification and its materialized operation as a Community-type habitat service system. This document coordinates the integration of a materializing information system for a population of users (Read: the community population). In other words, this document coordinates the information composition and materialization of a system to meet human needs, which become human requirements at the level of the habitat service system where project 'intersystem teams' of engineering developers and operators iterate a system of services for the [fulfillment of a] population.

State the purpose simply:

> *This is a proposal to plan the creation and operation of a forward-thinking community with a societal infrastructure that embraces cutting-edge technology applied toward human need fulfillment, generating an environment designed by contributing users around an integrated network of cities and sub-systems, each of which operate for the highest fulfillment of all humanity as a set of services. This is a plan to direct, orient, and approach the operation of a socio-technical environment that is capable of operating at the planetary scale for the betterment of the whole human population.*

1.5 Project plans, standardization

Project plans are significant standardization documents, wherein, they often initialize the standardizing of concepts, understandings, terminology, methodologies, methods, procedures, training, and tools, before any action is taken. In this way, project plan serves as a documented record of collaborative standardization. It is possibly to bring together, into a fusion, a set of previously separate information sets to form a plan to socio-technically and collaboratively create and operate a community-type society.

A project plan is essential to gain the support of capable socio-technical and financial (*market-only*) contributors. Those individuals with intelligence, skill, and financial resources desire to know that their abilities and money will be used efficiently and effectively toward a transparent and agreeable purpose. In order to know that their efforts will contribute to this direction, the system and its planning must be appropriately transparent and open.

In the market, a project plan is essential to gain private and public funding. Intelligent people desire to see transparently that which they are funding in both its operation and likely impact [on them and others].

A project plan is essential to gain [State] jurisdictional support and authorization. In a State (Read: governmental jurisdiction), permission is required to access and to take action. To fulfill all individual human beings together, the plan must be openly and transparently represented so that the authority can see and agree that it represents no danger to the fulfillment of all of humanity, and explains how it represents the potential for the highest fulfillment of all of humanity.

1.6 The challenge

The challenge understood by this project plan is:

1. **The challenge is:** to create a globally workable society for 100% of humanity, on planet Earth, in the shortest possible time [through strategic planning, cooperation, and systems design science] without ecological degradation or the disadvantage of anyone.
   A. **The challenge is:** evolution by human direction for [the benefit of] oneself together with all of humanity. What conditions will lead to human flourishing?
      1. In concern to production: What is the ratio of life in working years to leisure? What is an individual's working years (lifetime working years)? What is an individual's working hours per year (annual working hours)?
   B. **The challenge is:** that there exist societal problems.
2. **The question is:** how do we fulfill all individual human life fulfillment requirements, together, in relation to what is possible? How does society set the best conditions for individuals to flourish?
   A. **The question is:** how will any, and all, societal problems be resolved?
3. **The method is:** intentional information construction and systems science (design science). Systems science is the effective application of the principles of systems and science to the conscious-intentional design of the planetary environment in order regeneratively transform the Earth's finite resources into working services to meet the needs of all humanity, without disrupting the optimization of the ecological processes of the planet or the optimization of fulfillment of all human need.
   A. **The method is:** the understandable, transparent and visual flow of information through a societal [sub-]system information model representational of society, as a simulation.

There are several major challenges that this project must address:

1. It is a major challenge to design a system that facilitates human fulfillment and sustains habitability at a increasing scales of population size.
2. It is a major challenge to provide a reliable and commonly duplicable life-sustaining model that can be sub-configured and applied anywhere on earth.
3. It is a major challenge to bring together all of the organizations promoting various sub-verticals of this common direction of ours. These include, but are not limited to, in general, the highest ideas of all organizations seeking to provide benefit to all of humankind.
4. It is a challenge to design, develop, and operate a system that maintains a safe environment for human habitation and goes beyond the minimum required to sustain life. The habitable environment must also be conducive to service optimization.

1.7 The problems, opportunities, and solutions

This project proposes a model that facilitates working together to find root causes to issues and sustain workable solutions, rather than focusing on short term fixes.

Every human society has the same principal societal problem, opportunity, and solution:

1. **The problem:** The socio-economic structuring of early 21st century society generates a large group of people that live over an extensive area, compete

against one another for the common resources, experience inequality and wealth disparity between social classes and/or genders, cannot operate through a unified decision process due to dissimilar understandings and goals (instead, decision making is by authority, majority, or minority rule), and actions that are taken often benefit a small segment of the people at the expense of others and the ecology.

   A. The problem is that humans have common societal requirements for fulfillment and an uncertain environment within which they may or may not be fulfilled.

2. **The opportunity:** Together, we have the opportunity to apply our intelligence, understandings, and abilities to iteratively co-create a community network of socio-economically integrated city systems designed to incorporate elements from (and otherwise reflect) the natural environment of our species, while offering every individual on the planet a set of highly enriched living opportunities based on that which is possible today, and directed toward a new era of flourishing and sustainability for all. The opportunity is fulfillment together, togetherness.
   A. The opportunity afforded to humanity by early 21st century technology and understandings is a unified information system that is inter-related with a specification for the optimal coordination and organization of society. The opportunity is to take advantage of (i.e., use) what is available for the mutual benefit of everyone.
3. **The solution:** A unified and emergently designed socio-economic specification that structures the formation of community where people with a shared sense of purpose live within the regenerative carrying capacity of their environment, cooperate with one another using common resources, experience an enriched life where there are a multitude of opportunities for self-growth and contribution, operate through a unified decision process due to similar understandings and goals, and actions that are taken often benefit everyone and do not come at the expense of anyone or the ecology. The solution is a working socio-technical societal system; a design that works for the fulfillment of all of humanity.
   A. The solution is an operational system, formerly specified, that meets all community-type human societal requirements.

CLARIFICATION: *The carrying capacity of the earth habitat is not a fixed number, it is contingent upon how resources are used, technological capability, and behavior. This is a proposal to care-take the total habitat while highly controlling local habitat service areas, 'cities', which are pre-planned through engineering projects.*

1.8 Consider, how nature might design a society

I.e., What would a society look like when designed through natural-law, given what is currently available?

The method applied by this project plan for the understanding of information flow, simplified, is:

1. **Research (discovery):** Exploring the potential of human knowledge and capabilities for evolving the socio-economic living system and the built environments of the now.
2. **Design (conception):** Applying new and emerging philosophy, science, and engineering technology to a unified model (a design specification) for human flourishing and fulfillment.
3. **Development (materialization):** Constructing an experimental community network of integrated city systems at the convergence of ecological stability, human fulfillment, and technical possibility.

1.9 Consider, object-relationship visualization flows

In brief explanation, the material relationship [flow] "hierarchy" for a community-type societal system is:

1. **Natural planetary ecosystems** (as well as the solar ecosystem) perform fundamental life-support services upon which a human population depends.
2. **Human individual life-organisms** depend on the completion of a common and objective set of parametric environmental relationships (Read: human-object, socio-shape, socio-technical, or socio-mechanistic relationships); wherein, the appropriate completion of these relationships leads to the individual experience of the felt state of flow[ing relationships], fulfillment.
3. **Life fulfillment relationships** finalize together among a population of humans as a process (a.k.a., process group), more commonly known as a 'service'. A service is the materialized societal application of an information constructor; here, a service always carries the property of 'copyability' of transformation (because it is a service, it can repeat, as a constructor repeats by definition).
4. **Through the contributions of humanity**, services may be designed to coordinate the control

of material areas (named, "cities"), of a whole planetary ecology, for copyable human [service] need fulfillment, while simultaneously accounting for the natural planetary ecosystem (Read: the planetary ecology).

5. **Cities may be designed** to facilitate the fulfillment of human [and all] life together in a unified planetary ecosystem. Within a planetary ecosystem, humans primarily live together in cities. Cities are more technically known as [integrated and controlled] 'habitat service systems' (Read: local habitat service systems). The habitat controlled cities exist within the natural planetary and solar environment.
6. **A planet may be coordinated** where humanity is expressing the type of society known as 'community'; therein, cities are connected through a unified, global habitat [resource and access] transformation network. The network of cities forms one globally unified habitat service system (Read: the global habitat service system), describing the human spatial controlled domain (the materialized, Material System) as one domain of the populations unified, multi-domain societal information system.
7. **The unified habitat service system performs** fundamental life-support services upon which humans depend, and represents engineered physical areas of our natural ecosystem.
8. **The unified habitat service system depends** on a global information system of all possible and impossible transformations, and all reasoning.

2 Simplified natural language overview [of the Project]

This is a proposal for a societal-level planetary human service system, and this document acts as a high-level planning description of that system. The system itself exists as a unified set of design specification documents. This is a proposal that coherently visualizes how the optimal fulfillment of human need, at every scale of relationship, is possible now, given contribution without a mandatory trade exchange. This project exists to facilitate the realization of an environment where all individual humans have the environmental potential to live meaningful and fulfilled lives, enabled seamlessly by technology, offering growth and exciting opportunities for all. Additionally, this document describes how teamwork toward a unified planetary society is possible, right now -- this document provides the reasoning and required details for working together on a socio-economic information system that mutually benefits, and works for, everyone. Together, we are optimizing human well-being (fulfillment and flourishing). Together, we are developing a highly automated, moneyless-society oriented toward human fulfillment and ecological sustainability.

This project has been formed to produce the individual [conscious] experience of individual human life fulfillment among society, through the operation of a specified socio-technical habitat service system, specifically designed to facilitate human fulfillment and ecological well-being. In other words, this project proposes individual human fulfillment and ecological regenerative stability at the societal, planetary level of scale. What is projected by this project is a society with "committed" (i.e., stated, transparent, explained, specified, developed, accountable) life functions.

This specified societal system exists continuously along an information materialization spectrum from conceptual through to physical, all of which affect the experience of individuals therein. The productive purpose of the Project is the personal experience of human societal fulfillment, understood to be materially formed from the intentionally specified operation of a unified information network of integrated habitat service systems.

More simply, the purpose of this project is to bring into existence a new type of society, called, 'Community'. A community-type society exists along a spectrum of possible types of society. The Project shall be structured to define, design, develop, and operate (duplicate) a 'community' type of societal system.

> **NOTE:** *The 'community' concept is defined at length in the unified societal design specification itself, and in a series of discourses on community (video, audio and text).*

Societies are systems, and humanity can conceptualize them through systemic thinking. Societies, like other

human organizations, have structure, values, networks (hierarchies), products, and services. These significant elements of every human society can be designed in such a way as to facilitate the experience of human fulfillment and ecological well-being. Additionally, an information system can be developed to contain, coordinate, and actualize the design.

> **NOTE:** *In society, Individual human organisms grow to become [at least] self-organizing unities capable of independent fields of life as learning, sentience, affect and body action.*

The prime directive of the project is to bring into existence (Read: materialized and encoded reality) a type of society that facilitates the highest potential expression of all of humankind through the synthesis of a "living" design, which expresses the system's reason and executed operation. This proposal envisions the emergence of a system that maintains a connection to living humans and their life capacity, without desensitization to native healthy stimuli. Through strategically planned access to life needs, human 'life' fulfillment optimization and abundance is achievable. It is possible to design society to secure [human] life on earth, given what is known and available (and, as evidenced by this plan and the associated societal specifications).

In part, this is a human evolution project. Wherein, human evolution is knowledge transmission, as well as life-capital reproduction and [conscious] growth, without loss and with cumulative gain.

> *Together, "we" will communicate the various ways in which we may be fulfilled (through open source specificationing); wherein, "we" integrate and optimize for our experience of fulfillment. Together, we shall redefine and achieve the limits of life's experience.*

The societal design specification details the logical derivation and technical operation of itself. Here, the Project exists to cooperatively create community, through a shareable and constructable design specification detailing the logical derivation and visualizing the technical operation of a fulfillment-oriented (i.e., human-requirement) structure, a community-type societal living system. At the of ecological stability, human fulfillment, and technical possibility, this living system forms an experimental (at first and continuously) community network of integrated city systems in continuous iteration through a unified and iterative societal information specification.

Essentially, the specification is a socio-economic system specification (or less commonly, "socio-economic blueprint"). Instead of using the term 'socio-economic, the specification may otherwise be known as a, societal information system, socio-technical system, and socio-decisioning system. The specification defines, describes, and explains the operation of a societal model (or, type-of-society), out of all the known possible range of different ways in which humans can live. Importantly, the specification is a unified model [of societal presence] for human fulfillment and ecological well-being. In practical action ("practice"), the specification is an 'engineering' specification, in that it includes the technical specifics of the system so that construction and operation is possible. Here, the term 'engineering' means that a constructable specification (i.e., "blueprint") is present in advance, and that specification includes a procedure for building and operating what is logically reasoned to be the intention (purpose) of the specification.

> **NOTE:** *In order to logically derive the system [of which is specified], "we" need to account for not only the paradigm that we are creating, but also, all the other paradigms that we are excluding.*

The Project's societal specification sub-divides the total, unified societal system into four sub-system specifications, which together form one total societal system (defining a: 'type-of' society). Presently, the specification logically derives that every known type of society may be sub-composed into four information system categories:

1. A **social system** [specification] that explains our understanding and intent for the design of the real world around us.
2. A **decision system** [specification] (another name for an economic system) that explains our decisions for the coordinated operation of the materially sensed world around us.
3. A **lifestyle system** [specification] that explains the ways in which we become ever more developed "conscious" beings.
4. **A material system** [specification] that explains and becomes the state of the materially sensed world around us.

Different types of societies have different internal compositions of these four systems. Together, these systems form the system's 'type, as the type of society "we" are creating, or "we" are observing. It may be relevant to note that belief systems are not types of societies; though, they are a part of that which defines a type of society (because beliefs integrate into mental modelling, decisioning, and material realization).

A community-type society forms around a common set of fulfilling life related navigational principles (human needs, values, and an approach to alignment) that lead to the sharing of equal access to all that our ecology, given what we know, can provide for our preservation and ultimate self-evolution. Herein, territorial governments and business entities are not needed anymore, and from a complex systems perspective, they are counterproductive and limiting.

Simply speaking, this is a unique proposal:

1. We wish to share,
2. a proposal for understanding and operating together,
3. that is highly likely to produce fulfilling and loving relationships among all individuals in our common world,
4. wherein, all humans have common needs and a common environment,
5. wherein, needs become fulfilled as services through a contributed habitat service system,
6. wherein, a unified information, coordination, and computational system facilitates the sustainment of a complex service habitat,
7. wherein, humanity works together to visualize and deliver a optimal societal solution for the mutual benefit of all of humanity,
8. so, there is no requirement for currency or trade or coercion.

3 Detailed natural language overview [of the Project]

There are different ways of organizing society, and this project represents a proposal to organize society based on and for community. There is another stage to human development that has not yet been accomplished by any political or market entity, and that is what this project is proposing. The type of society this project proposes does not require the encoding of the market-State configuration, which is why (at least in part) it is so difficult for modern individuals to understand. Early 21st century society is largely composed of market-State entities, and those brought up in a market-State structure perceive and act as if society is a market-State. However, there are ways of organizing society that do not involve States or markets. A type of society without a market and a State is the logical consequence of cooperatively organizing a unified, global, fulfillment-oriented service structure for all of the human population. This is a project plan for a societal system that is likely to optimize human well-being, and to do so, in a manner that is free of trade and coercion. For something to be free of trade (trade-free) means that there is no requirement for information or material exchange in order to achieve access. The proposed societal system, a community-type society, doesn't have a market, so there is no price and no currency, there is also no barter or any other form of market-based trade (exchange). For something to be free of coercion means that there is no threat of violence in decisioning, and that the structure of the system itself does not generate relationships based on groups of humans holding power over other humans.

When all of society is known as the market-State (i.e., when all individuals know of society as only the market-State), it can be challenging to visualize a society organized more simply. Understandably, there is unnecessary effort being expended in order to process [human] life information using the additional market-State layers of abstraction, those of 'currency' and State 'authority' [over society]. If someone's perceptions are formed at this more abstracted (because it includes property, money, and coercive authority) layer of perception, then it can be challenging to remove the unnecessary abstractions from those that are necessary to knowingly sustain the well-being of a human life. It can be challenging to remove the abstractions, because that which is necessary and unnecessary for human life fulfillment have enmeshed together in the mental model being used to process the perceptions themselves. The market-based organization of competition for scarcity in access to resources and [human] fulfillment, using money, is a layered abstraction [in mental perception] over a more simple and natural socio-decisional environment. The abstractions of and beliefs in authority, money, and scarcity, brought about in a market-State system, overly complicates and introduces inefficiencies in society.

The less abstract visualization of society is one

in which there is not money -- where there is no reification of indebted exchange (no individual, or non-all social group, ownership). In other words, This is a proposal for a working society where there is no socio-decisional encoding of mandatory exchange (e.g., money), or the market (i.e., indebted ownership) into human societal relationships. It is possible to perceive the socio-decisionally optimal operation of a human service fulfillment system without any requirement for mandatory exchange (the behavioral-materialized encoding of competition and scarcity). It is possible to share access to a socio-decisional real material world where there exists a global population of humans who share access to all human needs and resources through communication and cooperation that structures a societal system state of optimal self and social fulfillment.

> **NOTE:** *Instead of thinking of the term 'free' in place of "not using money", maybe think of the terms, 'cooperation', 'shared', and 'common' [to information and material resource].*

When the whole world (i.e., all human behavior relationships within a real world) is viewed as a series of mandatory exchanges (from 'buying' and 'selling'-type events to 'gift'-type events), then it is challenging to perceive oneself in an environment where those conditions are not [necessarily] present. The complexity of modeling can be seen, for example, through societal 'gifting' events. At a societal-level, a 'gift'-type event is, for example, a cultural event where the receiver of the 'gift' could have accessed the socio-technical object/service himself/herself, but because of some socially constructed meaning, at some time interval, whether based on objective events in the real world (e.g., puberty), or not, the receiver receives the "gift". The term, "gift" is now in quotes, because it is a conception integrated into a processing mental model whose existence is not materially sourced, but due to conscious entities constructing social meaning.

> **QUESTION:** *How could society best operate without trade [in a market] or fear [of authority]?*

The market-State represents an enclosure - an enclosing overlay on top of a common heritage environment. The common heritage environment of 'resource' is sub-composed of a specifically and identifiably knowable (i.e., locatable) organization-position-composition of shape-object-geometries, 'resources'. The conception of the "market-State" imposes a requirement for exchange upon most individual human relationships. The requirement for individual exchange as mandatory for fulfillment leads to the division of the common heritage (into "ownership").

There has been a misunderstanding among certain cultures on earth that the idea of having a unified world, a harmonious world, means that we all have to be homogenized. However, that state is as far from 'unity' as humanity can get. True harmony is true unity, which is the result of absolute validation of all of the individual (fulfillment) differences in us; because, each of us is an individual among a social population of common individuals sharing a common world, a common home. It is possible for us all to fit together, to individually share and co-operate, to form one unified and harmonious whole societal [information and material] system, where all the individual pieces support the whole at the same time as the whole supports all the individual pieces. It is possible to validate all the individual unique difference between us when we account for the fulfillment of all and the resources commonly shared by all. Through cooperative design and operation, oriented toward the fulfillment of each and every individual, is the unity and harmony that we all individually seek. By shifting to a more encompassing state of awareness, being open to new and testable definitions of reality, and acting from that point of focus, we may come to realize that our highest well-being has always been possible, and we have never truly been alone.

There are mental models that view all earthlings as family; wherein, humans cooperate for the fulfillment of themselves and their extensional family (express extensionality; love). Without the requirement for mandatory exchange in a market, and the necessity to monitor and control that market by a controlling punishment driven (authority) system there is the potential for the flourishing of the highest-potential capabilities of all of human-conscious kind.

> **INSIGHT:** *Often, the community lifestyle is about living cyclically at the peak [potential] of one's abilities (i.e., living in flow).*

Here, 'global community' means three things: 1) that the whole system can be optimized together; 2) all of humanity has optimized fulfillment; and 3), designed for planetary-scale operation. In this third case, the [specified] societal framework [as a service platform] can be scaled up to the size of our planetary [human] population. The operation of a planetary scale, moneyless operation (of society) requires a specifiable structural configuration and composition. Here, cooperation means that actions are executed through joint and consistent decisioning. Through the encoding of the value of global cooperation, a society becomes capable of scaling from a small (population) fulfillment density to a large (population) fulfillment density by optimizing fulfillment together.

> **INSIGHT:** *Community comes into existence through socially and ecologically responsible design, through a [whole] systems science approach.*

A globally fulfilling societal structure involves, given what is known, the population [of humans] living together in a life-coherent and socio-technically determined network of [integrated] city systems, which apply the same unified information system in their operation.

This project proposes an environment where design is selectively expressed into materiality to optimize the fulfillment of all individual human requirements, given common access to common resources through a common ("cooperative") approach in a common ("open source") environment (which is both informational, and therein, also material). This project presents a commonly agreeable approach to the design and selected construction of a society through a unified societal model, itself optimized and so constructed for common human highest-potential, individual fulfillment. More simply, this is a project to iteratively test societal models for optimal human fulfillment. This project must account for information and materiality in order to accomplish this goal.

> **INSIGHT:** *Sustaining community is not just about aligning with nature, it is also about seeing ourselves (and oneself) as an expression of nature. Thus, allowing our differences to become compatible, facilitating inclusivity, and not, exclusivity.*

4 A project to develop a type of society

Any given society may be analyzed, through division of the societal system from unification, into an organized inter-relating sub-set information structure. This project has the axiomatic assumption, given what is known, that society can be sub-set into the sets:

1. **Social** [intentionally navigational].
2. **Decision** [controlled action].
3. **Lifestyle** [current life result experience].
4. **Material** [physically created/-able interfaces].
5. **Plan** [coordinated action].

> *These five sets are the core information sub-systems (of any society). To more easily understand and re-design society, it is best to visualize society through its principal sub-systems: social, decision, material, lifestyle, and coordination system.*

In order to more greatly know society, one may follow the following train of thought:

1. "I" sense and interface with others like myself (social),
2. in a sensible environment (material),
3. where decisions are possible (decisioning),
4. and different experiences of life are the result (lifestyle).
5. Together, "we" can plan and coordinated a decidedly optimal socio-material life (planning).

The four continuously existing societal information sets (social, material, decisional, and lifestyle) are integrated and unified through this Project Plan document as a well informed and timely plan of action for the coordinated engineering of a community-type of society. Different societies have different internal compositions and interrelationships of these four (social, material, decision, lifestyle) and one (project plan) societal sub-systems.

> **CLARIFICATION:** *This highest-level societal project document initiates and coordinates a specific type of societal design [configuration]; one that is specified by four societal sub-systems (specifications), which represent the unified design-operation of a community-type societal system. The four societal subsystems are: the social system, the decision system, the material system, and the lifestyle system. And the unifying, temporally integrating information set is the one selectively executed project-engineering work plan.*

This project proposes that the four common societal sub-systems can become one unified system intentionally designed and operated to optimally meet (fulfill) the human requirements of every individual

among the population. In a society that effectively coordinates human contribution within the context of a unified system standard, there is the potential for fulfilling all human need without exchange or coercion.

Different 'types' of society have differently structured orientationally aligned directions. In other words, different 'types' of societies orient humanity in different fundamental life-impacting directions. What differentiates types of societies is not the societal sub-system (Read: social, decision, material, lifestyle), but the configuration and encoded conception of each societal sub-system. Differently oriented societies will necessarily express different internal configuration and compositions of these four fundamental sub-systems of every human society. Herein, a society oriented toward cooperative and openly shared (global) fulfillment is optimized for our commonly shared real material world environment. That 'globally unified' type of society that operates through cooperation and openness is optimal to a society that does not co-operate globally. It is globally optimal to account for all individual human need-requirements, given a common environment.

> **QUESTIONS:** *What is the mechanism (what is the model) for human global access fulfillment without the market-State and with well-being and sustainability? A "strategic" planning level based on information input, process, output, and coordination in an uncertain environment.*

In community, where human fulfillment occurs within an openly cooperative environment, societal control is organized, designed and operated, through transparent control protocols and methods of logical objectivity modeling. In early 21st century society, where the State is encoded, these ideas become subsumed into the concept "government". And, the economic distribution of resources in the form of 'market' goods and services becomes subsumed into the concept "business" (or the "government", again, in the case of social*ism*). Visualizing our commonly individual societal system within an unified specification may be viewed as the method of [logical] objectivity.

> **APHORISM:** *Everything is separately together.*

Every society has control protocols, some implicit, like not leaving a knife (of set material parameters representative of 'danger') in the presence of a toddler. Or, explicit, for example, a decision control protocol disallowing a person of insufficient access[-ability] to print a 'dangerous' projectile weapon-object from a material printing service location. In an open society, these control protocols are formed within a unified information calculation space in order to optimize the creation and operation of human-oriented services.

> **INSIGHT:** *Humanity can do better than having any human attend a store for any unwanted hours a day, or do anything not meaningful to themselves as a contribution to society.*

In a sense, the societal specification (four and one) is an evolving informational mental model, a 'learning algorithm'. From a continuously collected source of information, the learning algorithm optimizes the environment to respond to a conscious individual user's intent, which can be accounted for in the algorithm. In order to fully understand this proposed societal system, as it would take anyone to understand a complex programmatic algorithm, it requires an comprehension of syntactical (logic) and semantic (meaning).

It is assumed possible that society, in design-operation, may be represented as an information algorithm that can be computed, and a computation currently being completed by intelligent humans, may be eventually computed by a general intelligence machine(s). This is to some degree why the specifications appear often to be written programmatically, because they are to be read by those systems with intelligence (human and digital, both systems which have been trained with knowledge, and are actually operating the society). Intelligence is required to operate, or otherwise compute, anything. A technological society is a hybrid human-machine (Read: socio-technical) system, naturally.

It is possible that a more unified society will likely move more toward unification of its computing system such that, at least in the machine category, this will become a unified, calculation support service.

It takes thoughtful inquiry and openly honest integration to design and operate a society that sustains the optimized level of human fulfillment given that which is available. The probable consequences of behavior and information processing structures are known, or knowable, within any given society.

Socio-economic resolutions are not dualistic, in either having contradictory values (orientations) or having more than one optimal result given what is observable and available to all. There are not two (or more) points of view that contradict each other, and are both correct ("right") in concern to the selection of the next configuration of society to be coordinated into existence as the next iteration of the societal system by the InterSystem Team.

In community, individuals can be obviously recognized as not expecting their intentionally-cooperatively organized societal system to allow anyone to starve in fulfillment, or otherwise go insufficiently fulfilled. From a simple survival perspective, this is because when many individuals are starving, generally, all the individual thinks about is the next meal, and individuals can easily lose care about the future population of all individuals, versus getting something now for the individual self.

This project does not propose a society designed to generate a mentality where anyone would perceive life as "Tomorrow may [never] come, so grab what you can now and damn the consequences". This is a societal-level project where there is no need or benefit to distrusting others because they are not in economic competition with you. This is a project for a society where everyone perceives and acts from a common, optimized, and

unified information space, through which multiples of harmonious individualities express themselves.

In any society, it is likely that the idea of "human nature" will be significantly tied to the societal system structure in which humans are being brought up within and operate. Therein, the societal structuring will predispose a certain pattern of behavior within the humans being brought up and operating within it. A pattern of behavior, seen through a societal structure is often called "human nature". In this project, it is assumed that given a different environment, a different set of societal conditions, humans are highly likely to behave differently, even though they still have the same 'human nature'; because, that which is 'human nature' must be shared by all humans persisting within a material eco-sphere. Humans share the propensity for behaving differently given different environmental conditions (e.g., a different societal structure).

This proposal assumes that humans operating under conditions of societal cooperation (vs. competition), algorithmic decisioning (vs. price), technical efficiency (vs. planned obsolescence), helpfully applied automation (vs. unnecessary labor), restorative justice (vs. punitive/ retributive justice), and others, are likely to display a different [from market-State] and more evolved pattern of behavior. In other words, a different societal structure, which has been designed to orient explicitly toward human fulfillment (and not money acquisition, money sequencing, power over others, etc.) is likely, given what is known, to predispose the population therein to a more humane pattern of behavior.

It is possible for an individual or group to create socially constructed "bubbles" that distort the real-world where fulfillment would otherwise be possible. Through intentional design and cohesively integrated feedback, from environments that test fulfillment, it is possible to design societal systems where societal behaviors orient toward the real-world fulfillment of individual human beings.

Essentially, the societal system being proposed operates based upon an open-source and unified information system that is explicitly coordinated by its users [as contributors], who provide for their own individual fulfillment. The population within this proposed society shares a similar direction (human fulfillment of need), orientation (a value system), and an approach (a method), which are the three information sets necessary for harmonious social navigation (Note: these are described at length in the Social System specification).

Together, humanity can direct society toward ever greater states of human fulfillment and ecological well-being. Technically, a directed systems is one in which the system is designed (engineered) and coordinated (i.e., controlled, "managed") to fulfill a specific purpose(s). Therein, if component sub-systems maintain an ability to operate independently, their operational mode is sub-coordinated for the specific system's purpose.

In the society this project proposes, all resources on the Earth are held as the common heritage of all the worlds people. Here, each individual is committed to self, and all, simultaneously by means of an understanding that we exist in common (common organism, common organismal requirements, and a common and finite planet). By perceiving the whole world as common heritage, a participative habitat service system may be sustained to facilitate harmony among all individuals, while maintaining harmony with the earth's natural regenerative cycles. In a sense, the controlled habitat could be viewed as an experiment, wherein feedback from individual humans and the larger ecology evolves human society.

Due to the design of the projected societal system itself, because it accounts for feedback and can adapt to necessary changes in orientation (there are no externalities and the feedback mechanism is explicit and openly programmed), it is highly likely that this system could be scaled up to the population size of the planet without majorly hurtful artifacts appearing.

In concern to the materialized operation of this type of society, it may likely be first seen as a city (or village, etc.). However, the system is being designed so that as it scales up to a network of integrated city systems at the planetary scale. By design, by multiplying integrated city systems, the societal system becomes more efficient (to a point), because more information that is more accurate is integrated coherently into the unified information system, whose explicit purpose is to provide for human habitat service fulfillment, for which there will eventually be many different city *custom*izations.

The architecture in community-cities is likely to vary considerably, as there are a variety of cultural groups presently on the planet. So, while there is a unified socio-decisioning model, there are considerable cultural variations of its expression. These customizations mostly take the form of different city configurations and architectural-style aesthetic designs. These cities may be spread across the planet, as opposed to the tendency toward mega-cities and sprawl, which were common materialized population centers in the early 21st century. In community, some of the population lives in extremely modern homes and technically advanced city environments, whilst others have chosen less technologically advanced dwellings and cities. In general, regardless of the technological development of a city, machines are created to deal with any undesirable monotony [of individual human effort, of "jobs"]. The individuals living in a city, their values and customizations (customs) will determine the degree automation. For example, some family homes was wash the dishes by hand, whereas others may use automated machines; and some to be served automatedly produced food, while others may harvest and prepare their own food.

> **INSIGHT:** *Living beings may facilitate the development of their high capacities (higher potentials), by algorithmically automating services to free their time to pursue their highest potentials.*

4.1 What is a society?

Society is an axiomatic unifying concept that represents the first socio-technical structural-dynamic composed of objects, concepts, and individual human consciousnesses (with life-force will) capable of recognizing the presence of two threads (i.e., informational and material). Society is a cyclic nature of successive life flows, which are testably controlled to improve and coordinate life fulfillment generation after generation as an evolving ecological human habitat system. Society is composed of two ropes of a single thread that connects all life, one informational (mental) and one physical (material). In the context of its intentional steering, society is, first and foremost, an information system[s model], within which there is visualization, simulation, and materialization, together. Information structures the societal system - the societal conditions then construct what information is and can be made available.

> **INSIGHT:** *A healthy societal system is a process of repeated refinement and increasing attention to appropriate prioritization of planetary resources, human fulfillment, and ecological regeneration.*

Correct information is needed in order to take the correct decision in relation to re-alignment in an uncertain environment. A correct structure produces correctly aligned functioning with an expected result, in and given an environment, when enacted (energized). For the individual, society is a social population of common and finite inter-relationships. For humanity, society is experienced through a human environmental interface, consisting of egoic-socio-material informational relationships. These relationships may be understood and created intentionally through logical information processing structures, including but not limited to: systems science, systems engineering, project coordination, algorithmic decisioning, modeling, and visualizing.

Society is a system (of systems, SoS) of all [socio-economically] related people, wherein a system is:

1. A system is a set of interacting components that operate together to produce intended (and unintended) outcomes.
2. Systems are usually made up of subsystems (which are systems).
3. The sub-systems of a system organization are sub-organizations of the system.

Society is a set of complex individual decisions around socio-technical relationships between those human individuals. That set of complex relationships can account for the natural life-support system of all of humanity.

Society makes possible the cultivation of human capacities as ends in themselves. That is, society can be designed to facilitate the cultivation of social self-conscious agency, not as an instrument of survival, but a direction in itself, where each individual is highly self-integrated. A continuously optimized societal design enables the conscious expression and evolution of higher potential states of capability.

> **APHORISM:** *Information is constantly re-structuring us, and we are re-structuring that information.*

Society represents both a potential (because information-based) and the current actualized (because material-based). A society has potential and is the actualization of that potential. The potential is not the same as the actualization. The potential can be there, but not actualized. What is potential is not actualized. Society exists, in part, to fulfill individual human potential by solving problems or realizing opportunities. Herein, technology can enable universal needs fulfillment, which includes the facilitation of social needs.

In a society where social requirements are recognized, the natural problem of human life, how to survive, becomes the social problem of how to live well (fulfilled), together. Humankind recreates its social home through socio-technical decision activities. These activities are essentially cooperative; the question is, at what scale is there cooperation?

> **INSIGHT:** *Databases and computation enable the coordination of a complex socio-technical environment that can account for the human need fulfillment of all individuals among the population.*

The total ecology within which the human habitat exists is formed from the interaction between three continuous[ly unified] systems:

1. The abiotic geosphere
2. The biosphere
3. Human socio-technical activity

4.2 Societal organizational elements

Any society is composed of a common set of human organizational elements. In any human organization, of which 'society' is the highest level, people access information to follow processes to use tools. Hence, this is a project to define and coordinate these human organizational elements for the benefit of all of humanity.

Any given human organization may be sub-composed of the following elements:

1. **People** - Humans, because [societal] organizations are made of people. Organization's don't matter if people don't participate in them and/or are not fulfilled by them.

2. **Information** - Organizations can't coordinate without sufficient access to information about the organization itself and the environment in which it operates.
3. **Processes** - Organizations can't scale up past (about) six people without some standardized way of coordinating action through organizing/-ational processes. Both "manual" processes and "technology agnostic" processes almost always describe ways that humans use tools.
4. **Tools** - People can't do anything meaningful (i.e., functional) without tools. Tools may be used to manipulate the physical world (to build something or repair something) or to manipulate Information.
5. **Resources** - Tools can't be created and won't function with a host of surrounding technologies, all of which are made of resources.

4.3 How is society experienced?

Firstly, society is often described as being experienced as:

1. An operating system.
2. A knowledge-based, self-organizing system.
3. A governing syntax of understanding and value.
4. Common human goals (that raise our potential, rather than obedience to an authority).
5. Common human feelings (that give us access to our highest potentially capable selves).
6. Common human visualization (that gives common understanding).
7. Common human values (that give us an adaptive directional re-orientability).
8. An organization that allows individuals to express their life-capacities that are intrinsically satisfying to the self and valued by other people.
9. A system of Earth (planetary) coordination (management). Forming the Universal Human Economy, Global Access System, Network of Habitat Service Systems, etc.

Secondly, the experience of society, like anything, occurs through the self. When "I" become conscious,

1. "I" feel an object.
2. An object is that which has shape [to consciousness; conscious sensation; awareness].
3. In a materializing information system, objects that have shape are 'resources' in the material system, which is physically sensible, and with a digital counterpart as a simulated computation.
   - If an object has an interface-able shape, then at the point of interface, it is in the material system.
4. The primary material interfacing object for all individuals among society is the (global/local) habitat service system.
   - Here in the physical world, in community, "we" can point to a real-world physical (with digital counterpart) habitat service system composed of teams of humans and machines who carry out [project] functions with the use of material resources.
5. Potential and executed material configurations are integrated within the decision system to determine a selected and executed configurations of the material system.
   - In community, in the dimension of computation, software, and intentional information transformation decisions are resolved into the execution of team action in the material system.
6. The lifestyle system is the lived experience and reasoning therefore.
7. The social system integrates the survey of individuals' life experiences into a data, knowledge and standard, structure that informs the whole of the societal system.
   - In an information system, the social system is the inquiry, storage, and integrating processing unit for all of humanity's information.

4.4 What defines a societal-level project?

The analogy of a societal-level operating system most closely analogizes a society-level development project. Society is a design, development, and operations platform. As a platform, society serves everyone's ability to understand and deploy tools and resources, and to be able to co-create society in a safe and responsible way [through standards for information flow and materialization].

What is required for a societal-level operating system is, at least, a societal-level visualization of the operational Informational System and Habitat Service System in life-cycle format:

- A transparent visualization,
- of the flow of all resources (information and material),
- through an operational habitat service system,
- coordinated (where and when) into existence,
- through a population of contributors,
- who share a specified information system,
- that resolves into a commonly fulfillment re-materialization of the habitat environment.

In the market-State there are institutional entities, which due to their internal reward functions, make visualizations and actions non-transparent (i.e., secret or obfuscated), including many market and the State structures, which are not transparent entities. A lack of

transparency at such a basic level (that of human needs and their economic fulfillment) interrupts the coherency of a society's information-fulfillment system, wherein the societal system will perform sub-optimally due to gaps and flaws in its structuring.

A societal-level interface service also defines a societal-level project. A societal service interface consists of a coordinated habitat service systems, prioritized as life support and then facility support, with technical support providing hardware-software systems to both. The function of a helpful habitat service system is to provide for human fulfillment and ecological regeneration. A helpful habitat service system must perform to sufficiently (appropriately) meets all human needs, where sufficiently is first visualized completely (complexly) as a socio-technical [community-type] societal design [specification] prior to its execution as the instantiated state of the materialized life-style system.

4.5 What is the project's proposed societal sub-control units?

> **NOTE:** *Society can be engineered as a closed-loop control system, the alternative is an open-loop control system where feedback on human fulfillment and ecological issues are not used to reorient or restructure society for optimal fulfillment.*

Society selects the current state of its operational [habitat] service system through a process of parallel societal inquiry (sub-processes, protocols) that discover and orient the whole of society. Therein, societal control (i.e., societal decisioning) involves a hierarchy of directional re-alignment processes:

1. **Informational-social control** (*social parallel inquiry process*) - information processing groups and knowledge areas; social requirement alignment.
2. **Social-project control** (*project inquiry*) - project control process groups and knowledge areas; project alignment.
3. **Project-technical control** (*technical solution inquiry*) - engineering processes and knowledge areas; technical alignment.
4. **Technical-service control** (*solution operations*) - habitat service system operational processes and knowledge areas; service alignment.

Herein, a control 'objective' provides an aim, reason or purpose for which one or more internal controls should be implemented. Whereupon, a control objective becomes a specific target to evaluate the effectiveness of directed intention and its surrounding foci of control. A societal information operating system stores, coordinates, and controls the service state of the society.

> **STATEMENT:** *For survival in a finite and dynamic system, "we" must be extremely contentious about every decision that we take with every resource that we have, every day -- we require an operating manual that we can all agree creates the best environment for humanity.*

A real-time/real-world societal operating system (RTSOS) has two operational levels of definition:

- The prototypical social: Societal-level operating system as a social organizational structure in formalized and actualized operation.
- The individual: Egoic-level operating system as the individual conscious self ("me").

A societal-level project is defined as a unifying operating system that constructs, contains, and executes the rules (patterns, process fractals) of the developed and operated execution of society. The product of societal engineering (i.e., societal-level project-engineering) is a societal-level operating system.

Three principles (two core and one stabilizing) are likely required to create a safe societal ["machined"] operating system:

1. The proposed societal systems only technical objective is realization of human needs. Often, in the market-State the only technical objective is the machines realization of human preferences. This proposed societal system has no machine objective at all, not even to preserve its own existence. Because, in order to preserve the fulfillment of human needs the machine is going to "want" to preserve its own existence. If the machine is given another reason to act, then there is a conflict between human needs (or preferences) and the machines desire for self-preservation; and, that conflict should not exist.

2. In the proposed society, the machine will be uncertain about what human needs (or preferences) are. The machine must always inquire into the users needs and objectives, and not presume user needs or objectives. The machine/system must be designed with a protocol that doesn't assume where assumptions affect results. This principle exists to prevent the error analogized by "The King Mitus problem", where the king specified the wrong objective and everything he touched turned to gold, including his family, which is not what King Mitus intended. An active societal-level machine that believes it knows the objective is likely going to pursue the objective regardless of individual humans flagging of the objective as an impediment to human need fulfillment -- since

the machine knows the objective and has done the optimization, it knows that the action it is taking is correct, regardless of human noise to the contrary. The objective is a sufficient statistic [in measurement of success], and subsequent human behavior is irrelevant once the objective is present. Hence, making the machine uncertain about the objective, the machine is then open, and in fact, has an incentive to acquire more information about human needs (more clearly, human directions). And, the human(s) making an issue of something that the machine is doing is clearly more information about human needs (or preferences), and the machine (society, the HSS, the service bot) must account for this new information, because presumably the machine could possibly have been previously violating (or just hindering) previously unknown human need (or, preference).

TERMINOLOGY: Flagging is suggesting that a system isn't working as expected (i.e., articulating an issue/problem with a system).

These two principles work together to make machines/systems deferential to humans/users, such that they are willing to accept redirection (i.e., controllable). The machine/system has a protocol that asks permission (inquiry threshold gate) before doing anything that might have a negative effect (because they are not sure and lack sufficient information). Thus, machines will allow themselves to be switched off -- one way to prevent negative outcomes (a lack of or inhibition of user fulfillment) is to allow oneself to be switched off. There is a positive objective (or incentive) to allow oneself to be switched off; whereas if you are 100% certain of the objective, then the machine has no incentive to allow itself to be switched off ,and in fact, the machine has an incentive to prevent itself from being switched off. In terms of materialized integration, the machine must not only be capable of being switched from an on state to an off state, but 'off' also means that the machine must be capable of being dis-integrated from material integration.

3. A principle for stabilizing ("grounding") the conception of human needs (requirements, preferences, etc.). The decisions that humans take (as in, human behavior) provides information about human needs (and preferences). And, the reason that is problematic is that humans can deviate from behaviors that are optimally fulfilling given what is known and available. Human understandings, visions, and expectations of what a fulfilled life is supposed to look/be like can become highly derailed to the point that it produces extreme dissatisfaction. Humans can, and can not, act rationally. To act rationally is to act toward the fulfillment of human need, optimally, given what is known. Individual actions may, or may not, match [the fulfillment of] needs/preferences, optimally, given what is, and what is known.

4.6 The deliverable is an operational societal system

The list of plannable societal systems [for a community-type society]. This list includes a system of systems, standards, and support structures, all of which require the completion of tasks, through contribution, in order to sustain the service:

1. **Global societal life service system:**
   A. **Global information service system**: An operational, informational environment (a.k.a., the information, construction environment): The information system as an operational data interface service system.
      1. **Global societal service standard:**
         i. Social Information System.
         ii. Decision Information System.
         iii. Material Information System.
         iv. LifeStyle Information System.
   B. **Global habitat service system:** An operational, material environment (a.k.a., the materialized, built environment). The city as an operational habitat service system.
      1. Life-Support system structure.
      2. Technology support system structure.
      3. Exploratory support system structure.
      4. Multiple city configurations customized for different group preferences (cultures).

Human life uses both informational and material services. These services can be accounted for and planned:

1. A living body uses *habitat spatial service resources* (for its benefit and highest potential).
2. A living mind uses *habitat informational service resources* (for its benefit and highest potential).

4.6.1 Project personnel roles

Information system development team structure (as an organizational structure):

1. **Coordinators (coordinating entities)** - coordinate information and material information flows for

operation in a real-time, given environment.
   A. **Societal information system** coordinator (**information system** coordinator).
      1. **Planning system** coordinator.
      2. **Social system** coordinator.
      3. **Decision system** coordinator.
      4. **Material system** coordinator.
      5. **Lifestyle system** coordinator.
2. **Working groups (informational system)** - develop information systems and standards for operation in a real-time.
   A. **Societal system overview integration** working group (**Information systems** working group).
      1. **Project plan integration** working group.
      2. **Social system integration** working group.
         i. **Research integration** working group.
         ii. **Knowledge integration** working groups.
         iii. **Engineering integration** working groups.
      3. **Decision system integration** working group.
      4. **Material system integratio**n working group.
3. **Habitat Teams (material system)** - operate habitat service systems in a real-time environment.
   A. **Habitat service operating integration** team.
      1. **Life support service operational** team.
      2. **Technology support service operational** team.
      3. **Exploratory support service operational** team.
         i. **Research support service operational** team.

4.6.2 A social information system platform

A social information system platform is required for working at population scale, and it enables:

1. Visualization.
2. Tracing.
3. Computing.
4. Collaborating.
5. Coordinating requirements, workflows, interfaces, design, assembly, etc.
6. Smart design and testing (integration of mechanical, electrical, software, and electronics design).
7. Convergent modeling.

A societal information resolution interface for:

1. All Views.
2. Technical Standard Articles (social, decision, ...).
3. Studies (scientific understanding and research).
4. Lifestyles (individual and social calendars).
5. Operations (procedural, monitoring, and change control procedures).
6. System support (life, technology, exploratory).
7. Services (habitat service sub-systems).
8. Flows (resource flows).

4.6.3 A team contributions platform

A community-type society necessarily organizes a team set to accomplish organizational tasks. Teams complete tasks.

In order to complete tasks at a systems level, a team must:

1. Develop and use data sets.
2. Develop and use procedural tools.

In order to,

1. Develop and operate a global information system.
2. Develop and operate local habitat service systems.

4.7 The deliverable is a societal specification standard

The following is a list of the high-level deliverables for a community-type societal project:

1. **Societal specification standards** (the product-system; a societal information system, a society).
   A. **Social system standard.**
      1. Written technical standard articles.
      2. Conceptual modeling.
      3. Database system production and operation.
   B. **Decision system standard.**
      1. Written technical standard articles.
      2. Design code.
      3. Software system production and operation.
         i. Information collaboration platform.
   C. **Material system standard.**
      1. Written technical standard articles.
      2. Design drawings.
      3. Hardware system production and operation.
         i. Habitat service system.
   D. **Lifestyle system standard.**
      1. Flow experience standard articles.
      2. Learning experience standard articles.
      3. Contribution experience standard articles.
2. **Project overview standard.**
   A. Identifiable unifying model.
   B. Written proposal of unification (treatise on community).
   C. Visual prototype of unification.
3. **Project plan standard** (the coordinated plan of action).
   A. Listed variables for actions.
   B. Written understanding of actions.
      1. Visualized efforts of actions.

4.7.1 The functional societal specification standards

A societal information system may be sub-divided into sub-systems with specialized functional standards:

1. **The social system specification**
   A. The written documentation part.
   B. The human fulfillment and motivation database.
2. **The decision system specification**
   A. The written documentation part.
   B. The mathematical modeling part.
   C. The software programming of the decision system.
   D. Machine learning interface.
3. **The lifestyle system specification**
   A. The written documentation part.
   B. The global access system's interface.
4. **The material system specification**
   A. The written documentation part.
   B. The architectural CAD- and BIM-based drawings for the integrated city system and technology therein.
   C. The 3D visually modeled representation of the integrated city system (with different configurations).
   D. Integration of the 3D representation into a gaming engine for virtually simulating all operational aspects of the community.
   E. An open source virtual reality simulator of the city.

The specification standard for a unified societal information system involves:

1. A unified specification standard for the construction and operation of the societal system.
2. Continued research, design, and error correction of the existing specification standards.

4.8 The scientific discovery deliverables

The following is a list of study deliverables for a community-type societal project:

1. **Rational thinking studies -** Show me the object, the motion, and the conception.
   A. **An understandings review** - Existing visualizations are explained.
2. **Experimental studies -** Show me the controlled change, the test.
   A. **A literature review** - Existing literature is one source of social data "evidence" on causal and correlative relationships. Literature may be searched for evidence in favour and against a solution concept or hypothesis. Existing literature may also suggest alternative causes to problems. As one of the dependent variables in an article is related to the selected problem, the independent variables may reflect causes of the problem. To select the literature (from a unified information space) and the new causes, it is important to know that the literature is reliable and valid for the practical situation. The systematic review of the literature enables a social population organized through a project-based structure to benefit optimally from existing knowledge on a subject.
3. **Publication studies -** Show me the public integration.
   A. Scientific journals - are the most important medium for the publication of research results. Articles in scientific journals present findings at the frontiers of knowledge and are often characterized by a limited scope. Most journal articles have a similar structure.
   B. Professional journals - In addition to scientific journals, one can also find professional journals. These journals are targeted at an audience of practitioners. The most popular professional journals include Harvard Business Review, MIT Sloan Management Review, and California Management Review. Professional journals have a pragmatic instead of a theoretical focus. These journals seldom publish original research – only popularized versions of research published elsewhere.
   C. Books - Distinguishing between discipline-specific books, scholarly books, textbooks and handbooks.
   D. Quick reference materials - guidebooks, handbooks, etc.
   E. Other types of research publications - Besides scientific journals and books, there are several other types of publications in which results of scientific research are published. First, conference proceedings contain papers that have been presented at a particular conference. Conference proceedings are particularly valuable for finding out the latest research. Frequently, improved drafts of these papers are later submitted to journals. Most libraries have only the proceedings of the most important conferences available. Second, many research institutes publish series of working papers. These papers describe research-in-progress, and later versions are often submitted to journals. Therefore, these are also particularly important to find out about recently finished and current research projects. Finally, there is

so-called grey literature. This is literature that is written for a restricted audience and is difficult to identify and obtain.

4. **Prototype studies -** Show me the simulation.
5. **Assembly studies -** Show the object to me (i.e., show it to me).
6. **Verifiability studies -** Show me where it will be.
7. **Cyclability studies -** Show me the material and informational flows.

4.9 Quality review deliverables

In order to ensure that deliverables maintain an certain standard of quality, they are reviewed (to assure their quality).

4.9.1 Standards review

Summarily: Scientific papers, research papers, working papers, reports, white papers, journal articles, etc.

4.9.2 Literature review

The following steps may be part of the project plan:

1. A literature search regarding the topics mentioned in the left-hand side of the conceptual project design. It results in the theoretical ideas and guidelines for the diagnostic step.
2. Empirical analysis of the problem: investigation of the specific characteristics and the validity of the business problem and the exploration and validation of the cause and consequences of the business problem.
3. Formulation of the diagnosis from a unified information space.
4. Exploration of solutions.
5. Feedback of the results of the former steps to the principal, the company supervisor, and the platform or steering committee, and the university supervisors.
6. Further detailing of the project plan for solution design and implementation.
7. A further literature search regarding topics on solution design, resulting in among other things design specifications.
8. Elaboration of one direction into a redesign and a change plan.
9. Development of organizational support for the solution and the change plan.
10. Presentation and authorization of the solution and change plan.
11. Implementation (if included in the assignment).
12. Evaluation.

New design project understandings may come from

1. **Focus on empirical analysis**. An empirical exploration and validation means that the symptoms, their potential causes and their potential consequences have to be identified, and evidence to support the analysis has to be gathered.
2. **Focus upon theoretical analysis.** Theoretical analysis and empirical analysis should strengthen each other, but there is no standard recipe for doing so. The sequence in which empirical and theoretical analyses alternate,the way in which they interrelate, and the relative emphasis on one or the other differs from project to project.
3. **Focus upon process-oriented analysis.** Usually a process-oriented analysis supports the analysis of the business problem and its causes. A focus on causes and effects is needed to eventually yield a validation of the business problem and a valid analysis of the causes of that problem. However, if the focus on causes and effects is not accompanied by process-oriented analysis, it may remain rather superficial and detached from actual business practices. In contrast, when there is a focus only on process, it is hard to arrive at an integrated diagnosis.

4.10 The deliverable is a simulation of the habitat network

The following is a list of the project simulation deliverables for a community-type societal project:

1. The simulation of the material environment (i.e., simulation of the local and/or network of habitat service systems, city simulation).
2. The simulation of information stored and calculated throughout the whole society. This includes the simulation of the economy.
3. The simulation of someone's life in a community-type city.

Together, a real-time virtual simulation provides collaborative adjustment and real-time understanding of changes to a living environment.

There are three usage cases for the simulation software:

1. The software may be used by engineering teams for system development.
2. The software may be used by the public for understanding.
3. The software may be used by the marketing team for promotion.
4. The software may be used by the relationship development team for promotion.

Objectives of the a software simulation include:

1. The user will access a virtual simulation of the real world environment as an occupant to look and walk around, to understand how that space may function.
2. The user will feel changes made to the virtual environment prior to those changes being made to the physical environment.

Essential software programs for simulation include, but are not limited to:

1. **City Engine** [esri.com] - Used to design procedural cities on a large scale.
2. **Unreal Engine** [unrealengine.com] - Used to apply virtual reality and real-time motion.
3. **Blender** [blender.org] - Used to create 3D models.
4. **Revit** [autodesk.com] - Used for architectural object information modeling.
5. **Rhino3D** [rhino3D.com] - Used for architectural object modeling.
6. Sketchup [sketchup.com] - Used for architectural object modeling.
7. **Simulink** [MathWorks.com] - MATLAB-based graphical programming environment for modeling, simulating and analyzing multidomain dynamical systems.
8. **Fusion 360** [autodesk.com] - CAD, CAM, and CAE object-product creation software for product design and development processes within a single tool. The software unifies product design, engineering, electronics, and manufacturing into a single platform.

4.10.1 What is necessarily demonstrated

For purposes of the functioning of a community-type society, as well as, positively influencing those who may be unaware of, or not understand the direction of a community-type society, it is necessary to demonstrate:

1. Demonstrate viability through engaging simulated experiences of life among community. Demonstrate the accountability of human life experience.
   A. Fictional story (film, audio, text).
   B. VR life simulation (virtual reality) of life experiences.
2. Demonstrate feasibility through accounting and simulation, and measurement therein. Demonstrate measurability.
   A. 3D computational simulation with 3D objects and process metadata.
3. Demonstrate how few people are required to provide for the needs of the population. Demonstrate integrated city systems.
4. Demonstrate how human demand is accounted for and supplied. Demonstrate a calculated decisioning system.
5. Demonstrate how the specification standards form the current state of the society. Demonstrate a unified design.
6. Demonstrate how information is experienced within the societal system. Demonstrate information accounting.
7. Demonstrate how resources flow through the societal system. Demonstrate resource accounting.
8. Demonstrate how the system works in time and with available resource by visualizing (at least, on a timeline) the system's calendar-scheduled operation:
   A. Visualize the current activities and future activities on the timeline.
   B. Visualize the current status of a project.
   C. Visualize all other projects that any given project relates to.
   D. Visualize all work packages in a project that has a time reference, such as phases, tasks, and milestones, as well as, relationships between them.
   E. The work packages can have a start date and due date.
   F. Milestones only have a due date.
   G. Visualize all work packages, phases, milestones, tasks, and bugs/issues in a timeline view.
   H. Visualize all precedes and proceeds between different work packages.

4.10.2 A demonstration experience

Several possible demonstration experiences may be produced, used, and updated:

1. **A "free access" demonstration experience**: A virtual experience or video showing (Read: simulating) people walking into access centers amongst gardens and acquiring products for free, or going to recreational locations and using services for free, or working on InterSystem team positions without hierarchy, while using a unified information system.
2. **A resource-based demonstration experience**: A virtual experience or video showing (Read: simulating) the flow of matter (resources) through a material environment sub-composed of objects usable to humans.

4.10.3 Guides to facilitate understanding

A set of materials for facilitating comprehension of the standards to a wider portion of the global population include, but are limited to:

1. Translations of the standard.
   A. Translation of the standards and supplemental deliverables into other languages.
2. Audio of the standard.
   A. Oral narration of the design specifications (i.e., turning them into an audiobook). Due to the continuously updated nature of the specifications, some of the content may be difficult to keep up to date in audio format when a human actor is involved in the narration.
   B. Software oral production of the specifications through a software application. Due to the complex technical nature of the information, pronunciation and grammar may be an issue in the automated vocalized production of the specifications.
3. Handbook/Guidebook for the standard
   A. Each standard will have a handbook version (or guidebook) to facilitate an understanding of the specification's content, and develop an interest in the project. These companion documents are used for quick reference and a concise overview.
4. Video guides for the specification
   A. Descriptive video media of the standards presented in a professional, personal, and visually appealing manner.

During development, there is likely to exist some combination of new societal construction and former societal transition.

4.10.3.1 The benefits of virtual reality simulation

Once the stuff of science fiction, virtual reality (VR) has arrived as a relatively affordable and mainstream consumer technology. VR is a new, complex form of communication, and as with any other medium of communication, it can be used to convey arguments and facilitate change in how individuals view the real world. It is a technology that can be used to demonstrate the feasibility of designs, and it will revolutionize how populations shares their standards for society. The vividness of virtual reality can give an audience a sense of immersion, enhance the emotional impact of a message, and bypass poorly constructed analytical arguments. Individuals no longer need to "tell" or "sell" people what one what is being propose; instead, it is now possible to immerse them in the environment and allow them to freely experience it (in a virtual environment) for themselves. Experiences within immersive virtual environments are more powerful than mere imagination (e.g., reading) in terms of information transfer and influence on actual thinking and behavior.

Through the use of VR people can walk around the community and immerse themselves in the experience of its complex operation. Not only will this be helpful to developers in simulating, testing and improving a system's design, but it is also a highly persuasive marketing tool. Imagine if community could freely share a virtual reality experience of what it would be like to tangibly live and participate in community, to experience as best can be experienced virtually that which is described by the specification standards of a community-type society. It will reveal that what is being proposed in text and model form is actually possible now in the real world. Though, in fact, what is being proposed has been possible for a number of decades.

This VR experience may help individuals come to a greater understanding of what the current modern socio-economic system actually removes from them by its ongoing existence. It may reveal how the current system limits their potential. Through a well-structured simulated experience (orientation), it is probable that developers can help the public reconsider maximizing their current situation in the market-State, and instead, facilitate a shift toward a greater action to what is truly important to them in life, which they may not even be able to well articulate. When people encounter a community-type (a.k.a., resource-based economy, RBE) direction for the first time, they often think about what this direction proposes in terms of what they will lose, rather than what they will gain. Although community is significantly more pleasant, fulfilling and generous than a market-State society, it is so different that people have a difficult time conceptualizing it, and immediately think about what will be absent.

If you want to change people's minds, and if they are on a different paradigm than you, if they identify themselves with a whole different set of presuppositions at a subconscious level, you will frequently not be able to change their mind by being rational. And, the more evidence you show them that is at variance with their fundamental paradigm, often, makes them angrier and more rigid, and so, we need a more eloquent and intelligently persuasive way of helping people re-visualize what is possible (and, what they may be missing out on).

Human senses provide access to the brain and by simulating the sensory environment of a community-type society through immersive virtual reality people will much more quickly get the perspective we are trying to convey. A virtual reality experience will facilitate rewiring of the brain toward what is possible in the present, and toward our broader, and more integrated worldview. Change on the scale that is required can only be realized when people see and experience a better way.

The experience of a different reality can physiologically change a person's mind. In other words, virtual reality can literally change our minds. Think about the way current media does that (possibly, in the Orwellian sense). It is important to take virtual reality seriously and to create a simulation of a socio-economic system that is inherently positive for all human and ecological life in its focus.

Wouldn't it be great to have a free, open and shared simulator of the community? Through such a simulator we could test out different operational designs,

technologies and city configurations, and we could facilitate a personal exploration of the environment for others. A virtual simulation of community would give people a taste of the experience of a life of greater fulfillment. And then, after it is experienced virtually, one could go to our website and find the exact reasoning, designs, tools, and resources for the creation and duplication of the most up-to-date version of the community. When experienced, even virtually, I think most people in modern society will consider community a better way of living than the way they live now.

5 The project's definition

A.k.a., Formal concept of project proposal; project proposal overview, project document definition.

A project definition is a description of what the project has to achieve and how.

5.1 What is this project?

This project could be viewed as having the purpose of brining into operable existence a community-type society via an open, community-type societal [world-building] standard (known as the societal specification). This is a project proposing a testable societal [service] system. This project will result in the operation of a test-able, and therefrom, re-align-able, societal system.

This is a project, with an accompanying engineering structure, that exists to design, build, and operate a type of society with the following high-level, generalized characteristics:

1. Trade-less (moneyless) and coercion-less (non-authoritarian) production through unified information modeling (input-output service system modeling), intrinsic contribution, and common heritage resources.
2. Class-less access (Read: no higher or lower socio-economic classes) through a network of integrated habitat service systems that provide common, personal, and team access.
3. Highly automated in order to provide optimal socio-technical production efficiency, conserving resources and human effort.
4. Fulfillment-directed requirements enable optimal human life well-being and flourishing.
5. Regenerative design to organize the habitat in sustainable harmony with a larger ecological environment.

Simplistically, this is a unique project to create and sustain a highly automated, moneyless society, oriented toward human fulfillment and ecological sustainability. More broadly, the purpose of this project is to bring into existence a new type of societal system; a type of society representational of the highest optimization and expression of human potential and possibility.

In terms of information, the result of this project a societal design specification outlining a rational plan of coordinated societal-level action in life, as the potential and encoded frame of fulfillment ("good"), for anyone. Here, flourishing is contingent upon the comprehensive satisfaction (fulfillment) of the needs. Universal fulfillment of needs is the condition that allow embodied consciousness to express its capabilities freely.

QUESTION: *Without adequate conditions for the use of freedom (Read: to freely develop and express capabilities), what is the value of freedom?*

Once solution alternatives are present, a population can, together, select among the alternatives for that which is optimally in alignment with the populations fulfillment (given, that which is available). In other words, this is a project to design solutions to societal configuration, select and operate the optimal solution given what is known and available.

5.2 What problem does this project solve?

INSIGHT: *Quite possibly, the only real problems in life are the problems that are common to all of us. Therein, we need a common ("collective") response to the common problems concerning our species.*

Researchers use the term problem to describe a situation in which the current actual state and future desired states diverge; wherein, problem solving is converting an actual current state into a desired future state that is better (i.e., more desirable). Problems are opportunities. Individuals can take control of the meaning (e.g., outcome) of a problem. The only difference between "problems" and "opportunities" is the meaning given to them.

This project solves the problem of structuring information and controlling material transformations for the benefit of all of humankind; the creation of a unified socio-technical system that accounts for humanity and its environment. The system proposed by this project solves the problem of structuring and coordinating the iterative design and operation life-cycling of a human-habitat, fulfillment-service system that is likely to result in the state of all individuals of humanity continuously and consciously evolving toward their highest expression, for themselves and all others.

Additionally, in order for a developer (or funder) of the system to recognize the value of a specified solution to the problem, the following information sets must be known, each of which represents a search problem:

1. Who are the system accessors?
   A. Who are the users and operators of the system?
2. What is the system object?
   A. What is the intention for the existence of the system as an interfaceable object?
3. How hoes the system object process [newly acquired] content?
   A. What is the method by which transformations occur within the system?
4. Why is the outcome expected?
   A. What is the reasoning for selecting the current system object, as opposed to a different system object?

Society is a simplex (simple and complex) problem, wherein:

1. Simple problems are solvable with currently available data and tools (i.e., high current certainty due to current data; current solutions can be reconfigured to solve new problems). Therefore, the solution to the problem is simple.
2. Complex problems are solvable through the discovery of additional data and newly designed tools (i.e., low current certainty due to current data; current problems require altogether new solutions). Therefore, the solution to the problem is complex.
3. Simplex* problems are solvable with current data and tools, but still require research and new design because of artificial environmental limitations (e.g., limiting beliefs on the part of humans; current problems require a mixture of solution novelty and reconfiguration). Therefore, the solution to the problem is simplex.

**Note that the concept 'simplex' has additional meanings, which are detailed in The Auravana Project's FAQ.*

Additionally, in a socio-technical system there are two highly generalized forms of complexity:

1. Technical complexity concerns the physical nature of a problem situation. Technical complexity refers to the physically technical nature of reality.
2. Social complexity is associated with the relationships between the human users of a system. Social complexity refers to the consciously social nature of reality.

INSIGHT: *Complex societal problems are real-world problems, and real-world problems are complex societal problems.*

Resolving complexity in the design and operation of real-world socio-technical systems necessitates, at least:

1. Clearly explained starting conditions (goals and objectives).
2. Clearly defined requirements.
3. Clearly courses of action (methods and plans).
4. Here, 'clearly' means completely visualized and easily communicated, given a common language.

5.2.1 What are the problems with the configuration of early 21st century society?

This is a project plan that accounts for, and addresses, the largest and most common problems in modern 21st century society, including but not limited to:

1. Pollution.
2. Overcrowding.
3. Social suffering.
4. Unemployment (& lack of ability to contribute).
5. Poverty.
6. Education quality.
7. Low-quality fulfillment-service choices.
8. Significant separation in socio-economic access between the human individuals.
9. Political problems.
10. Etc.

All of these points of conflict, contention, and suffering are seen as interconnected at the societal (and planetary) level. The problems individuals experience in cities are intimately related to society as a whole. Technical problems within cities are related to society as a whole (e.g., technical problems of congestion, inefficiency, pollution) - technical issues become social issues, and social issue become technical issues -- individual issues become social issues, and social issues in feedback become individual issues.

5.2.2 What does the project propose as a better living situation?

This project proposes that people live in:

1. Community at the societal scale; have fulfillment throughout all life phases.
2. An appropriate sufficient state of human need fulfillment, without the need of money or coercion.
3. A moneyless, Stateless, classless society oriented toward human flourishing.
   A. Live without the requirement to earn and spend money.
   B. Live without the requirement to punish.
   C. Live without the requirement to live above or under others.
4. Conditions where flourishing and greater probable flow is possible.
5. Conditions where contribution develops and coordinates the planet's resources to provide abundance in access for everyone in the most sustainable way.
6. A habitat service environment with optimized access, given common access.
7. An integrated habitat systems where resources are economized.
8. A restorative environment where the ecological services are restored and optimized.
9. An environment of life-long learning, contribution, and leisure.

5.2.3 How does this project propose to solve the problem(s)?

QUESTION: *As planetary scale inhabitants, how are we going to work together for our mutual benefit?*

In part, the project proposes to solve the problem(s) through the development of an contribution-based information, decision, and material service support system. In order to completely solve the problem of societal design for mutual fulfillment, the problem and its solution must be modeled in a unified information system, and then, tested in materiality. At the highest-level, the modeling problem is one of societal intention, which directs a composition, generates a configuration, and sustains a coordination. The first step is to discover and concept model the core (axiomatic) systems of any human society. The second step is to compose and configure those systems to express the intention for the society. Whereupon, the model is tested in operation, and iterated therefrom.

How is society solved as a problem?
By asking getting passionate, questions, inquiring, resolving and synthesizing, then putting in effort together to construct and sustain:

1. How do we best, select a societal system and plan there that works for the benefit of everyone?
2. How do we, fit into our surroundings?
3. How do we, identify the effects of actions?
4. Does what we do, match (align) with the things we need?
5. How do we improve (i.e., what are the questions to ask to make some system better)?
   A. What is the system 's purpose (i.e., what is it for; what is its function; what)?
   B. How does it serve people (i.e., what is its benefit; what is its value; why)?
6. How do we best:
   A. Solve collective action problems
   B. Acquire empirical data about the world (a.k.a., make empirical findings about the world). Empirically review and validate.
7. Most other problems are a result of these problems.

5.3 What is the project's direction?

This project proposes 'access' as a definition of direction (i.e., 'access' is a definable direction). All individuals in the community desire access to the following interfaces, all of which can be measured and designed in common:

1. A high quality of life, given what is available.
2. A high-standard of living, given what is known.
3. A life where the human individual flourishes

together.
4. An objective, accountable, and grounded life-coherent service system that meets all human need.
5. A common life-ground of information and material that forms the structuring of our higher capacities (our higher potential selves).
6. Access to our own [self-integrating] source of power and creativity.
7. A society formulated in exact and understandable terms.

Access to genuinely understandable and testable fulfillment requires realization of the following values that are at the core of an adaptive and helpful orienting [navigational] system:

1. Access to **freedom** [to express capabilities].
   A. What is freedom to the individual?
   B. What is the likelihood of the fallibility of fulfillment?
2. Through **justice** [as universal need fulfillment, required by all human embodied consciousness].
   A. What is freedom to those individuals who cannot make use of it?
3. By means of **efficiency** [in our common actions] within a common ecology.
   A. How does optimization generate freedom (free time)?

Together, humanity visualizes a shared understanding of what makes life [most] meaningful. What is most mutually beneficial for all of our lives?

Together,

1. Humanity will construct a shared vision, and the resulting societal solution will be tested to express these values (conditions of the vision).
2. Humanity will not execute upon a societal solution until it visually expresses these values (conditions, principles, inquiries, etc.).

Social systems lower their entropy by cooperating and caring. Social systems raise their entropy and de-evolve through fear. If there is fear, there is no trust, if there is no trust, there is a not a lot of cooperation. A societal system expression without the value conditions of 'cooperation' and 'caring' is likely to structure a sub-optimal state of fulfillment. Humanity can come together to share a common purpose, our common interest, our need fulfillment and the care-taking of the ecology. Then, through greater information coordination there is the potential to safely access more extensive forms of technical function.

In application, value functions are qualified boundary constraints (encodings) that resolve an issued decision toward a particular direction of intention. A value is a specifically desired orientational state (or "preference") among all potential attributes, states, or preferences.

The two axiomatic boundary constraints are:

1. **Specific limits that must be met.**
   A. For example, there are ten people in the population, and ten people must eat. This project proposes, in the Decision System, a set of social inquiries, social thresholds by which tasks (solutions) are decidedly assigned resources, and often, effort, on the part of the InterSystem Team.
2. **Specific limits that cannot be exceeded.**
   A. For example, there are a countable number of fish in the sea, and a rate at which they re-population; to ensure continued access to fish as a nutrient source, then there are only so many fish that can be taken out of the ocean during some given duration, least the fish population not be capable of recovering its population.

In order to effectively resolve these boundary conditions in the design and operation of any new system, decision analysis is required (i.e., a decision system is necessary). In the real world, it is assumed that there are potential impacts to others in an environment, given one's own decisioning. Decisioning in the real world necessitates a process [method] for identifying and prioritization a single selection (e.g., state or solution).

5.4 What defines the project's vision?

A vision is a picture of the future.

1. The project envisions a network of walking community garden cities.
   A. More completely, the project envisions an informational-spatial interface network of walking community garden of sub-global habitats.

More simply, the project envisions:

1. A life-work environment where most of the population lives in integrated family- and garden-oriented smart cities with life-work lifestyles based on optimizing life fulfillment.
2. A population-wide access system with no trade, no market, no currency, no money, no finance, no economic exchange.
3. A high-degree of technical automation with a concurrently high-degree of individual challenge to promote a lifestyle of optimal flow and well-being.

5.4.1 Vision statement?

A vision is a desired future state. A vision statement describes an organizations aspirations (i.e., why does the organization exists; what is it en-visioning?).

- Vision statement - describes the intentions, aspirations of the organization.

Among community, planetary resources are seen for what they are, as the common heritage of all the planet's people. These resources are the 'life' satisfiers of every human; the sustainers of human fulfillment, and a sub-element of a larger total ecology that sustains (or, does not sustain) our individual well-being. Herein, fulfillment services are selected [as solutions] to sustain, (rather than predation upon) social and ecological [life-]support-systems. Resources and societal-level requirements are seen as common in a community-type society.

> **QUESTIONS:** *How can any individual truly be fulfilled in life? How can we create lives that are truly worth living, given that these lives are knowably finite (i.e., come to an end)?*

Herein, the concept of fulfillment has, among others, the following sub-conceptions (the different sub-dimensions of fulfillment at the societal-level):

1. Human:
   A. Need (there exist conscious embodied entities) = fulfillment.
2. Engineering:
   A. Requirement (the need is connected to the some direct output, via a process) = fulfillment.
3. Social:
   A. Well-being (the requirement is connected to the individually common human experience of well-being) = fulfillment.
4. Habitat:
   A. Service (the ecology is connected to as a service) = fulfillment.
5. Planet:
   A. Ecology (the potential of human life is connected to as a planet) = fulfillment.
6. Life:
   A. Potential = fulfillment.

5.5 What defines the project's mission?

A.k.a., What is the directive of this project?

A mission is, in part, why 'do' what is to be done (i.e., why do the project's work?), so that it can be done well. In application, the concept 'mission' means 'task' together with 'purpose', clearly indicates the action to be taken and the reason. In common usage, especially when applied to lower level organizations, an activity selected/assigned to an individual or unit is a, 'task' (or, mission).

- **The project's mission** is a global network of operationally localized habitat service systems that construct, prioritize, and complete tasks based upon a conditional set of value decided inquires/criteria and a unified information [construction] system.

5.5.1 Mission statement?

A mission statement describes an organizations purpose (i.e., why does the organization exists, re-directing it).

1. The project's mission statement is to bring into "living" existence a global network of integrated city systems in which human individuals 'live' in fulfillment with one another and the larger ecosystem.
   A. 'Living' is to continuously adapt and move intentionally against gravity.
   B. 'Live' is to have human need requirements met.

5.6 What are the project's expected outcome(s)?

An expected outcome is the intention[al criteria set before action that] results in a functional and/or conditional state of the environment. What results are expected?

It is expected that the project will result in:

1. A societal system configuration that will verifiably be the best (optimal) for everyone, given the information and material availability.
2. A societal system reduced in suffering, adaptive toward an optimal state of flow (of love) in each moment of our individual lives.

5.7 What is the project expected to produce?

The project needs to explain:

1. **What is the product or service to be produced (and, offered to the public-market-State)?**
   A. The service to be offered by this proposal is community at the societal scale. The products are: a unified set of societal-level community standards and a network of community habitats. Necessarily, the transition to community-type living is also a service.
2. **Technical background on the product or service?**
   A. The service is a societal-level operation where human needs are optimally met given what is known and what is available. By optimally meeting human needs, humans experience

well-being and are most likely to flourish. This product/service includes a set of societal knowledge and agreement standards that orient material habitat operations where the global population lives with sufficient need fulfillment.

3. **Market for the product or service?**
   A. All humans have needs. Given global coordination of information and resources, there is no need to trade to meet needs. The fulfillment of others' needs affects the fulfillment of one's own needs. All humans desire well-being. Together, it is possible to co-operate society where all humans flourish. Many humans in the 21st century suffer due to created by the market-State. The ecology of the 21st century is significantly harmed by the practices of the market-State. Everyone desires community; some are living in worse conditions than others, and are in greater need of community [operations at the societal scale].
4. **Process by which the product or service is produced?**
   A. The service (community) is produced by the development of community standards and the construction of a community network of habitat service systems. Societal specifications standards are developed by working groups who work for a standards setting organization. Standards development requires collaborative design and distribution software. The construction and operation of a habitat network comes from production and regulation by market-State organizations. Habitats require light- and heavy-industrial production. Community also necessitates education, a service that may be provided through university education. On a day-to-day basis, the standards will be developed, transition operations will be conducted to move people and resources into community, and habitat team operations will occur to meet human needs within the habitat network.
5. **What facilities and personnel are needed for the operation?**
   A. There is the requirement for the construction of a habitat facility as a minimum viable product.
   B. There is a requirement for the following types of personnel: project coordinators, contribution service personnel, information development personnel, habitat team personnel, and relationship development (transition team) personnel. Because information working groups work primarily through software, there is no need for a specific physical facility for them to work in (of course, internet computing technology requires a physical facility). Habitat teams work in a populated area with fixed physical boundaries (i.e., human settlement) -- a physical location, with a human population, where the populations needs are met through [habitat/ecological] services. In the early 21st century, market productions will be required to construct and operate both the standards setting organization and the habitat network. Additionally, State regulations (policies) and State workers will be required to create new habitats and transition old settlements to those representative of community.
6. **What is the projected revenue from the operation?**
   A. Community does not trade tokens; there is no expectation of financial revenue; instead, there is only expectation of human fulfillment.
7. **What are the qualifications and background of the team?**
   A. The team must be educated sufficiently and/or qualified or sufficiently experienced to complete the work. The team

5.8 What are the preliminary milestones?

Top-level milestones include, but may not be limited to:

1. Deliverable of a unified societal concept of operation in the form of a set of societal system standards. [COMPLETE]
2. Deliverable of coordinated updates to the societal standard to bring it up-to-date given newly available information. Note here that a standard's filename suffix identifier identifies the revision: SSS-..-...-###
3. Deliverable of a yearly integrated commit to republish the standard after as a final [edition] working group integration point. Note here that a standard's filename internal identifier identifies the edition: SSS-..-###-...
4. Deliverable of sufficient number of individuals capable of constructing and operation the first city and its informational system (or, some portion of it).
5. Deliverable of sufficient financial resources and legal contracts to supply the requirements of constructing the first city and its informational system, and not just some portion of it.
   A. Deliverable of actual resources for construction through to operation.
6. Deliverable of sufficient jurisdictional (legal) agreement in writing that construction and operation of the first city and its informational

system is safely certain.
7. Deliverable of sufficiently operating habitat service system (i.e., city system) and societal information operating system.

5.9 What are other common naming classifications of this type of society?

Egalitarian individualistic:

1. Respect for individual decisions and autonomy.
2. Sharing access (to common resources) without wealth disparity.
3. Systems in place to meet all needs.
4. No motivation to accumulate excess (or "be greedy").
5. There is not coercion.
6. The hierarchy is not authoritarian, but one of choice, expertise, and accountability.
7. Holistic in nature accounting for both the individual (me) and the group (we). In early 21st century society, people are taught to think its one or the other and there can't be both accounted for simultaneously.

5.10 What defines individual behavior in the project?

All 'behavior' is 'motion'. It is possible to model motion commonly (i.e., it is possible to model our common behaviors). In a human body, motion feeds-back to consciousness a spectrum of feelings.

As feeling entities, all human are individually (i.e., "we are all, individually) seeking fulfillment and relief from suffering. Notice the direction of flow that feelings represent -- into fulfillment and out of suffering. This is not to say that individuals want mere pleasure or the easiest possible life. Much of what growth to an individual consciousness entails feels like a struggle, as growth through challenge.

Optimal human behavioral development and societal advance occurs,

1. By optimizing human service fulfillment, without which individuals suffer loss of life capacity by measurable degree of regression dis-allowance (dis-advantage).
2. Through elimination of unnecessary suffering from life capacity reduction due to deprivation of life fulfillment (i.e., "life goods").

5.11 What are the primary societal project tasks?

This project is sub-divided into a set of axiomatic tasks representing a parallel project-level life-cycle, which is, to design, develop, and live in an emergent, community-type society in time with available resources, together.

- The first phase of project implementation initiates actions to measure the existing environment in order to identify the environmental situation in which the project exists.

The following are axiomatic task categories (informational phases) for this societal building project:

1. **Project coordination and planning**, including multiple sub-project and project plans.
   - **THE PROJECT PLAN**, which details the *how* and *when* of what is to be constructed into "our" lives.
2. **Societal systems development engineering**, including the design and development of the unified societal information system and internal habitat service systems (cities). This supra-process involves the Project's primary sub-processes of: **requirements engineering** (specifying and sequencing requirements), **designing** (preliminary to detailed and conceptual to technical), and **prototyping** through to fully **developing**.
   - **THE UNIFIED SOCIETAL SYSTEM SPECIFICATION**, which details the *why* and *what* and *how*.
3. **Societal systems operations engineering**, including operating and monitoring the existent unified societal information system and the material habitat service systems (network of cities) therein.
   - **THE UNIFIED SOCIETAL SYSTEM SCHEDULED EXECUTION** by the societal InterSystem Team, which details the *why*, *what, and when*.
4. **Our individual experience in society**.
   - **THE INDIVIDUAL'S LIFESTYLE**.

Here, society could be viewed as an intentionally (specifically) planned and scheduled lifestyle.

The planning of configured access to the habitat defines societal-level planning. A control[lable] volume of ecology, known as a 'habitat', is identified, both informationally and positionally. Resource flows into the control volume [habitat service system] and output emissions from the control volume [habitat service system] are designed and measured. Data integration allows for the capability of a multi-city, habitat network operations service environment where all resources and access opportunities are shared in common.

> **NOTE:** *In networks, the size of a particular change does not necessarily indicate the scope of its effect, and care must be taken to avoid changes that maximize local benefits at the expense of global effects.*

5.11.1 Society is a progressive emergence

At the societal level, emergence could be viewed as **progressive elaboration** - the system (e.g., society) is progressively elaborate as the project's information system develops, becoming increasingly well informed and unified as time and iteration occurs.

5.11.2 Societal-level planning

> **APHORISM:** *Those problems which are not acknowledged are generally repeated.*

Together, a social population (a society) can plan their next action(s); the population can plan the next change to the [state of the] environment. At the "highest" conceptual-level, this plan is expressed as the unified 'societal information system'. At the material-level, this plan is expressed as the controlled 'habitat service system' (i.e., the city-system network existing within a larger wild and decidedly care-taken ecological system). A cooperative society plans their information system; and that unified plan is sub-composed of a materialized, environmental service system.

5.11.3 Society is a project task

> **INSIGHT:** *Society is a projection, as a systems engineering project.*

This societal building project may be sub-organized into the following parallel task domains, where contribution is necessary:

1. **STEERING COMMITTEE SUB-PROJECT**, because this proposed society will come into existence when the market-State is highly present on the planet.
   A. Market and State Interface - contractual and jurisdictional agreements.
2. **SOCIETAL ENGINEERING SUB-PROJECTS**, because this proposed society will iterate through existence when usefully contributed work is done.
   A. Societal system design (specifications).
   B. Societal system implementation (operations).
   C. Human system inclusion (population migrations into community-city network).
   D. Habitat system operation (intersystem project teams complete service requirements to meet the needs of all human users).

5.11.4 Human life-cycle analysis

The purpose of life-cycle analysis is to acquire sufficient information to determine and select actions that will meet objectives of adapting and optimizing life over iteration, cycles of time in an uncertain environment. The output of a life-cycle analysis is a situational input into decisioning.

Human life-cycle analysis is a three-component process:

1. **Inventory analysis** (needs, requirements) as the identification and quantification of environmental signals and human receptor for those signals.
   A. Here, needs [inventory] are often seen as part of the problem domain, whereas requirements [inventory] are considered part of the solutions domain.
2. **Impact analysis** as the technical qualitative and quantitative characterization and assessment of the consequences of resource use and environmental releases.
   A. Here, issues are often seen as part of the problem domain, whereas objectives are considered part of the solutions domain.
3. **Improvement analysis** as the evaluation and implementation of opportunities to reduce environmental burdens.
   A. Here, values are often seen as part of the problem domain, whereas conditions are considered part of the solution domain.

5.11.5 What is a human quality standard?

A.k.a., What is the standard for human quality?

Progress is the development of factual quality standards for human society, as those standards that define and explain what humans require, and how to optimally coordinate the fulfillment of those requirements, given what was known available at the time the standard was synthesized. What is sought as a goal, as [mutual] progress, is the meaningful improvement of the well-being of each individual in the short and long-term. The quality that everyone deserves is the best that humanity has to offer as a planetary civilization.

5.12 What does humanity commonly desire out of an engineered societal system?

This project proposes engineering as the primary method of project operation. This method structures 'how is this project' to be carried out. This project is to be carried out in the most ordered, organized, and prices manner possible through systems science engineering.

Herein, if a society were viewed as an engineering, safety, and provisioning service for the fulfilment all of humanity (i.e., for all planetary human users), then it would likely maintain the characteristics of:

1. A planned societal system.
2. A coordinated societal system.
3. A cooperative, multi-user and decision-supported environment.
4. A model of society most accurately aligned with human fulfillment (given what is known).
5. A unified societal system with a set of local habitat

service systems (i.e., cities) forming an [operational] global habitat service system network.
6. A society oriented in its intended design toward [the felt experience of] optimum access to individual human fulfillment.

In order for a social population to function "well" (Read: cooperate toward common fulfillment), it needs to establish and maintain a common ground of shared meaning, including mutually shared data, knowledge, values, and vocabulary.

In early 21st century society, different "fields of expertise" may use different terms to mean the same thing. However, when [people from] different fields converge in a common setting (Read: into community), a common ground of meaning must be established. The necessity of common ground is important for at least two additional reasons for sharing the community's knowledge with others outside the community-type society, and "for developing a shared understanding of complex systems of ideas that the community develops.

5.13 What might an engineer ask first about this project?

An engineer who looks at the problem of society might ask, in concern to technology, "What does humanity need"? And, an engineer would likely respond, "Humanity needs a helpful socio-technical system, a unified information/habitat service system". The engineer might think next of conditions. At a social level, "humans desire to be helpful to one another". Thus, a materialized (from planning) socio-technical system may (or may not) coordinate and facilitate human helpfulness. Helpfulness is a sign of togetherness, as is sharing; both of which represent caring, which occurs between others (at the highest population-level), among a unified group who share commonality.

> **QUESTION:** *How might one societal solution be capable of orienting toward greater (or lesser) states of fulfillment than another?*

5.14 What is the 'socio-technical' view of society?

> *A.k.a., Ultra-large-scale (ULS) hybrid-cognition-intensive, cyber-human-hybrid-autonomous, cyber-socio-technical systems (HCI-STS/STR).*

A socio-technical system is a social system with technical implications and in conjunction, the technical system has social implications. Technical systems with social implications and social systems with implications for technical systems. Implementation runs both ways. Every system humanity builds to interface with the embodied world of human materiality also reconfigures that embodied space, altering cognitive and social practices. This happens because implementation encodes a particular formulation of the desire for effectively computability. A desire that humans reciprocate when they engage with that system. A socio-technical view is a view where need is resolved through socio-technical [service] production.

All human organizations comprise of two interdependent systems, referred to together commonly as the 'socio-technical system':

1. A social system, due to the presence of a living organismal population (humankind).
2. A technical system, due to the conscious design and creation of material organizations that automate service fulfillment (i.e., tools of increasing cognitive information about an extant reality that allows for their construction, such as the creation of a hammer in history to the historical creation of the chain saw. A technical system produces technology for a social system; that technology is used to automate and ephemeralize required service fulfillment in order to produce a higher order stability in access, thus more free time to pursue higher capacities that humanity has the potential of expressing and otherwise actualizing.

In community, there is an integrated [human] socio-technical system that can be understood and designed. It can be understood and designed in part, or in whole, and its actualization has real world consequence for conscious living beings (until it doesn't). Any ecological or human societal system could be considered a socio-technical system because it combines social organisms (humans) with technology. Changes in one system affect the other system.

For example, the rethinking of 'dishwashing' as a system might make it more convenient to clean dishes (for everyone), as well as solving one of the basic survival problems (of everyone), water conservation and processing.

A socio-technical system necessarily has:

1. **Social interactions** can be thought of as interactions with people.
2. **Services** can be thought of as a parallel category of interaction between humans, [logical] process, and [material] objects [in common access]. Here, technology is a service.

Change coordination (change management) is a component of a quality assurance system that ensures all changes are accompanied by:

1. **Support** – developers, organization, user.
2. **Control** – specifications, documents, algorithms, and others.

3. **Service** – to support people.

Societies socio-technical information flow, in the form of projects, involves the flow of different resource-types (which are common to all individuals):

1. **Information flows** (a.k.a., computation and visualization).
2. **Material flows** (a.k.a., material science and positional mechanics).
3. **Time flows** (a.k.a., coordination and scheduling).

5.14.1 Technology

Technology is the mechanical and informational processes by which things function. Technology is merely how things made and done. Technology reflects the engineers designers and programmers who make it. Made technology is a reflection of the makers knowledge. Technology extends human capability (i.e., machines extend human capability).

> **APHORISM:** *We can have the best possible 'how', but if we mess up our 'why' or 'what we might do more damage than good.*

In this subject, Technology is the know-how and creative processes that may assist people to utilise tools, resources and systems to solve problems and to enhance control over the natural and made environment in an endeavour to improve the human condition.

Technology is the art of technical [systematic] servicing. Or, technology is the study of the potential of an object [in service]. The study of in-service objects. Other definitions for technology include:

1. The purposeful application of knowledge, experience and resources to create products and processes that meet human needs.
2. The study of systems of making or producing.
3. Products, knowledge and skills working together to improve the human condition.

5.14.2 Socio-technical issue coordination

The common elements of a socio-technically coordinated societal system include:

1. Social information composition.
   A. Issue situation.
2. Technical decision planning.
   A. Issue planning.
3. Technical decision identification.
   A. Issue identification.
4. Technical decision analysis.
   A. Issue analysis.
5. Technical decision solution.
   A. Issue solution.
6. Technical solution execution.
   A. Solution execution.
7. Technical solution monitoring.
   A. Issue monitoring.

5.14.3 Service and asset production

There are two primary types of service (in a total asset ecosystem); wherein, the asset types are:

1. **Process/activity/operation/concept** - Service is the product (service is the asset).
2. **Object/product/resource/shape** - Service to support the product (the shaped asset is an object; the asset is the service to support the object).

Simply, the common production types are:

1. **Mass production** - the 'batch' size is infinite.
2. **Batch production** - the 'batch' size covers a range characterized by a finite number.
3. **One-of-kind production** - the 'batch' size is one.

Simply, the common production scale types are:

1. Production [selected 'solution batch'] for the **local** HSS (local city).
2. Production [selected 'solution batch'] for the **global** HSS (city network).

5.14.4 Societal multi-level design modeling

A society's multi-level design could be modelled as a configuration of four levels:

1. **Product-technology systems (technological product systems)** - physical objects that originate from a human action or machine process and exist as part of a service system. As these objects are made up of technical components, the term 'product-technology system' is used. This refers to tangible, inextricably linked technical systems, physically present in place and time. With most of these artefacts, you could 'drop them on your toes'. Product-technology systems generally fulfil one or more clearly distinguishable functions. A system dysfunction occurs as soon as one or more technical components are missing.
2. **Service-product systems (Habitat service system)** - built of physical as well as organizational components, which form a united and cohesive whole that together fulfils a specific function, usually definable in time and place. The system fulfils one or more clearly defined functions that can no longer be performed if one of the technical or organizational components is missing.
3. **Socio-technical systems (Societal Sub-Systems)** - the combination of information systems that

fulfill societal functioning. Changes that take place at this level are often referred to as a 'system innovation', which can be defined as 'a large-scale transformation in the way societal functions are fulfilled'.

4. **Societally experienced system(s)** - the population (community) of people living through a particular societal design, including the sharing of values and understandings.

5.14.4.1 Why is multi-level design modeling necessary?

Multi-level design modeling is necessary in a real world socio-technical systems for safety:

1. Navigational framing (social system).
2. Generative design (decision system).
3. Constructed operation (material system).
4. Expressed living (lifestyle system).

5.15 What is a real world, socio-technical systems engineering solution?

The real world community model is the society's highest level [real world] data [structuring] model, and it is detailed in the Decision System Specification (where resolutions are determined). The real world community model is a socio-technical systems engineering model. The socio-technical systems model that generates and records potential, and instantiated, societal solutions. Currently, the community specification (per the Decision System) has assigned the name 'real world community model' to that highest-level societal solution model that visualizes (represents) the system and sub-system conception of the unified societal system.

In societal engineering, everything is an understood, or an understandable, expression of the societal system, which requires of the observer the ability to think systematically and have systematic access to relevant information.

Socio-technical systems engineering refers to the design and deployment of a societal system. Socio-technical

Society does not only require technical-economic interventions, but social ones as well. The idea of socio-technical systems engineering refers, in part, to the engineering of the interaction between conscious beings who persist together in a common material world. There is an interaction between consciousness and an environment, and because, there is intention to survive and thrive (i.e., enhance life capability), then there is also the cognitive presence of [material] 'usability'. Technology is automated functioning usability. Technology is usable for various orientations: from generating fulfillment, and doing so more rapidly, to generating conditions of suffering, and doing so more rapidly.

Humans have something resembling 'needs' in society, of a social and technical nature. Project engineering may be applied to account for the completion of these needs. In a society structured through project-engineering, there is a requirement for a common decisioning procedure (a decision model, protocol, algorithm) to execute control, the 'controller' resolves decisions common to all individuals (Read: socio-parallel solution inquiry). In this proposal, there is a social control decisioning (projects) and a technical control decisioning (technical solutions). Engineering solution decisions (Read: technical solution inquiry) provides all potential workable solutions, ranked according to societal and organizational engineering objectives (a.k.a., conditions, constraints). The social organizational inquiry determines and selects for execution upon by InterSystem teams (into community existence) the optimal engineering solution, given that which is available. This social conditioning is affective at all levels, because it is the individual among the social where knowledge and access is shared (though sharing may be restricted and manipulated under some, less fulfilled, socio-technical contexts).

> **NOTE:** *In the real world, a life-coherent organization is one in which the component parts are coordinated toward a common life objective (life fulfillment).*

A socio-technical service system is characterized as:

1. **A Hybrid of:**
   A. A socio-technical system is a 'hybrid' type of system in the context that its components come from (at least) two different categories of things: some components are ordinary material, hardware, and/or software objects, whereas the other category is that of 'human' life-beings. Note that most socio-technical systems also contain elements from a third category, a category consisting of information (abstract entities).

In application the socio-technical system layers include:

1. **Human:**
   A. Socio-technical systems involve humans both in the role of operators and in the role of users. Operators are sub-systems of the larger system in which humans contribute (perform) their operating work. Users benefit (or are expected to benefit) from the contribution of human operators. Humans are 'free' (type of access) to use the system as a service, in the case of a socio-technical engineering, to participate in its sustained creation.
2. **Technology:**
   A. A proper functioning socio-technical system requires the co-ordination of the actions of all systems involved (coordinators, developers,

operators, and users). Technological development and application will usually be accomplished through procedures (protocols/ rules), and the design of such procedures (whether machine or human) is therefore an integral element of the task of designing a service system.

3. **Information:**
   A. A human decision to follow a particular rule requires, first of all, an analysis that the situation is one where the rule applies. But even when an operator decides that a particular rule applies, he or she can also be expected to perform an analysis as to whether or not it is in the person's interest to follow the rule. Often, this process of analysis is known as interpretational freedom. The history of technology consists to a large extent in attempts to remove the 'friction' in the system that is caused by the (interpretational) freedom of operators, and many if not most of these attempts have been successful. Here, it important to consider both: (1) thinking better about the sort of instructions that operators receive, and (2) simply remove the [human] operators completely. Operators are everywhere and continuously being replaced by hardware-software systems. This second option is of course no panacea: hardware-software systems can fail as well, even if differently.
4. **Resources:**
   A. All real-world physical system are composed of material resources, including the bodies hof humans and other life-forms.

A societal system represents a broad class of sub-systems where operational [decision] protocols and team procedures form a unified operating [service] system of individual "stakeholders" who live together in a living system with knowledge of physical "natural law" processes.

A city is an engineered socio-technical system; a [globally and locally unified] human service fulfillment platform. A [community-type] habitat service system is an environment where access and services are available for free.

In general, complex machines work in the same way as organisms. In a complex machine, as in an organism, there is a sensory input, expression output boundary, with a processor inside. In organisms, the sensors measure life-relevant data (as in any system, sensors measure system-relevant data).

In order to effectively construct real-world socio-technical systems, service systems require:

1. Sensors.
2. Processor.
3. Expression interface.

In community, the user places requests for service [output] on the unified information service system, and the habitat service system responds to the users demand.

'Negative' requirements are factors in a living organism's environment that prevent it from surviving there, or limit its highest potential development, there. Those factors are called 'limiting factors'. They include soils, temperature, water, sunlight and physical barriers. Physical barriers may include landforms and water bodies. They often prevent a living organism from moving to another place when conditions get bad in their regular habitat. Real world socio-technical systems must account for real world sources of information about the state of the dynamic ecological habitat, including but not limited to:

1. Habitat temperature.
2. Habitat nutrient profile.
3. Habitat air.
4. Habitat water.
5. Habitat sunlight.

5.16 What would a real-world, socio-technical systems engineering solution visually look like?

At a high-level, a unified societal system solution may look like an information structure with the following data model:

1. Ecological life service support systems
   A. Habitat service system
      1. Habitat life support service systems
      2. Habitat technology support service systems
      3. Habitat facility support service systems
2. Societal project information support [Plan] system
   A. Social System.
      1. Direction.
      2. Orientation.
      3. Approach.
   B. Decision System.
      1. Life support service system priority.
      2. Technical service system priority.
      3. Facility service system priority.
   C. Lifestyle System.
      1. Education life phase.
      2. Contribution life phase.
      3. Leisure life phase.
   D. Material System.
      1. Habitat service system network (global HSS).
      2. Habitat "city" service system (local HSS).
      3. Material system operational processes.

4. Spatial interface constructions.

Herein, for every complex service there is a network of sub-services, wherein and throughout there exists the condition of equal access to all that humanity has to offer the rest of humanity, by sharing without a trade- or coercion-relationship.

If a system comprises interrelated parts contained within a boundary serving one or more functions within an environment, then humans are both systems themselves, as well as parts of larger systems. Here, socially contributive interactions to the structure and usage of services primarily occurs as part of an InterSystem Teams (i.e., Accountable InterSystem Teams primarily do the work to develop and maintain services):

1. Life support intersystem team.
2. Technology support intersystem team.
3. Exploratory support intersystem team.
4. Decision support intersystem team.
5. Standards development intersystem team.

If society is a moving vehicle (an analogy), then toward what direction is the vehicle pointed and heading. It is essential to figure out which direction that vehicle is to be pointed. If it is pointed at fulfillment, then flourishing for humanity is likely. The appropriate power, steering, and destination are all important to building and maintaining fulfillment at the societal scale. A human transport vehicle is a micro socio-technical system. Societal engineering is clearly a socio-technical, and not simply a technical, or simply a social, problem.

In order to produce a socio-technical system,

1. Collect human requirement measurements (metrics & benchmarks).
2. Model the world and potential objects in the world.
3. Synthesize uniquely attributable habitat service system [world] designs.
4. Analyze habitat service system [world] designs.
5. Select optimal habitat service system [world] given an objectively measurable set, which is executed through a material operation (process).

What is an 'economy' within a unified societal system oriented toward human fulfillment and ecological well-being. An economy is a sub-set of nature, a habitat service system - a harnessing of human technology to the larger planetary and cosmic ecosystem to facilitate our own fulfillment. An economy could be said to be a system of resource flow and transformation that produces life services and life "goods" (life requirement results), and not life "bads" (e.g., externalities, unnecessary suffering and artificial limitation), over time.

- The physical environment where an organism lives is called a 'habitat'. A 'city' is a controlled 'habitat'. An 'economy' is the current (input-output) transport configuration of all resources in the 'habitat'.

The social meanings that people attach to environments through their interactions and ongoing socialization play an important role in determining human behavioral responses. This outlines the important role of the living area serving the functions of the human needs and actions.

The facility and life support service systems are support for human survival and flourishing, and that support is expressed through the operation of a set of [support] services. These services operate together, for the betterment of everyone, in order to provide a three point platform upon which a stable society may manifest and grow. Therein, each services operates through a set of common (to all appropriate systems) operational processes, that prioritize and triage resources and tasks.

Humans are a living system, and individual humans are a social organisms with complex communication and information processing capabilities who group together for mutual benefit (e.g., shared food, values, challenges). Such groups constitute social systems, and they become socio-technical systems naturally through technology.

INSIGHT: *We are a part of the systems we build, and therein, they build us too.*

5.16.1 Societal information system de-composition

Given the information available, any society may be informationally sub-composed from unification into four divisions of life-cycling experience, for any individual of the societal population:

1. Social.
2. Decision.
3. Material.
4. Lifestyle.

Although integration operations occur continuously in a unified information system, there are methods unique to each sub-structural system, that organize its composition.

1. Social system core methods:
   A. The core discovery method is that of science.
   B. The core reasoning method is that of logic.
   C. The core orienting method is that of value.
   D. The core directing method is that of testable goal intentions.
   E. The core life method of social memory is that of data storage and retrieval.
2. Decision system core methods
   A. The core decisioning method is that of integration (of sufficient information to resolve a specification, tested to solving a social issue that

generated a requirement for the decision).
   B. The core temporally coordinated execution method of projects.
   C. The core positionally technical solution method of engineering.
3. Material system core methods:
   A. The core materializing method is that of material cycling (more commonly, production and recycling).
   B. The core material method of access is that of a service interface operation.
   C. The core material interface support [infrastructural] method is that of service operations.
4. Lifestyle system core method:
   A. The core life method is that of the 'flow' life-cycle.
   B. The core life method is an entrainment alignment to natural cycles.

5.16.2 Simplified synthesis of a community-type society

The societal informational sub-structural view includes (social, decision, material, and lifestyle):

1. [Social] Data - situational issue.
   A. [Social] Knowledge - socio-technical understand ability.
   B. Technical knowledge - standards.
   C. Social knowledge - values.
   D. [Decision] Objective principles - objectives and requirements.
   E. [Decision] Algorithm/program - software.
   F. [Decision] Computation - computing.
   G. [Material] Construction - materialization.
   H. [Material] Materials - resources.
   I. [Material] Interface - service.
   J. [Lifestyle] Sensor - survey.
   K. [Lifestyle] Indicator - indicate cycles and issues.
   L. [Lifestyle] Evaluator - evaluate service and experience.

5.16.2.1 Briefly, how does design occur?

In community, design occurs via specific methods, given what is known:

1. How does design occur (what is a social design, social standard)?
   A. In community, social in the context of societal design means that the design considers the whole [societal] system of life support and socio-technical functioning, in terms of how the different machines and services interface with one another and humans (eventually forming the exploratory support service). Different machines can function as modules in a wide array of integrated systems.
   B. In community, design occurs through a unified, project-engineering integration method.
2. How does [re-]alignment occur (what is technical design, technical standard)?
   A. In community (or, any society), a decision system controls (planning and executing) the direction of alignment.
      1. Control direction.
      2. Planned direction alignment (selected solution).
      3. Executed action/task to direct alignment (accountable contribution).
      4. Surveyed resulting alignment (user-developer feedback).
      5. Evaluate alignment data (determine situation).
      6. Plan direction alignment (selecting solution).

5.16.2.2 Briefly, what is decision control?

A decision system controls (planning and executing) the direction of alignment:

1. Control direction of materiality.
2. Planned direction alignment (selected solution).
3. Executed action/task to direct alignment (accountable contribution).
4. Surveyed resulting alignment (user-developer feedback).
5. Evaluate alignment data (determine situation).
6. Plan direction alignment (selecting solution).

The decision [construction] system structural controls:

1. Is the control system transparent? If no, then the task is impossible.
2. Is the control system a digital algorithm? If no, then the task is not impossible.
   A. Can consciousness among the population, who hold the intention, be brought up to the level of understanding of the computational intelligent system? If no, then the task is impossible.

Socio-technical planning decisions are informed, given:

1. What resources (informational, human, material) are available?
2. What is known possible (knowledge, standards) to do, accomplish, create, and sustain with those resources?
3. And, dis-/mis-informed by, What is concealed?

Socio-technical operational decisions are informed, given:

1. What are the actual, datum operations to be designed (task, solution)?
2. When are the actual, datum operations to be executed (timing, access)?
3. Where are the actual, datum operations to be executed (materiality, resources and logistics, teams)?
4. With what, specifically are the actual datum operations to be executed (resources)?
5. How are the actual datum operations to be transformed (method of operation)?

Coordination control decisions (a.k.a., project decisions; social inquiry decisions)

1. What values (principles) are to be encoded into -ware through the software programming?
2. What experience will be encoded for individuals, as sensory in their environment, through the -ware programming of those values (principles) into its designed operation?
3. What is the optimal (most efficient and effective) timing logic for encoding those values?

There are [relatively] two types of [construction] decisions when it comes to the operation of a socio-technical environment:

1. There are relatively social decisions -- the project approach to the habitat:
   A. Focuses on describing the world in terms of
      1. Trajectories, directions, imperatives, objectives, time-frames, resources, and services
      2. initial conditions,
      3. given issue situation,
      4. wherein, the dynamical rules become expressed as:
         i. scheduling, coordination, controlling and monitoring
2. There are relatively technical decisions - the engineering approach to the habitat:
   A. Focuses on the dynamical rules as
      1. Which physical transformations are possible,
      2. Which physical transformations are impossible, and Why (for all).

In general, a highly-populated community-environment appears as a walking life-space, with automated transportation by rail and/or vehicle (depending on size):

1. The unified information systems model is visualized in the decision system because that is where planning occurs?
2. The unified information systems mode is visualized in the social system because that is where information integration occurs?
3. The unified information system is visualized in the lifestyle system because that is where the experience of all systems occurs?
4. The unified information systems model is visualized in the material system because that is where all encoding and user interface design (and development) occurs.
5. The unified information systems model is visualized in the project plan because that is where all information sets are necessarily associated with resources and time; material coordination.

Societal information systems access:

A.k.a., Community societal support.

1. Social data and data processing access (community information support) - social [information] construction support.
2. Decisional task processing access (community decision support) - decision [solution] construction support.
3. Material interface reconstruction processing access. (community technical support) - material [operation] construction support.
4. Life required service fulfillment access. (community life support) - life [integration-cycle] construction support.

The societal navigating methodology:

1. The approach methodology as the selection of methods associated with producing efficient and effective societal organization.
2. The direction methodology as the selection of methods that produce efficient and effective access to life fulfillment opportunities.
3. The working methodology as the selection of methods that are capable of systematically re-materializing a habitat, together in common.

The method of working together:

1. The selection of a method of coordination; the project methodology; social decision inquiry.
2. The selection of a method of materialization; the engineering methodology; technical decision inquiry.
3. The selection of a method of contribution (information transparency and team accountability); freedom of contribution.
4. The selection of a method of collection of usable information (standardization); service effectiveness in what fulfillment occurs.

5. The selection of a procedure and accountability to action (decision and evaluation); service efficiency in how fulfillment occurs.
6. The selection of a calibrated algorithm for computational materialization.
7. The encoded realization of an intentional walking life-space.

5.16.2.3 Approach [to society]

The integration of all information necessary to resolve an intention.

1. The intentional approach (everyone).
2. The unified approach (planetary).
3. The information approach (society).
4. The integrated approach (habitat; life-cycle; standard).
5. The issue approach (service).
6. The operations approach (processes; integrated project-engineering).
7. The project approach (the project lists, teams, timelines; plans).
8. The engineering approach (design, development, and operation).
9. The decisioning approach (algorithm).
10. Control approach (planning, executing, monitoring).
11. Algorithmic approach (synthesis).
12. Indication approach (objectives).
13. Evaluation approach (criteria).
14. Re-alignment approach (analysis).
15. Computational approach (logic, gating, materials).

5.16.2.4 Direction [of society]

The fulfillment of all individual human need among a regenerative, real-world socio-technical environment.

1. The intentional direction (human fulfillment of everyone).
2. The unified direction (global habitat service system; needs).
3. The information direction (societal information system; surveys).
4. The integrated direction (local habitat service systems; services).
5. The issue direction (habitat service standards; functions).
6. The operations direction (operational process protocols; resources and access; solution standards).
7. The project direction (solution social decision inquires).
8. The engineering direction (solution technical decision inquires).
9. The decisioning approach (algorithmic socio-technical inquire; a unified and adaptive information decision system).
10. Control direction [of materialization] (decision system).
11. Algorithmic direction (decision system).
12. Indicate direction (social system).
13. Evaluation direction (social system).
14. Re-align direction (lifestyle system).
15. Computational direction (material system).

5.16.2.5 Execution [planned operating experience of society]

The computation of the project lists into a simulated and real-world environment.

1. The intentional execution (“I”).
2. The unified execution (InterSystem Teams).
3. The information execution (database and algorithm - societal information system is stored on a database and runs an algorithm).
4. The integrated execution (local habitat service sub-system functions).
5. The issue execution (decision information flow standard).
6. The operations execution (access and usage protocols; accountability; work packages).
7. The project execution (project plans, project lists, schedule).
8. The engineering execution (system concepts, engineering lists, schedule).
9. The decisioning execution (algorithmic, conditionally programmed, information support system; software and interface).
10. Control execution [of materialization] (decision system specification).
11. Algorithmic execution (decision system specification).
12. Indicate execution (social system specification).
13. Evaluation execution (social system specification).
14. Re-align execution (lifestyle system specification).
15. Computational execution (material system specification; simulation; real-world).

5.16.3 Societal construction object

Society is a construction of tasks (specification-deliverables). Following, the object elements of societal construction are defined relative to the societal sub-system:

What is an object? An object performs motion.

1. In the social system, an object is that which is stored as data.
   A. Data.

1. Processing data.

2. In the decision system, an object is that which a task can be performed on (coordination).
   A. Task.
      1. Performing tasks.
3. In the material system, an object is that which has shape (geometry).
   A. Shape.
      1. Transforming shape.
4. In the lifestyle system, an object is a human life.
   A. Lives (Note: Constructor theory of life).
      1. Living life.

In an uncertain (discoverable) system, there are two fundamental types of objects necessary to make predictions are:

1. Dynamical laws (Laws of motion)
2. Initial conditions
3. And, final states (as a meta-composition of both objects)

5.16.3.1 What is a constructor?

A constructor is capable of performing one or more tasks, with available resources. A constructor is:

1. in a material sense, an object that represents the limit of a series of objects (with sub-object scales), each of which can perform a [construction] task in the context of a certain accuracy, to produce a final product.
2. in an informational sense, a concept, that represents a series of processes (motions between objects), each of which can perform a [construction] service in the context of a certain accuracy, to produce a final service.

> **SOCIETAL CONSTRUCTION STATEMENT:** *An ontological primitive is a "thing" that simply exists; something that simply is discoverable. Different worldviews postulate different ontological primitives; this is how we know who we are in the world and it is the information source by which we to reason our life-style. Community facilitates our fulfillment, and so we naturally desire to give of some of our life's working effort to the persistence of this system of fulfillment. We apply our effort toward contributing to the community and to our own self-development, through coordinated tasking. A task is a process that leads to either a novel structure, a "construction", or the continuity of a pre-existing structure. Community structures facilitate the experienced, lived fulfillment of real needs, to the point that they are sufficiently and completely fulfilled. There are many structures which have come before and there are many which will come after, and we construct with regard to this 'iteration' of how we might experience more fulfillment in the next [>] iteration.*

An ideal constructor has particular properties; principally, that the constructor is the cause of any informational-material transformation, if it retains the capability of performing the transformation again. For example, a heat engine is an example of a constructor because it performs a certain task, and after that, in the ideal case, it is capable of performing it again, and again, etc. Alternatively, consider any room in a building as an example of a static constructor, because it perform the task of shelter repeatedly; although a room cannot construct motion, it was constructed by motion, and will destruct by motion, over time.

In the [information] constructor logic, what may be exact is the statement of whether a task is possible? A task is either possible, or not, given what is known available. In other words, a task involves a decision in regard to what is possible, and what is not possible.

In society, what is possible is a decision. Therein, what is possible is a decision system. What is possible is a unified information system within which a decision system exists to resolve possible and impossible tasks programmatically, algorithmically, socio-decisionally.

> **QUESTIONS:** *What is the societal solution? What is a societal-level information media? Can [service] objects approximate ever increasing alignment with real-world, planetary human-life fulfillment? If there can exists a sequence of ever improving approximation to a [societal] constructor in its task [of societal construction], does that means that the task is possible?*

Common [information constructor theory] 'information media' examples include:

1. The transistor encodes a bit of information.
   A. A transistor is an electrical switch that holds a system state [bit of information], and can be turned on or off by another circuit. Computers use transistors to perform computation.
   B. The traffic light encodes information.
      1. Transform: green to red; red to green.
      2. Transform 2 lights: copy information from 1 light to the other light (green to green; and red to red).

Information media is information media because the following transformations (and tasks) can be performed on it:

1. **Swapability** property of the states - the interface states can be swapped.
   A. For example, with one traffic light, the green can become red, and the red can become green.
2. **Copyability** property - the information can be copied from one to another. The copyability

property allows information to be transformed from one substrate to another. This copyability property is what the interpretability principle expresses - whenever there are two systems that separately quality as information media, if the composite system qualifies as information media, then that means that certain tasks can be performed on the whole that can be interpreted as copying information from one to the other.

B. For example, with two traffic lights, the information on 1 can be copied onto another (red -> red; green -> green).

There are objects that have these properties of copyability and swapability, and they are called 'information media'.

NOTE: *A 'program' is a repeated output.*

In a societal system, what are the objects upon which transformations can be performed?

1. **Matter** - Spatial transformation, physical transformations, hardware transformations.
2. **Data** - Sensory transformation, mathematical transformations.
3. **Concepts** - Informational transformation, conceptual transformations, software transformation.
4. **Program**s - Computational transformations, statistical transformations.

Simply, constructors are possibly capable of doing what:

1. A constructor is capable of processing data.
2. A constructor is capable of performing a task.
3. A constructor is capable of transporting and re-forming shape.
4. A constructor is capable of carrying consciousness.

The continuous, conscious societal construction experience:

1. **Community access** ("we, of which there is me and we").
2. **Personal access.**
3. **Common access.**
4. **InterSystem Team Work Access** ("we", for which there is accountability in contribution).
   A. Work plan.
   B. Team tasking.
   C. Material service.

A societal constructor will:

1. The constructor (theory) will identify possible and impossible data, based on structure.
2. The constructor (theory) will identify possible and impossible tasks, based on principles.
3. The constructor (theory) will identify possible and impossible materials, based on science.
4. The constructor (theory) will identify possible and impossible lifestyles, based on solutions.

5.16.3.2 Complete constructor sub-object

INSIGHT: *In any informational or physical explanation there are some primitive elements.*

The sub-composition of an informational-spatial societal construction task:

1. **Task** - a specification of a physical transformation.
   A. Axiomatic task attribution, is:
      1. Possible (therefore, constructor)
      2. Impossible (does objective prevent a task from being performed?)
   B. A constructor, which is a machine, exists to perform tasks (Read: bring about a task).
2. **Timing** - a schedule (linearization) of a physical transformation
   A. Axiomatic timing attribution, is:
      1. Possible (therefore, coordinator)
      2. Impossible (does timing prevent a task from being performed?)
   B. A time, which is the common linear variable, exists to time tasks.
3. **Resource** - a material composition of a physical transformation
   A. Axiomatic resource attribution, is:
      1. Possible (therefore, user)
      2. Impossible (does resource prevent a task from being performed?)
   B. A resource, which is a matter, exists to materialize tasks (Read: externalize a task).
4. **Team** - a contribution of individual efforts to transform physicality.
   A. Axiomatic team attribution, is:
      1. Possible (therefore, accountability)
      2. Impossible (does team prevent a task from being performed?)
   B. A constructor, which is a machine, exists to perform tasks (Read: bring about a task).
   C. A team, which is a social construction, exists to execute tasks (Read: to do a task).
5. **Quality** - a condition of a physical transformation whose result is optimal.
   A. Axiomatic quality attribution, is:
      1. Possible (therefore, of value-validation).
      2. Impossible (does quality prevent a task from being performed?)
   B. A quality, which is an objective evaluation, exists to adapt tasks (Read: integrate feedback).

6. **Service** - a pattern of useful physical transformation.
   A. Axiomatic service attribution, is:
      1. Possible (therefore, habitat technical support).
      2. Impossible (does service prevent a task from being performed?)
   B. A service, which is an operation, exists to perform repeat tasks.
7. **Need** - a signal, sign of life capacity fulfillment.
   A. Axiomatic need attribution, is:
      1. Possible (therefore, habitat life support).
      2. Impossible (does need prevent a task from being performed?)
   B. A need, which is an life requirement, exists to perform understandable tasks.
8. **Preference** - a signal, sign of life opportunity fulfillment.
   A. Axiomatic preference attribution, is:
      1. Possible (therefore, habitat recreation support).
      2. Impossible (does preference prevent a task from being performed?)
   B. A preference, which is an life opportunity, exists to perform self-desired tasks.
9. **Decision** - a point of potential change [in fulfillment].
   A. Axiomatic decision attribution, is:
      1. Possible (therefore, issue recognition).
      2. Impossible (does decision prevent a task from being performed?)
   B. A decision, which is a point of change, exists to perform solution planning tasks.
10. **Evaluation** - an integration of the resulting alignment.
    A. Axiomatic evaluation attribution, is:
       1. Possible (therefore, control system).
       2. Impossible (does evaluation prevent a task from being performed?)
    B. An evaluation, which is a feedback opportunity, exists to perform corrective tasks.
11. **Indication** - a signal, sign of life quality.
    A. Axiomatic indication attribution, is:
       1. Possible (therefore, sensation).
       2. Impossible (does indication prevent a task from being performed?)
    B. An indication, which is a quality or quantity , exists to perform self-check tasks.
12. **Construction** - a duplicable building model.
    A. Axiomatic construction attribution, is:
       1. Possible (therefore, model, standard, simulation).
       2. Impossible (does construction prevent a task from being performed?)
    B. A construction, which is an information model materialized through a task, exists to perform useful tasks.
13. **Measurement** - determination of observational or mathematical alignment.
    A. Axiomatic measurement attribution, is:
       1. Possible (therefore, location).
       2. Impossible (does measurement prevent a task from being performed?)
    B. A measurement, which is a determination of position, exists to perform informed tasks.
14. **Verification** - a signal, sign of requirements completion.
    A. Axiomatic verification attribution, is:
       1. Possible (therefore, development).
       2. Impossible (does verification prevent a task from being performed?)
    B. A verification, which is a development phase, exists to perform requirements evaluation tasks (engineer oriented) .
15. **Validation** - a signal, sign of issue (design, solution) completion.
    A. Axiomatic validation attribution, is:
       1. Possible (therefore, design).
       2. Impossible (does validation prevent a task from being performed?)
    B. A validation, which is a development phase, exists to perform objectives evaluation tasks (user oriented).

5.16.3.3 Computational tasking

Today, the most "cutting-edge" form of computing is "quantum" computing, as a branch of fundamental physics. Regardless of the name, the idea comes from the idea is that computers are really physical objects, which means that what computational tasks they are capable of performing depends on the physics (real-world rules) that the elementary components carrying the information obey.

Currently, there are two known types of computational tasks:

1. **Classical turing machine** - based on discretized version of classical physics (discrete mathematics).
2. **Quantum mechanical (universal) computer** that has access to ways of performing computational tasks that are wider than the ones that classical computers can access, which means it can be programmed to perform certain computational tasks in a more efficient and power way, and there are certain algorithms that can only run on the quantum computer and can't on the classical computer.

Potentially, a quantum computer can perform all computational tasks that are possible under the laws of

physics. And therein, the question of what algorithms the system is to run [for humanity] becomes salient.

A universal constructor is an object, just like a universal computer has the ability to perform all tasks that are physically possible. However, it may be the case that there are only specialized constructors for each one of the tasks, and it may be the case that they all cannot be integrated into one object, which is a universal constructor, that when programmed, in the requisite way, will be able to perform each of those tasks. The universal constructor generalizes to general constructions what the universal computer does in terms of computational tasks.

It is possible to formulate the whole of society (or, physics) in terms of possible and impossible tasks., not computation tasks, but all tasks. Computational tasks are transformations on information media. A generic task may, or may not, be an information media.

Constructor theory expresses all laws as statements about which transformations are possible, which are impossible, and why. A constructor, when presented with the substrate in its input states, is capable of sending that object to another state. In doing this, the constructor stays the same. Here, the cause is the constructor. Constructors are information that can cause transformations in the environment. Therein, knowledge is a particular type of information that is capable of performing certain tasks associated with instantiating that knowledge in a physical system. Knowledge instantiated into a physical system can cause transformations (without anyone knowing about it; for example, DNA was causing organic transformations before any human knew about its presence).

> **INSIGHT:** *Ideally, a universal quantum computer can simulate the behavior of any other physical system with dramatic potentials and risks for social life together.*

For example, a refrigerator: within the refrigerator there is a glass of water; temperature; and a certain energy resource, the refrigerator can send the water and glass to a lower temperature. The refrigerator is capable of repeating this temperature cooling function on another glass of water.

If a task is not impossible (i.e. it is "ruled out"), because of a socio-technical effectiveness inquiry [decision], then it is possible, and possible with knowledge. Humanity can make use of knowledge to achieve transformations that verifiably improve its environment and the way in which individuals interact with it.

1. Initial conditions.
   A. For a computer, the initial conditions are a 'program'.
2. Laws of motion.
   A. For a computer, the elementary operations by which a computer works (e.g., transistor-decision-control gating).

5.16.3.4 Computational algorithms

> *A.k.a., Transformation automation ("quantum" represents the potential for informational and spatial transformation at the same time).*

Through algorithms, principles are converted able (through en-coding) into algorithms, which allows for computation (via computers) and decision support, for a community of contributing users. Computational decisioning uses information and an objective function (technique, algorithm) to determine parameter values from operational data.

> **CLARIFICATION:** *Algorithms don't have to be designed with output inconsistency, like human biases.*

Written principles (directional concepts) converted to algorithms (spatial logic), would allow a computer to take decisions for humanity and in parallel with humanity. Therein, humans are taking decisions, and the computer is taking decisions based upon a transparent criteria, and then, humans look at all the decisions, and compare and reconcile. If someone would do something different than the computer would do, then it is time to go back to the criteria that are built into the computer and check what/who is right or wrong. Should something in the computer programming change, or is there an error in humanity's decisioning awareness (i.e., did the computer calculate something humans missed). This type of system allows humanity to be incredibly efficient and productive, and allows humanity to process vastly more information (than without InterSystem parallel computing). And that, as a result, allows for the sustainable creation of community at the planetary scale. A cooperative, coordinated socio-technical societal sub-structure allows humanity access to more information, processed more quickly, and with less emotion. The unified processing of information, transparently, is required operate a cooperative society at the scale of the planet. Here, machines don't compete with humans.

> **NOTE:** *A synthesis, upon comparison with another synthesis, may sometimes lead to reanalysis of what and how.*

When can you trust a machine (or machine learning), and when can't you trust machine learning. The machine can come up with algorithms, or humans can come up with algorithms. The algorithms that machines come up with are not readily understandable. Possibly, machine output algorithms may be trusted, with a sufficient sample size, in a closed system. However, when there is a situation where the future can be different from the past, and there isn't sufficient deep understanding to accompany a decision (I. E., an non transparent machine output algorithm), then that is an unsafe, dangerous and risky position to be in at any scale of human population size. When can humanity get away without operating with deep understanding? Possibly, when there is a

human interfacing with the machine so that there is a continuous inquiry into whether there is a sufficiently deep understanding (a forum of effectiveness inquiry) - - can the computer help the user learn and maintain a sufficiently deep understanding. The ideal condition is an environment where there is the parallel development of humanity and computation; while humans develop more capable computational technologies and techniques, computational systems build an optimized societal system through algorithms, which are developed by machines, and applied by humans, at a pace level with their sufficiently deep understanding.

> **NOTE:** *To have deep understanding, cause and effect relationships must be understood. To have cause and effect relationships understood, correct alignment of conception with the real world is necessary.*

Can the computer help the human looking at it learn and have deep understanding of itself and the algorithm?

It is dangerous when there is not deep understanding and the future can be different than the past (i.e., when it is an open, and not closed, system).

5.16.3.5 Where does the algorithm come from?

Principles (values) for taking good, intentional, optimal decisions can be converted into code (encoded into software programming). In a community-type society, there is a unifying information system programmed in code, and with a software interface, and there is a decision system programmed in code, and with a software interface. Additionally, there is a material experimental system programmed by atomic materials (resources, architecture, technology), and with a physical [human] vehicle interface.

By ensuring algorithms are transparent and deeply understandable, then widespread, deep, and optimal learning becomes probable for the whole human population. The understandability of society and of algorithms is a tremendously useful and powerful information set for humanity.

> **NOTE:** *An example of the application of algorithms to automation is 'autopilot' - once instructed (programmed) the system will navigate the craft (vehicle or construction) toward the destination.*

5.17 What does it mean for society to have an 'engineered' direction?

In an engineered system the concept [of a] direction is defined by a set of requirements, which are technical conditional statements of what the solution must contain to be a solution. Engineering is not just any form of creation; engineering is intentional creation. Societal engineering as a direction, is defined defining a set of [human] requirements. When a full direction can be visualized and agreeably shared, then decisioning therefrom becomes more relaxed. Societal engineering is about creating and sustaining access to objects and experiences that meet human requirements. Humans select the requirements. Engineering a situation where life persists and flourishes requires priorities. In society, together firstly, there is the necessity for having a basic life supported experience, which involves socio-technological service relationships.

5.17.1 Cooperation principles

The following are a set principles and concepts that facilitate a cooperative, mutually aligned socio-technical design (co-design) methodology:

1. The (engineering-based) system is an open system, in a theoretical sense, whereby interactions occur in a broader socio-technical context. Environmental factors exert a direct influence on the system, through the provision and exchange of information.
2. The socio-technical system in question is largely influenced by existing engineering design processes, which are often in progress when a co-design methodology of this nature is put into practice. Therefore, the appreciation and integration of existing engineering design frameworks is critical.
3. Engineering design processes operate within a wider development setting, characterized by distinct but interrelated phases; prior to development, development test, usage and feedback.
4. The socio-technical system, as made up of inextricably linked social and technical subsystems within a unique environmental context, must be considered at various levels throughout the design process.
5. Relevant stakeholders, notably end-users, should be actively involved during the engineering design process, and at each of the aforementioned levels of design.
6. Stakeholder engagement should not be restricted to end-user involvement, but should encourage and support the inclusion of additional stakeholder groups who may be influenced by the engineering design.
7. For the co-design process to be morally aligned, a thorough understanding of the existing societal (information and spatial) environment is required to facilitate integration and understanding in the early stages of the engineering co-design process.
8. A standard risk assessment has inherent limitations that are particularly relevant to this application. Rather, underlying the co-design methodology is the analysis of "exposure" as a metric of system

weaknesses that serves as feedback during the design process, through the provision of contextually relevant measurements that embody risk in use.

The application of the aforementioned principles and concepts to the societal engineering , and specifically to human well-being, requires a number of assumptions be made:

1. A societal system and the social, technical, and environmental contexts in which it exists, is an open unit that is directly influenced by, and is receptive to, changes in its surroundings. It does not, and should not, exist or be designed and developed in isolation.
2. The creation of a society requires awareness of typical engineering design (and to some degree, development) processes. Preliminary stages of such processes include some form of needs identification, background and literature study, requirements specification, the identification of the objectives of the design, and an ideation component. These preliminary phases are followed by prototyping with a focus on exhaustive analysis of multiple designs. Such analysis in turn informs the selection of a preferred prototype leading to a detailed design phase. The latter is concerned with the construction and exhaustive testing of the selected prototype, culminating in the production phase of engineering design.
3. The work setting for the cooperative design (i.e., co-design) of the societal system is comprised of the pre-planning, planning, and execution phases. The co-design of an intentional societal system should be considered at all levels.

5.17.2 What is societal planning?

Societal planning is a rational plan of life for living together on a finite planet. Societal planning occurs through projects, which represent work packages in time. Societal projects planning is, simply, societal coordination.

Any proposal for an societal-level organisational system must identify, determine, and explain the following:

1. How organisational processes are controlled?
2. How do feedback loops operate?
3. What constitutes the boundary of any sub- and supra-organisation?

Planning can coordinate the timing of all of these related inquiry events so that a single solution selection is possible for execution at the whole societal level of operation.

Here it is assumed that planning for human need fulfillment at the societal level is likely to generate and sustain a socio-technical system of an efficient, effective, safe, and free condition. It is sensible, wise to pro-actively think about, shape, and schedule through iterative design-time. Here, design that facilitates the development a fulfilling (i.e., the 'right' type of) environment for humanity is selected for. The full development of human potential, which involves production, with human beings and the ecology at the center. Society enables human potential or human capacities (or it can disable them). Wherein, real wealth is the development of human capacities and the development of human potential.

Imagine engineering as a function of society. In this sense, engineering is a socio-decisioning function for intentionally engineering systems into and out of existence, for individual human need fulfillment. The individuals among community take on accountability as contributors to an intersystem team. And, therein, the 'social' domain is coordinated through a software based social decision support system to determine workable social solutions. Among the serviced community, the 'social' is the population of individuals sharing access to resources (and access opportunities). At the Intersystem domain, the social is no longer individually choosing users, but accountable contributors. Accountable contributors plan their actions, they coordinate.

In society, all personal and social goals are completed (worked on, achieved) on the basis of successfully planned social interaction (past and present), with others. In order to generate fulfillment, and not degrees of suffering and conflict, the earth's resources must be seen as the common heritage of all, and it is only therefrom that unified planning is possible. Every technical system is planned somewhere, somehow.

> **APHORISM:** *When there is ownership and secrecy, planning is difficult.*

Participation in planning reflects the social "character" (or quality) of human action, of human interaction in any given society. It follows that participation in some form of societal life without serious systematic limitations is humankind's most basic common human interest. It is possible we see each other commonly, and therein, uplift everyone through coordinated design and planning for our commonly experienced, individual fulfillment.

The term social system is used, in general, to refer to lifeforms in definite relation to each other, which have enduring patterns of behaviour in that relationship. Having a populating data model for a social system is the first step in social societal planning.

There exist three core societal pre-conditions for human [social] survival and flourishing over long periods of time:

1. **Production** of access to needed satisfiers through extension of ecological life support services (into,

and by means of, a habitat service system).
2. **Reproduction** of genetics.
3. **Transmission (and processing)** of information.

The output of each of these preconditions, as process categories, is more efficient and more effective through planning.

5.17.3 What is a humane societal information system?

NOTE: *Society is response-able for human fulfillment (or suffering).*

Understanding the societal system (e.g., life space) is the first prerequisite for understanding an individual's actions therein. Generally, the individual and life space are mutually interacting systems, both modifiable via the other. The life space, or society, is the environment as it exists commonly (for every individual).

The basic conception of a life-space sub-divides into:

1. An individual's biological foundations.
2. The social system which contain the person.
3. The person's interactions with the environment.

Society is a social life organization. As an real world organization, society can be designed and engineered, and its effects can be aligned with life flourishing (life capacity), or not. As an developed system, society can have goals (*direction*) and a set of values (*orientation*) that align the society with the stated target vision (re-position).

A human society is the aggregate of humans living together. Observably, human life is a matrix of activities over the measure of an individual life-time, and linked across generations in the temporal continuum of natural and social history. The range of activities that define any individual life is structured by the environmental (native and non-native) conditions upon which it is dependent and the social organizations within which it is lived in interdependence with others. Human society may be lived as a complex adaptive system.

There are more and less fulfilling ways of arranging socio-technical relations. A societal system that is responsive to the needs of human beings is likely desirable than one which is not responsive to human socio-technical needs/requirements. Every sentient organism needs constantly to re-assess its environment in order to adjust to any changes in it and to ascertain which aspects are, or become, salient for its current life purposes.

Societal systems engineering represents the unification of disciplines in the design and development of an iterative societal system. Society is a collaborative effort, which may be recognized by individuals and active structures therein, or not (and there are definite negative consequences when it is not recognized).

NOTE: *While life can be fulfilling in unmediated nature, we can consciously move forward together in society.*

5.17.4 What is a 'humane' societal system?

INSIGHT: *A sane society (and economy) is there to serve humans in opening horizons of life-worth.*

A humane system acknowledges and accounts for the needs of all individual human beings. If a system is defined as a set of interrelated elements, then a human system may be characterized as a system in which the principle elements are human beings. Human systems may be arranged differently. However, because the arrangements have a relationship to existence, they can always be organizationally understood through the following four axiomatic information categories required for existence as a population together: social, decision, lifestyle, and material. Herein, the 'human environment' is every conception and/or physicalization with which humans interact. Technology aside, humans maintain the same set of common needs. The organization of any given society's social, decision, lifestyle, and material can optimize the fulfillment of needs [for everyone] for a given environment, or it can do less (as in, negative efficiency).

In existence, each person shares an environment that overlaps with another's environment, physical and social. In community, the shared environment is produced through planning, coordination, integration, and contribution/participation. Each persons own environment is partly given, partly modified, and partly made by the person. These environments influence the probability of fulfilling human need (in common), and hence, impact quality of life (life experience) of everyone. Persons' environments, and the environmental system generating them, are part of the internal organization of a society, as part of a societal information system.

Each society has its own societal information system (which may or may not be explicated), consisting of the physical (natural and man-made) environment enclosed within a boundary (or city/Country-State), outside of which is nature (possibly caretaken, and possibly not). The state of the societal environmental influences the functioning of the society, ultimately reflecting upon the quality of life of the persons in the society. Humans exist on a physical planetary environment.

5.17.4.1 Prioritization

Human lifeforms are biologically wired to be social (e.g., mutually beneficial) with one another, but only in a certain order of operations. There are a core set of fundamental human needs that when met will "relax" a life-form to the degree to which it can effectively focus on things of even greater depth and importance than survival, such as love (i.e., extentionality) and growth. Humans have a threshold at which basic needs must be met for them to

begin acting in full social conscience with one another, and societal systems engineering provides the ability to design and iterate said type of societal system.

In community, societal development involves the application of accumulated scientific knowledge and socio-decisional (philosophical), technical understanding about the nature of the human organism in a way that can convey social experience of the reality (or a pre-supposed reality).

> **INSIGHT:** *Human life time is not simply the duration of our existence as physical organisms calculated in conventional units of temporal measurement, it is a morally meaningful whole of experiences, activities, and relationships unifying the moments between a person's birth and death.*

5.18 What is the expected socio-technical impact of the project?

The expected socio-technical impact of the project is the sustainment of a societal configuration classified as the type 'community. A community-type society represents a structure with the potential to achieve planetary-wide fulfillment of all human need and the sustainable expansion of human potential. Thus, it is expected that this project will have a mutually beneficial impact on the life experience of all individual humans on the planet. It is expected that the society which is constructed through this project will effectively and efficiently distribute access [to resources and services] for the fulfillment of all human need in a manner that does not exceed environmental service and safety limits.

A community-type society represents a societal structure designed to account for new knowledge, such that its own internal logic, understandings, structures, and functions become updated continuously, as humanity learns more about itself and its environment. It is expected that a design that accounts for new information in a cooperative manner is significantly *less likely* to generate the corruption, disharmony, and suffering, which are structurally systematic occurrences in early 21st century society.

5.19 What are the goals of the project?

In large part, the goals of the Project are defined in the social system [specification]; wherein, the explicit purpose of the societal system is to:

> **Continuously and consciously evolve toward our highest potential expression for ourselves and all others through resilient adaptation to a higher potential dynamic of experiential existence.**

In the social system specification, the following societal goals are listed [as directional structures] in support of the society's unifying purpose (stated above); these intrinsic aspirations maintain a social orientation toward common individual fulfillment:

1. To support each other in progressing toward our highest potential while developing self-knowledge and a deeper understanding and appreciation of our nature and the nature of the world.
2. To continuously improve the effectiveness and efficiency of the community's systems in fulfilling the unifying and life-long needs of everyone.
3. To continuously improve the means and methods, the oriented approach, by which we discover, understand, learn, communicate, and act.
4. To exist in a state of regenerative abundance with our life-ground while maximizing the intelligent use of resources and care-taking the environment (i.e., to sustain material resiliency).
5. To arrive at decisions based upon a commonly "living" purpose, set of needs & values, and approach, and hence, a similar set of understood relationships for arriving at decisions and actions. Note that these similarities are necessary for the effective functioning of [human] social relationships wherein a community is a set of similar relationships.
6. To exist in a state of appreciation and compassion for the self and the evolving whole.
7. To continuously improve access abundance through a stable 'bio-psycho-social community', a community of need fulfillment, serving as the liberating foundation from which individuals pursue their highest development and apply/ contribute (participate in) everyone's evolving potential.

Given a context of some uncertainty, and hence growth, society must be capable of (i.e., have the goals for):

1. Adapting [the societal system] to (Read: controlling adaptation to) changes in the environment.
2. Scaling [the societal system] for (Read: controlling the scale of) changes in the population.
3. Developing and utilizing [the societal system] (Read: executing and monitoring) methods and support tools for users.

Socio-technically speaking, the goal of this societal building project is to facilitate the healthy advance of individual self-awareness at the same time as technology advances:

1. 'Technical' means technology (physics applied functional); a more thought responsive environment over time.
2. 'Social' means conditional design for human need fulfillment.

3. 'Self-awareness' means the individual (individuated conscious) recording of experience.

Global human imperatives related to sustainable existence within the carrying capacities of the planet Earth, are:

1. The development of a unified societal information system.
2. The development of a global habitat service coordination system (earth management system) - A viable system of earth management must enable (rather than disable) life capacity without loss, and with cumulative gain over generational time.
3. The fulfillment of all human need (#1 and #2 together allow for #3).

QUESTIONS: *What is the individual's level of self-awareness? What may help and facilitate an individual in becoming more aware of who they truly are? When most of humans are born here on this planet they forget most of their potential past [life] experiences? What are the levels of self-awareness when there is a whole and integrated intelligence (consciousness) recording experience; what is our response among a common [heritage/sourced] environment.*

The primary **societal stability goals** of community, as a type of society, are:

1. Social system stability - a social system that adapts, scales, and develops while fulfilling human need, without conflict and while reducing suffering.
   A. Occurs through the facilitation of cooperation by means of intelligently shared organization and the sufficient completion of human need fulfillment.
2. Socio-technical system stability - a socio-technical system that integrates, coordinates, and operates services for human need fulfillment, without conflict and while reducing suffering.
   A. Occurs through the facilitation of teamwork by means of intelligently coordinated projects and the accessibility (availability) of resources, including information.
3. Technical system stability - a technical system that sustains a safety function/algorithm of impossible tasks that would conflict with the fulfillment of human need, or generate conflict and additional suffering.
   A. Occurs through the facilitation of an algorithm that is informed of what humans require and is capable of intelligently responding and adapting to those human requirements with uncertainty over what humans will require in the future, and certainty over what is (so that there is ever greater alignment and predictability).

Self-awareness advances include, but are not limited to:

1. Ability to contemplate - to think and imagine about ideas relating to the past, present, and future.
2. Ability to socialize - to think about ideas while accounting for other self-awareness (i.e., less/null social conflict).
3. Ability to communicate universally - to think and communicate by means of a universally understandable linguistic structure.
4. Ability to cooperate - to understand and contribute to the design of a unified societal model as so proposed by some given societal configuration (planetary teamwork).
5. Ability to perceive tasks that are likely to create, and impossible to create (i.e., will not create), a thoughtful and beautiful societal environment.
6. And beyond - the ability to move elsewhere in self-awareness, etc.

Thus, this proposal is for a societal configuration that does not incentivize a low level of conscious awareness -- a societal configuration that does not trigger base-material instincts that lead the human mind to perceive the ultimate answer to most difficulties as blame, punishment, or death.

Technological advances include, but are not limited to:

1. Stone age - primitive tools.
2. Metal machines - iron, steel, steam engines.
3. Electricity - electric power, computers, information technology.
4. Computational automation - socio-technical support algorithms (e.g., decision support algorithms).
5. Genetics - creation and modification of life-forms.
6. And beyond (e.g., matter transfer, etc.).

Healthy societies function on the social advances of good organization and individual self-awareness, and to a lesser extent, upon technical advances. With greater access to the physics of reality comes greater responsibility and accountability (i.e., response-accountability). So, increased access can only be phased-in depending on how well new thinking and behavior patterns are adopted.

5.19.1 Imperative goal

Due to a number of factors, including the increase in technological advances it is imperative that humanity develop and agree to a set of unified and integrated goals. The development of technology has suddenly made all societies, globally, interdependent. A long-term, strategic human goal is some desired current and/

or future state of the world whose realization would require an effort lasting over many generations. The imperative goal is to have a series of goals that could be shown to have a reasonable possibility of retaining their moral validity for an extended period of time, multi-generationally beneficial.

5.19.2 Human fulfillment within a habitat

The goals of a project is to develop a community-type society:

1. An experimental total city network system and integrated societal information system is proposed that will pursue the following goals.
   A. Designing a masterplan from a master community standard for societal operation.
   B. Designing a masterplan from a maser community standard for a local habitat operation.
   C. Conserving all the world's resources as the common heritage of all of the Earth's people. Restore the world's soils and bodies of water.
   D. Economizing all the world's resources into the optimized fulfillment of global human need (and preference).
   E. Transcending all of the artificial boundaries that separate people through development of a unified information system standard.
   F. Evolving from a market-State society to a community-type society (design out trade and coercion)
   G. Evolving from a money-based economy to a system in which a community can provide for itself by growing or making the things it needs.
   H. Re-wilding, caretaking and restoring the natural environment to the best of ability.
2. Develop a cybernated society that can gradually outgrow the need for all political local, national, and supra-national governments as a means of social management. Cybernetics applied to improve human fulfillment. Computers are a tool that frees people up from labor. There are two views of the habitat in community: the global cybernated view and the local habitat view. Not everyone may choose to live in a high-tech habitat (there are also low tech and density habitats), and the global network of [local] habitats is coordinated by a cybernated (intelligent and coordinating statistical service system).
3. Share and integrate new understandings and technologies for the benefit of all humanity.
4. Use the highest quality designs and productions for the benefit of all the world's people. Quality through continuous improvement.
5. Develop a common approach to action informed by an objective decision resolution process composed of inquires. Fulfillment through optimal decision inquiry resolution dynamics.
6. Encourage the widest range of contribution and incentive toward useful contribution.
7. Provide the necessities of life fulfillment, including stimulating challenges and preparation for the intellectual and emotional experience of flow.

5.20 What is the expected impact of the project on the family?

> **APHORISM:** *If I want to make my life the best that it can be I have to also make the lives of those around me the best that they can be in order to make my life the best that it can be. More colloquially said, "The best way to store food is in your friends stomach".*

This project extends the set of principles that relate commonly among loving family entities out to the whole population of society. Those relations that where once normative (implicit) at the family level are made explicit through a human-interfaced societal information system, that is cooperatively coordinated into exists by using contributors. In Community, as in the family (or, any openly sourced system), those who use family services are also those who contribute to family services. In other words, in a family, there is no artificially limiting separation between users and contributors; just as in community, there are no political, employee, employer, or consumer relationships, which are limiting class separators that are fundamental to the market-State.

Additionally, in a loving and supportive family situation, the family:

1. Restores relationships - Families do not apply a retributive, punishment-based, system on someone in the family when they do wrong (this has neuroscientific backing. The application of violence, aggressive, and punitive motions, when mistakes are made, causes damage to individuals and the family. Punishment as a mode of operation causes unnecessary suffering. Instead, families use restorative methods to heal relationships (of which there are multiple techniques from multiple domains).
2. Shares resources and information - Families share and work in such a way that the whole family is better off; they do not secret information and hoard resources that would better the lives of other family members. Families do not charge family members for living and using family services. Families do not enforce a structure of economic exchange (particularly, abstracted economic

exchange) on one another (particularly, in priority habitat servicing - life support). Forced economic exchange, and the encoding of property, inhibits access opportunities and promotes division and mistrust between family members.

Just as in the micro-social environment (i.e., family), within the macro-social environment (i.e., society), problems are solved by finding common ground and cooperating therefrom. In other words, family problems, like societal problems, are solved [in part] through finding common ground and cooperating with one another. And, at the societal-scale, a cooperating population is likely to be found using technologies, computing in particular, to facilitate optimal socio-technical construction, coordination, and decisioning.

5.21 How will the solution to the problem be conceived?

QUESTION: *What could we do if we were starting fresh?*

This project proposal includes a 'Concept of Operation' specification for a complete societal system. The solution is a system concept, and it is defined in alignment with the given real-world environment, which is experienced as a basis for a commonly conceived of societal operation. In this project proposal, the possible interactions by a societal process, and the interconnection between several sub-processes within a societal process are specified using the concept of 'services' (ports, interfaces). Counting iteration ("step-wise") refinement of society's process specifications and associated verification rules are considered. The iterative refinement of service (port) specifications and associated inter-actions (relationships; e.g., system-to-system and human interface) is considered as well. This document structure follows the basic concepts of the specification method, involving an approach, [to] a direction, [to complete] an execution. The iterative refinement of services (ports) and interactions is explored as partly an information interface, and partly, a hard-ware interface, for which an abstract specification and a more detailed implementation is given. Proof rules (logic) for verifying the consistency of detailed and more abstract specifications are discussed in some detail.

From this view, the method of conception [of the 'societal system'] is based on the concepts 'process' and 'port', as types of relationships in the real-world. A 'process' is a 'relationship' in itself, and a 'port' is a 'service', a larger set of relationships where a need is present (as in, a serviced or serviceable entity). A service [port interaction] may possess many processes [interactions]. The specification of the properties of a societal process (e.g., 'HSS operational process') or port (e.g., 'habitat service system') is given at an conceptual level. The externally visible behavior of humans toward one another and the planet, as a result of a societal configuration, may be described through process or port. This document does not detail the way this behavior is realized by an internal structure of the process or port; it is not the societal system sub-composition of social, decision, material, and lifestyle, though it coordinates, by means of approach, direction, and execution, all four core societal sub-specifications.

The concepts of process and port are significant in the design of an information system:

1. A process is an entity that performs some data processing and is assumed to be the unit of specification.
   A. In human society, the highest-level process is the process relationship the humans control at the highest level, the HSS prioritized operational processes.
2. A port is a part of a process and serves for the communication of that process with its environment (i.e., other processes in the system).
   A. In human society, the highest-level *port* is the service relationship the humans control at the highest-level, the habitat service system (HSS).

5.22 What systems of organization will use resources?

A.k.a., What systems of organization will use resources to complete the project.

This project proposes a unified societal information system that structures what systems use resources. This project proposes the following societal information system de-compositional view (Read: societal specification elements are) of resource usage:

1. **Human users (human life flow diagram)** - a flow diagram that visualizes the human (end-user's) resource usage path through the [functionality of the] societal system, from life to death. For instance, at the level of the societal building project, a flow diagram for a community-type society would detail the sequence of systems necessary to facilitate a fulfilled life of optimized well-being for any identified individual, given what is known and testable, from birth through until death.
2. **System architecture (system structure diagram)** - A system architecture diagram illustrates the way the system must be configured, and the way the database tables should be defined and laid out (all of which require resources). In community, there are two systems, which are really one - the information service system, within which is located a material service system:
   A. **Societal information service system**

architecture (level 1) - societal-level concepts:

1. **Social** - Socially defined direction, orientation and approach to navigation together.
2. **Decision** - Decision resolution logic to coordinate and control a complexly networked societal system.
3. **Material** - the probable material solutions and the reasonably selected, InterSystem Team applied, materialized iteration of the societal system.
4. **Lifestyle** (time/schedule) - the resulting common and individual human experiences of a material existence, given some entrainment cycle.

B. **Habitat service system architecture (level 2)** - habitat-level concepts:

1. **Life support** - human need-requirement
2. **Technical support System**
   i. Transportation architecture - how materials are positionally located and moved.
   ii. Information architecture - how information is computed and visualized.
   iii. Communication architecture - how information is transferred between humans and systems so humans have the information they need to respond.
   iv. Production architecture - how matter and information are cycled through the environment.
3. **Facility System** - human development-requirement

The habitat service sub-systems are called habitat service support systems, because they support a unified service-oriented habitat [for human fulfillment], which consists of three service support systems to which any common access resource in the system can be allocated. In terms of accountability, contributing members of an InterSystem Team fulfill the requirements of the three functional systems of each individual, locally networked habitat service system:

1. **The life support service system** maintains services that support life existence as part of fulfillment.
2. **The technical support service system** maintains services that support technical existence as part of fulfillment
3. **The facility support service system** maintains services that support discovery and self-development.

Tale note that 'state diagrams' are data models that show the changes between states of habitat service objects in the system. They show the cycle of an object's states, including events that trigger changes in state. They only show transitions, triggers, and the flow of changes.

5.22.1 What are the societal-level products?

A.k.a., Societal system deliverables, work outputs.

This project proposes the following societal service de-compositional view:

1. **An information service system**
   A. A global information and decision support system.
2. **A habitat service system**
   A. The technical domain of a hard- and soft-ware service systems.
      1. A globally networked habitat service system
      2. A locally networked habitat service system
      3. A habitat operational process area (operational processes)
      4. A habitat operational knowledge area (operational knowledge)
3. **A socio-technical InterSystem Service Team**
   A. The social domain as human contributors organized by an accountable functional role.

5.22.2 Where will people live?

The population of community, as proposed by this project, primarily lives in live-work integrated habitat cities within an integrated global city network (within a larger planetary ecology). The cities in the Community-city network (global HSS) tend to be separated by kilometers and are dotted across the landscape, often in a grid pattern. When cities are newly planned, they are generally laid out (internally and externally) in a planned symmetrical grid. The internal grid of most of these cities is circular. The community population mostly lives in these cities. The countryside is mostly used for outdoor and other recreation activities. There are very few roads linking cities, because rail transport is effectively applied (and to a lesser extent, air transport).

NOTE: *In community-type cities, the grid for the city is symmetrical, and often, circular.*

Habitat services are just one part of the larger planetary ecosystem. A 'habitat service system' (HSS) is a controlled part of the total ecological habitat. A local HSS is more commonly known as a 'city'. In community, most cities are live-work locations. A global HSS is a planetary city network. It is a societal 'requirement' to design and operate cities.

5.23 What is a list of descriptors of the project's proposal for society?

A.k.a., Here is what we are building. This is where you will find high-level descriptive snippets of

what is being built.

The following is a comprehensive list of descriptors of this project proposal for a 'Community' type of societal system. This list details, at least in part, what is needed, required, and expected for the existence of a community-type society:

1. A society that facilitates individual humans in becoming more aware of who they really are.
2. A society that facilitates the sharing of access to a higher potential dynamic of experiential existence for oneself and all others.
3. A society that effectively and efficiently creates the enabling, and removes the disabling, conditions for people to flourish.
4. A unified system that facilitates the maximization of each individual's potential.
5. A socio-technical environment that enables all of humanity to have access to the most up-to-date societal model and operating system, given what is known.
6. A unified society that enables every individual access to all the opportunities that all of humanity has to offer.
7. A societal development operations project for global human fulfillment, through global cooperation, wherein all resources are viewed as the common heritage of everyone.
8. A society where the population visualizes together a highest potential state-dynamic of fulfillment.
9. A purposeful societal system wherein efficiency, individual freedom, and the effective fulfillment of all human need are core determining inquiries into the selected decision to execute solutions into material existence.
10. A societal service system that exists for as long as individuals in the community desire the continued existence of the system -- humanity intends and technology enables a life of optimal flow and fulfillment.
11. A complex adaptive societal system (as adaptive toward greater states of human life-capacity fulfillment through improved designs).
12. A society is an open ended global problem. At what layer is the problem seen? At the fundamental level, all problems are systems problems and all human systems problems are fundamentally societal. Not just economic, not just decisioning, not just values, not just social, not just technological; but, societal at a priority recognized level.
13. A societal kernel informed openly about what humans require [as a requirement].
14. A societal kernel appropriately uncertain about what humans require, so that it doesn't irreversibly destroy things that are actually required [as a requirement].
15. A society that has, and provides, access to what individuals' need to thrive, to achieve some higher intentional goal, or to prepare themselves for some significant event.
16. A society that makes and sustains societal 'things' that last in usefulness.
17. A truly social, workable societal system that is designed to considerately account for each individual part in relationship to the whole, and the whole, in relation to each individual part. A societal system composition and configuration that effectively accounts for both the individual and the social.
18. A unified information systems model for an optimally organized state of human fulfillment and ecological well-being, given what is known.
19. A society that evolves intentionally towards states (and dynamics) of increasing well-being and mutual flourishing.
20. A unified and open societal standard for a community-type society is a core project goal.
21. A society where individuals live with fulfillment and wellness, without money or coercion, through cooperation and societal standardization.
22. A life-work environment where most of the population lives in integrated family- and garden-oriented smart cities with life-work lifestyles based on optimizing life fulfillment.
23. A society where life is recognized, work is shared, and needs are distinguished from wants, putting needs first as the priority and wants as discretionary or customary (customization or preference).
24. A project to bring into existence an information field representative of the highest potential of all individuals of humanity (wherein, aura = information field, and vana = wild breath).
25. A society that may foresee, as much as possible, the consequences of its actions in an uncertain, explorable, and growable environment.
26. A society that mutually distributes access to the fulfillment of all human need; a societal system that is not final (to individuals of the population), but iterative and progressively elaborated, emergent.
27. A society (civilization) where the population lives in harmony without force and coercion (of course, without war and destitution), for all. A society of need fulfillment, not fear reaction (i.e., a society of needs and not fears).
28. A society that is validated to perform appropriately to meets all human needs.

29. A society where we share an understanding of how the world works and how humanity can best work together in the world.
30. A society that optimizes for human fulfillment and well-being metrics (i.e., metrics other than profit).
31. A society that improves the human condition.
32. A society that continuously provides the opportunity to participate in society in ways that are intrinsically desirable to the individuals themselves.
33. A society that gives priority to aspects of life that are real, and does not prioritize aspects that are not real.
34. A society that seeks to understand, measure, and improve the human experience.
35. A society that orients toward an increase in global human well-being (i.e., satisfaction with life and the conditions of life, positive affect, and eudaimonic well-being).
36. A system where all individuals share the same ultimate planetary goal of a network of integrated city systems that share and coordinate resources without currency for everyone's fulfillment -- the network of integrated city systems acts as a fault tolerant [human fulfillment-service] distributed system.
37. A system where there is sufficiency for all; destitution for none.
38. A society where anyone can contribute, or not, without going destitute, and with having enough to grow in common with others. In early 21st century society, there is always the threat of destitution - if you do not work (i.e., are not employed), then the ultimate eventual consequence of a lack of belonging is destitution.
39. A society that works together as one unit; a human society that is unified, in that it works together transparently as one unit toward a higher potential state of togetherness, optimized fulfillment of all human need, mutually coordinated well-being, and more continuous and deeper states of happiness and flow for all among society at a global level.
40. A society that measures and increases well-being; a society with the aim of producing more well-being for every human individual.
41. An society where individuals care about themselves, each other, and the earth.
42. A society where the best quality of life is available to everyone. It is possible to model and operate society as a service system for humanity.
43. A society where the feeling of love is in the hearts of all individuals, and extension-ality (i.e., seeing others as an extension of oneself) is in their minds and in their decisioning.
44. A society that provides the right signals so that humans can feel at flow and love in their lives.
45. A societal environment where the technologies of well-being appropriately "dominate" the space, so that human beings learn how to be well, and are able to sustain and further develop a state of wellness.
46. An environment where the tools for well-being are easily accessible to every human being (i.e., colloquially speaking, the tools for well-being must be in the hands of every human being; a place where well-being is in the hands of all.). Further, the tools of well-being must be in the hands of human being (not just in the hands of organizations, businesses, States, leaders, gurus, etc.).
47. A society where it is possible to, and people are likely to, build their individual and social lives around a set of flow triggers.
48. A society where individuals have the freedom of access, autonomy of self-direction, and ability (knowledge and skills) to explore life's deeper questions.
49. A society where individuals have a holistic understanding and sympathetic appreciation of the human needs.
50. A society where people do what is of actual necessity and value to the fulfillment of their human embodied needs.
51. A society based on the existence of a real-world and a set of criteria for mutual human thriving within it.
52. A societal ultra-structure for the ability to take information and expand it to its logical conclusion, and therein, take the appropriate decision -- an ultra structure that enables better and faster decisioning for mutual human flourishing.
53. A societal system that integrates the operation of a network of local habitat-service systems (a.k.a., city systems) synchronously with a global information system.
54. A society that represents [proposes] a credible vision of a significantly better future. A vision that is feasible, viable, desirable for all of humankind.
55. A physical place, a network of cities, where information systems process the informational and spatial characteristics of human life together in a biosphere for mutual benefit through globally shared access (economic togetherness).
56. A society with a cultivated population of people who understand the impact of their thinking and behaviors on themselves, others, and the environment.
57. A society where people see themselves in relationship to other people.

58. A society with a contribution-based framework that is accountable to real-world human requirements and conditions, and behaves as a service system that fulfills (meets, satisfies, completes) human needs optimally.
59. A society with a decision resolution structure that uses indicators and empirically sourced data to set planned service-fulfillment targets and complete socio-technical fulfillment requirements within the value conditions (e.g., the inquiry resolution thresholds) of the population.
60. A society with a recognized solution design and execution planning structure for coordinated [community] action - a [scalable] project coordinated societal systems engineering plan.
61. A society that is safely prepared for and utilizes a network of autonomous systems to facilitate global human fulfillment.
62. A society where the habitat is recognized as a sub-system of the planetary ecological system. A piloted spaceship is an organism controlled habitat service system. The global human habitat service system may also be navigated like a space ship. Human navigated spacecraft in orbit are a microcosm of the more universal human controlled portion of a larger ecological habitat on Earth. Upon a planetary ecology, humans can control (as a spacecraft is controlled in its engineering and flight operations) elements of the natural [ecological] environment to engineer the construction and sustained operation of human coordinated habitat service systems, cities, as sub-ecological systems, where humans fulfill their needs together.
63. A society where individuals contribute and work together for the benefit of everyone, and therein, individuals feel in 'flow' with their work and connected to others in mutually beneficial ways.
64. A economic socio-decisioning system where services and objects ("things") are produced for the purpose of being *used, and not, sold and used* (Read: there is no trade).
65. A societal-level open access service system consisting of habitat service sub-systems. The function of the habitat service system is to provide for mutual material human fulfillment in the most efficient way possible through open source design and optimized development.
66. A society where the population senses and experiences integration throughout all domains of conscious (experiential) life, and hence, optimal well-being and wellness.
67. A human societal system with the intention to attain its maximum potential, which is most likely when all the individuals are working with one another; global cooperation, that necessitates, global coordination.
68. A societal system that accounts for the network effect of having any significant fraction of a population with unmet needs, which adversely impacts that population. A great deal of life in the past and still presently is miserable in large part due to competition over access to the resources that humans need to survive and thrive, generating unnecessary scarcity in fulfillment.
69. A society that is not likely to invent problems where none really exist.
70. A society where passion and efficiency produce sustainable human fulfillment.
71. A society that is not likely to reward the persistence of problems that do actually exist.
72. A societal project to bring into existence, and facilitate the persistence of, a planetary civilization, society, that feels in alignment with their environment, themselves, and with all others throughout the cosmic dimensions of experiential creation.
73. A society of the type, 'community', built upon useful information.
74. A society that facilitates the coordination and organization of all contribution to make the best use of resources for all of humanity.
75. A society that recognizes that "we" all want to navigate toward greater prosperity.

5.23.1 Alignment descriptors

The following are several questions to use when evaluating the alignment of an observed society (or proposed) with that of a community-type society, as the type of society proposed by this project plan:

1. Is it based on an explicit and common human purpose for existence?
2. Is it based on human need?
3. Is it based on contribution and sharing (i.e., is access free and participation open source)?
4. Is it based on a transparent execution?
5. Is it based on common heritage resources?
6. Is it based on a unified information system?
7. Is it based on globally coordinated access?
8. Is it based on an integrated built environment?
9. Is it based on systems science, standardization, project teamwork, and socio-technical capability?
10. Is it (or, where is it) completely visualized as a whole and understandable system?
11. Is it safely and workably scalable up to the size of the planetary population?
12. It is thinking and acting together in real-time to regenerate a more loving, kind, and beautiful earth

where humans extend their sense of compassion and access potential to all people.

This following characteristics provide a description of the planetary environment, given the conditions of this proposed societal systems model.

1. No war* - wars tend to occur along tribal and cultural divides in an effort to secure territory and resources.
2. Social mobility* - the population is free to choose which city area to live in, and when and where to contribute.
3. Infrastructural safety* - the infrastructure is sufficiently safe to operate and reduce risk from natural disaster.

**Once the recognition that "we are all one" becomes an integral part of human consciousness, the urge to resolve issues by killing each other and artificially limiting access to planetary resources, becomes obsolete.*

5.24 What are the project's primary surveys?

The primary survey inputs of this societal-level project (for the collection of data), include:

1. A coherently inclusive account of that which is required for human socio-technical flourishing.
2. A coherently inclusive account of the human team member skills necessary to complete the project.
3. A coherently inclusive account of the current team members on-hand.
4. An evidenced-based and rational-based approach to organizing society, which allows for feedback and adjustment.
5. An abundant life-ground that reduces scarcity stress.
6. A structure that would allow people to not suffer, and not get sick, but to get stronger and become more resilient with time.
7. A society to support (facilitate) the realization of our individual and common potential.
8. Knowledge of social-technical dynamics (engineering).

INSIGHT: *Evidence-based information has a calculable reliability. What is the reliability that the problem is designed out of the situation?*

5.25 What is a rational overview of the project?

Normally, knowledge is the result of actions (such as observation, learning, or communication). Values are the result of the interactions between knowledge and decisioning [that affects the social aspects of a population]. A lifestyle is the result of patterns of decisioning in a given environment. A material system is the result of a built system of resources, material resources and informational resources, and an ecology. In the reality of the existence of 'logic'[al] information processes, actions, become system design (of both an informational and a material form). The material system is an informational set (system) with a biophysical process component. Analyzing an informational algorithm in this detailed manner involves both epistemic logic (how was the knowledge determined) and dynamic-action logic (what is the predicted environmental response given a set of conditions). Herein, science is used to understand - physics tests and engineers re-form information and matter for differing functions.

A "rational" action at a societal/social level, is one that exists to facilitate the fulfillment of one's own needs, while simultaneously fulfilling the fulfillment of all others' common needs, in order to optimize all significant variables to the fulfillment of all common needs, which are individually expressed by unique consciousnesses.

The idea of a system of 'basic' needs forms a model corresponding between consciousness and all common human needs (i.e., human requirements) of some 'fact' (or "form" - as a real experience, "substance"). The most basic of which to understand is that: a human (without some possibly unknown source) cannot live continuously over some knowable duration of time (a quantity), given no access to food:

1. If someone does not eat, it is a 'fact' that they will eventually die causatively related to not eating?
2. It is a basic action, common to all humans, to have hunger (a conscious thoughtful input of feeling), act upon an environment to access food (think-cognate and move/behavior), and eat (process in a commonly specialized manner/method) to some relative degree [because food is a material object taken in by the mouth], with individually optimal nutritional (i.e., food quality) input profiles?

In the initial epistemic model for this situation, an optimized world (vs. eight possible worlds in a finite game environment) assign A-level category (or, A or B category for games) to each child. Society says: at least there is some way for optimizing for common human fulfillment; or, at least one of you is dirty.

This is the relationship between solution/fulfillment algorithms and epistemic communication - it is possible to optimize the solution to game algorithms based on a competition-based knowledge puzzle of:

- If, after collecting a resource outside, two of three people have the resource, then
  - Either, in cooperation (i.e., sharing), they all see the others, including themselves. Instead of

using competitive rules, if every child said what resources (e.g., mud) were observed in the first round, then every child would be able to determine the quality and quantity of resource in the first round (thus, optimizing, instead of gaming).

- Or, in competition (i.e., artificially restricted sharing), their perspective is artificially restricted such that some of the people, up-to and including oneself, do not know who has a resource. "Nobody knows in the first round. But in the next round, each muddy child can reason like this: "If I were clean, the one dirty child I see would have seen only clean children around her, and so she would have known that she was dirty at once. But she did not. So I must be dirty, too!"

A person (child) knows about the others' resources (or does not), and his own (or does not), encoding agents' certainty (of presence of resources required for fulfillment). In competition, successive assertions made in the scenario update this information. Updates start with the "fathers" publicly announced agreement that at least one resource is present (i.e., one child is dirty). This is about the simplest communicative action, this is the simplest communicative action, and it eliminates (optimizes) those worlds from the initial model that require a tertiary layer of logic (i.e., competition logic embedded within the market-State). The initial conditions are set, and then everyone shares their observations for everyone's mutual benefit. Note that a preference structure on top of an open source structure is not equivalent to a profit structure (market) obscuring the underlying [possible] open source structure (where resources are held in the commons of all, all fulfillment). In competition, there are typically competing "players" [for access -- closed-way, restricted communication]; whereas in community, there are typically cooperating "sharers" [of access -- all-way, open communication]. Simply, society has been defined to fail exactly at those rows or columns in a two-player general game model that are strictly dominated by competition. Every finite game model has worlds, and mathematics can "prove" is expression. The "nash equilibrium", a concept with the name of the player that identified economically as a "mathematician", refers to a condition in which every player-participant has optimized its outcome based on the other players' expected decision. The "nash equilibrium" is a market-based overlay on top of optimized fulfillment. Imagine that two businesses (market-encoded organization) compete in the same market-industry, for price-profit. The two companies enter a state of market-based "nash equilibrium" given the competing business expected response, neither business can make more money by unilaterally deciding to boost production. Any visualizable pattern [of information] will have a set of associated descriptive mathematics.

Herein, it is relevant to ask whether a the fulfillment sub-system of a societal system is also part of a system of competitive (market-scarcity - rule-ethic) or cooperative (shared commons - rule-value) interactions? Is there a societal fulfillment: problem-game (competition), or a problem-operation (cooperation)? Or, is there a perception of receptive-motor ability to change individual-societal fulfillment (because of a 'belief' system overlay, limiting knowledge and a higher potential value orientation that encompasses the fulfillment of all)?

Society can now be described in two logical directions:

1. **First direction:** From science to logic - given some algorithm defining a solution concept, we can use our cognitive ability to discover-find epistemic actions (e.g., basic human needs - actions for which knowledge can be known) "driving" and moving its dynamics (behavior).
2. **Second direction:** From logic to science - any type of epistemic assertion (e.g., basic human need) defines an iterated solution process which may have independent decisioning and/or interest-preferences.

Game theory adds the idea and associated mathematics of competition on top of a fully connected (i.e., sharing) set of entities to by restricting their memory action-potential for sharing.

Finally, the dynamic-epistemic setting has one more degree of freedom in setting up the virtual conversation, viz. its scheduling. For instance, the Muddy Children of Example 2 had simultaneous announcement of children's knowledge about their status. But its update sequence is quite different the children speak in turn. When the first person says its status, then in the analogy, in the actual world, the second child knows its status. Saying this eliminates all worlds except the optimized one.

5.26 What is the minimum viable product?

Because this is a societal-level development project, the question of, "What is the minimum viable product" is a challenge to answer directly. It is a challenge to answer directly because a society is an ever living and changing complex of many interacting influences. Note here that minimum means that itsn't being applied at a large-scale (e.g., city, State, etc.).

What is known is that there is a minimum viable set of operations that must be ongoing to community to be present, as follows:

1. **A societal specification standard in the configuration of community:** The minimum viable product is a specification standard that can be adopted to conceive of and to operate community.

A. One unified specification standard.

2. **A habitat in the configuration of community:** The minimum viable product is a pilot university flow habitat comprising of a system likely to produce more human flow, more soil restoration, and an abundance of food, fuel, and fiber over time.
   A. One efficiently duplicable rural restorative and food abundance producing university-type habitat. This habitat will be duplicated into a network of rural economic production habitats.
      1. One primarily mineral-based rural habitat service system.
      2. One primarily bio-construction based rural habitat service system.
3. **A software solution to inform and adapt community:** The minimum viable software product is a residency profile and education platform for coordinating orientation and entrance into the habitat network.
   A. Project coordination software.
   B. Standards setting collaborative software.
   C. Decision system software.
   D. Operations software.
   E. User software.
4. **A hardware solution to [re-]materialize** the habitat [network] to more greatly meet human fulfillment requirements given the information and technology available.
   A. The production of integrated habitats as an integrated means of production and delivery.
      1. Production of means of production (produce machines that will produce the final deliverables).
         i. Means of production for production of an integrated habitat.
      2. Production for consumption (produce final deliverable).
         i. Production of final user needed deliverables (goods and services) within an integrated habitat [network].
      3. Note: a center for the production of habitats is the first means of production (for the production of community habitats).
5. **An on-boarded team of community members** ready, willing, and sufficiently available, knowledgeable, and free of trauma to effectively operate and benefit from life (in all its phases) in a community-type habitat network.
   A. The support of a partnership between:
      1. Industrial producing cooperatives, and
      2. a regional union of socio-economic States.

5.27 What are the possibilities for humanity?

The possibilities for society may be drawn forth through the following questions:

1. What is the fundamental [conceptual-operational, ConOps] hypothesis, as a description and explanation, simple enough that it can be double-checked by simple thought?
   A. To the best of "our" knowledge, there is nothing wrong with the hypothesis that humans can in wellness together.
2. Is a 'community'-guided society a viable basis for human fulfillment and ecological regenerability of biospherical services?
   A. To the best of our knowledge, there is nothing wrong with the hypothesis that humans can thrive together in a biosphere.
3. What is the performance and potential of an integrated (cooperative and ordering) socio-technical societal system?
   A. Can the rules of human need and societal construction be accessed to design fulfilling services, objects, and machines?
   B. Can information mechanisms be adapted to increase the programmability of societal sub-system part assembly?
   C. How efficiently can new solution specifications be synthesized and constructed into the ecological environment?
   D. What would be the performance of engineered habitat systems, with or without high technological integration and automation?
   E. What is the smallest and largest sizes of a city? Unknown.
   F. Can interfacing with the market-State improve any of these answers?
4. What are the technological objectives and capabilities of a socio-technical integration of society into a unified information [space] sphere?
   A. What are the capabilities of a community-type society's service products?
   B. What are the objectives of a community-type society's service products?
   C. How are the objectives of a community-type society's service products evaluated?
   D. Why are the objectives, capabilities, and their combined probabilities in effectual-causal relationship selected over others?
   E. How has social navigation, together in this cosmos of exploration, changed?
5. How capable will the system be?
   A. What information and physical materials will the

service or product be built of?
   B. What are the functions of the system?
   C. What will be the efficacy of the various system functionalities?
   D. Can the system produce complete human need fulfillment, or only partial fulfillment?
   E. What components of itself can the system produce (autoproduction)?
   F. What new capabilities can the services and products implement?
   G. How close can the fabrication be placed to place and time of service/product use?
   H. How easily can new products and services be designed?
6. Are transparently understandable and algorithmically guided decisions a viable basis for a moneyless and Stateless society?
   A. Is there anything wrong with the basic hypothesis of using programmatically controlled computers and actuators (machines) to do society?
   B. Is it possible, and how could it be possible, for machines and humans to coordinate optimally at any level of technological development? What is the nature of machines, their role in creating value for humans, and ultimately how machines form an essential and extended, integrated, part of individual humans connected over a multi-domain mesh network, and the human system over time (as, knowledge and evolution?
   C. How can the human be in the center of an ever optimizing ecosystem of humans and devices and tools that "we" (humans) have created around us and that will consequently keep growing and influencing us (bar any unrecoverable risk-disaster scenarios)?
   D. Can engineered societies do planning to synthesize/solve human [need, informational and spatial] requirements for fulfillment with low error rates?
   E. Can issue, resource, and procedural accounting build habitat services with low error rates? Even on a planet with multiple societal types operating?
   F. What other methods will allow teams to build globally cooperative organizations?
   G. Will there be substantial difficulty in acquiring financial funding?
   H. Will there be substantial difficulty in acquiring jurisdictional contracting?
   I. Will there be difficulty in sustaining operation?
7. To what extent is algorithmically guided decisioning counter-intuitive and under-appreciated in a way causes underestimation of importance?
   A. Automation and autoproductivity. Autoproductivity is the ability of a system, under external control, to automatically produce an identical copy of itself.
   B. Societal complexity and functionality is not limited by decision system complexity - will projections from inquiry processes overestimate service or product development difficulty?
   C. Community-type societal engineering may be overshadowed by superficially similar organizations— is there a risk that people will think they're studying community when they're actually studying something else?
   D. Community is opposed by special interests - is study of it likely to be stunted by business and political maneuvering?
   E. Human benefits of an planned and integrated humane societal organization are not widely known - would better knowledge increase research and development?
   F. The operations of programmable, automated service may be easier at the societal [macro] scale - will projections from conventional engineering under or over-estimate difficulty?
   G. Economics has been the domain of market economists. Control and coordination has been the domain of politicians. Engineers have a much faster approach to development. How will this affect progress.
8. What procedural inquiry resolutions toward decision control does all this suggest?
   A. Approach to control
      1. Total control: (with 10% deviation) through transparent algorithm of all that relates to development or use of society?
      2. No control: let the solution emerge?
      3. Local control: sub-systems find their own solutions?
      4. Security control: preserve against destructive change?
   B. Approach to resources
      1. Efficiency control: optimize use of scarce resources?
      2. Effectiveness control: maximize availability of non-scarce resources?
      3. Acquisitions control: collect resources?
   C. Approach to access
      1. Personal access: oneself use?
      2. Commons access: time scheduled common use?
      3. System access: operations use?
9. What applicable sensing, deciding, and manufacturing tools exist?
   A. What modalities exist or can be developed?

B. What open source technologies exist or can be developed?
C. What combination of sensing, deciding, and manufacturing can be integrated?
D. What communications technologies exist or can be developed?
E. What design collaboration technologies exist or can be developed?
F. What coordination technologies exist or can be developed?
G. What fabrication technologies exist or can be developed?
H. Which of these technologies is compatible with automation and/or high throughput?
I. What are compatible combinations of societal technologies?
J. What handling procedures and technologies exist for moving information or matter between different societies and/or locations efficiently?

10. How rapidly could systems be designed and services become operative?
    A. To what extent can components be re-used between services (or products)?
    B. To what extent can low-level design be automated?
    C. How directly applicable are current engineering methods?
    D. What new engineering methods need to be invented to use this technology?
    E. How quickly can prototypes be built?
    F. How rapidly could the system match the current market-State access of a middle-to-upper income family?
    G. How can proliferation and access of community services and products be expanded?
11. How could an effective development program (Read: construction of the first "discovery-oriented", "resource-accountability", experimental-accountability" city system) be structured?
    A. How can coordinators, scientists, and engineers be engaged in the project?
    B. How can mentorship be engaged in the project?
    C. How could the project be funded?
    D. How could bureaucratic friction be minimized?
    E. How could passion and flow be maximized?
    F. How should the overall project be structured?
    G. Under what psychological environment (culture) could an effective program take place?
    H. Under what sharing environment (legal) could an effective program take place?
    I. How can development time be minimized?
    J. What cost and time overruns should be expected?
    K. How can everyone collaborate?
12. What will be required to develop a global habitat access service and its products?
    A. How much computer time, human creativity, and power would it take to design, then simulate, and verify the operation of a community-type society?
    B. What will be involved in developing an information support system that can carry out the required processing and decisioning to build the first iteration of the societal system?
    C. How reliably can the operation of a community-type society and its parts be simulated? What would the cost and development time of a CAD/simulation system capable of acquiring understanding from socio-technical dynamics simulation of such parts?
    D. How many parts and surfaces would be needed to constitute a complete set of low-level structural and functional components? How much human effort would be required to develop them?
    E. What would be the cost of developing a design for the first societal city and accompanying societal information system.
    F. How many of these steps could be accomplished concurrently in a rapid work program? All of these steps could be started concurrently, with successive refinement.
    G. How precisely can costs and schedules be estimated?
    H. By what methodical approach will development, occur, of the first self-contained city manufacturing system (which has the requirement to be able to produce duplicates at an exponential rate), and does its description and explanation integrate/complete all spatial and temporal elements?
    I. To what extent is there a (time / resource) schedule consideration, conflict, and priority?
    J. How reliably is the schedule adhered to; the core metric of 'team' operation (indicated as "showing up", occupying, or otherwise acting with a purpose to complete some preplanned task in some para-procedural-metric way?
13. What beneficial or desirable effects could this have?
    A. How much suffering, illness, and disability could the societal system reduce?
    B. To what extent could the societal system alleviate underdevelopment?
    C. Could this help with food and water shortages?
    D. Could this help with climactic changes?
    E. How much and in what ways could it alleviate ecological-environmental problems?

F. How much and in what ways could it alleviate socio-structural problems.
G. Which natural disasters could it prevent or alleviate?
H. How much could these benefits reduce social unrest?
I. How much financial, commercial, governmental, and human incentive is suggested by these questions?
J. What new services, products, or value conditions will the system make accessible?

14. What technical restrictions may make society safer?
    A. Because unleashed access to technology is so dangerous, the best solution appears to be careful decisioning on technology, including some mandatory restrictions to access and materialization. Fortunately, the same features that make technology dangerous also allow the implementation of several kinds of technological restriction that may form useful components of an overall coordination-automation program. Products that might be adapted for secret production of certain materials and technologies pose a serious threat to humanity and the biosphere. Other products pose other kinds of threats, and additional restriction will probably be desirable. Still, many products, once approved, can be built freely—and for some classes of products, approval can be a rapid and automated process.
15. What raises serious questions about societal interfacing?
    A. How is what is raised as serious, as an 'issue', prioritized (i.e., how are serious 'issues' prioritized)?
    B. What other societal organizations and options should be studied?
    C. What other societies may be suitable for automatically precise re-programmable assembly?
    D. What are the consequences of experiencing a societal system that recognizes consciousness as a fundamental component of the exploratory system?
        1. What are the consequences of a societal system that is recognizable as collaborative and explorative; thus, has probably uncertain itself through time, though is certainly interconnected in the now [space], and thus by consequence, may be planned in its now [integration] into the conceptual-spatial (integrated physical-embodied, consciousness-material) environment?
    E. What effect will the system have on military and government?
        1. What effect will this have on governmental rights and liberties?
        2. What effect will new information access (and consequently, surveillance) capabilities have on privacy and social engineering?
        3. What effects will new information access (and consequently, surveillance)capabilities have on governments and other coercive power wielders?
        4. To what extent will new capabilities increase demand for community?
        5. To what extent can conceptual and spatial breakthroughs alleviate poverty and misery?
    F. What effect will this have on migration?
        1. What effect will free information and access opportunities have on the movement and relocation of people?
        2. What effect will the movement and relocation of people have on the operation of a community-type society?
    G. What effect will the system have on market-State?
        1. What effect will the system have on macro- and micro-economics, on production and distribution?
        2. What effect will this have on geopolitics?
        3. What would be the effects on international relations of reduced international trade?
        4. What would be the effects of global community-based societal access on lifestyle decisions and personal access? How quickly could those effects happen?
        5. What barriers to cooperation could make these problems more difficult to solve?
16. What are the disaster/disruption scenarios?
    A. War; social unrest; market unrest; dangerous technologies; socio-moral corruption? Bio-solar spheric changes; ecological collapses?
    B. Social; technical; biospherical?

5.28 What are the assumptions?

This project assumes that human beings are experiential vehicles, that enable consciousness, to experience a physical environment with other individuated consciousness. Within this axiomatic assumption, this project plan assumes that it is possible:

1. For humans to cooperate -- to act together, harmoniously.
2. For humans to identify a sufficiently stable set of information, and service systems, for completing human requirements synchronously.

3. For humans to calculate the ways in which resources may be useful.
4. For humans to determine the optimal arrangement (configuration) of resources.
5. For humans to select a solution (of objects and relationships) to provide for each and everyone's highest [level of human need] fulfillment.
6. Society is a system for which it is possible to design and operate the existence of.
7. For humans to construct a lifestyle that allows for living together in a fulfilling way (e.g., constructing a diet that allows the individual organism to eat in an intuitive way among others, as eating for its nutritional and psycho-emotional benefit; and not, eating with disorder).

It is an assumption that the following questions have testable answers:

1. How can "we" organize the human societal system to produce the products and services humanity requires, cooperatively?
2. How can "we" maximize the efficiency of resource usage for each and every individual's human access to the highest-level of fulfillment, given what is known?

Let us wipe the board free of past limitations, before assuming and proposing:

1. Let us assume that it is possible to understand how a society without the market or the State could exist to produce a sufficiently optimal and continuous state/dynamic of human fulfillment and ecological regenerability.
2. Let us propose the existence of a societal system by means of a standardized and planned specification for the construction of a most fulfilling society system.
   A. Let us contribute our efforts in a coordinated manner to service the fulfillment of the highest fulfillment of all.
   B. Let us visualize together a proposal that assumes we are all capable of living together in the service of all.
3. Let us assume we can coordinate a Global InterSystem Human and Resource Contribution Team who continuously provide services to the global population of community users.
4. Let us propose an information system that accounts for common resources and the common requirements of all of humanity.
5. Let us assume coordinated access to a common pool of resources.
6. Let us propose a network of integrated habitat service systems that distribute access optimally for individual human need fulfillment.
7. Let us assume customized cities within a global/planetary community-city network.
8. Let us propose access to services as resources are distributed through a transparently understandable decision support-computational algorithm.
9. Let us assume a population of conscious intellects, capable of reasoning and growth.
10. Let us propose a unifying information systems model/method that resolves into the continuously iterative improvement to conscious life well-being.
11. Let us assume that humans are capable of optimal well-being (the highest-possible fulfillment) and the least optimal suffering (the lowest possible feeling of fulfillment).
12. Let us propose a community-type society configuration where we are all together, most likely, to live lives of optimal well-being.
13. Let us assume that we exist together in a common, real-world environment.
14. Let us propose a societal specification that optimizes our fulfillment together in our common real-world environment,l which we further propose can be visually explained as a unification of conceptual and spatial information a project coordinated specified plan of execution by an InterSystem Team.
15. Let us assume that it is possible for society to be differently configured, producing different results than those proposed by this theoretical explanation for the next optimal iteration of our consciously materialized societal system.
16. Let us propose the specification contain the reasoning, so that the next optimal society configuration may be more completely understood by all those users with the intention. Let the proposed societal system explain (contain the explanation for) the logic of its own theory.
17. Let us assume humans can connect resources together into services that transport and transform material [spatial] resources into as-required-by specification of the requirements for human fulfillment.
18. Let us propose a habitat service system that connects the life-cycles of planetary ecological services.
19. Let us assume it is possible to control the coordination motion of ecological resources into optimal [integrated] habitat service configurations.
20. Let us propose a solution to individual human fulfillment at the planetary scale.
21. Let us assume spatial objects are what the material environment is composed of, and

conceptual objects are what the information environment is composed of.

22. Let us assume values are directional conceptual objects as shapes/structures with an intention for the next conditional iteration of the whole societal system.
23. Let us propose an information system that resolves a responsively uncertain decision support system that determines and selects optimal solutions, which become evaluated materializations, physical objects.
24. Let us assume there are categories of configuration of a societal system, as well as, the real-time consciously experienced configuration of material resources.
25. Let us propose the specific design of a societal system that has been designed by selecting among categories of configuration [of resources] (as solutions) for the one that demonstrates optimal real-time fulfillment of all within a planetary-scalable solution.
26. Let us assume that different organizations of resources and qualities of services can achieve different levels of individual human-conscious fulfillment.
27. Let us propose that services can be designed within a spatial environment to facilitate and/or "automate" a product-result and/or conditional outcome.
28. Let us assume that it is possible to observe any human societal system as a series of societal information sub-sets.
29. Let us propose values become conditional objectives in the decisioning selection of the next societal solution.
30. Let us assume that all existence is in continuous physical motion.
31. Let us proposed a specific information and habitat service system as the next iteration of our society.
32. Let us assume that is possible to together decide the next execution societal solution.
33. Let us propose that society starts with language, because we are proposing an informational and physical interpretation that linguistically interrelate.
34. In the early 21st century, most people say "society, you know what I mean", and then just keep going without defining society.
35. Let us assume that resources are objects, and that the informational habitat service system is a concept, a category of objects ("things") that relate to the life-support, technological support, and facility support of all human life.
36. Let us propose a system composed of informational and spatial objects globally coordinated into a network of InterSystem Service Teams.
37. Let us assume that Intersystem Teams composed of users can develop and operate services through their contributions.
38. Show me the documentation so that we can all transparently understand the theory of the proposed system.
39. Humans can consciously intend and knowledgeably construct a material (Read: spatial information) system configured to optimize services that complete human need.

Herein,

1. Fulfillment is a dynamic concept because what all humans require as a habitat service system [configuration] may change through time. Fulfillment is a concept that can be accounted for by the engineering of a service to complete a set of requirements. Fulfillment "takes shape" as the conditional configuration of spatial resources into an optimally experienced habitat service system. Fulfillment is a dynamic concept.
2. There is no market or State object in the real-world There are organizations of conscious humans and material resources. Community is the societal-level term given to the organization of humans and resources by design to complete human requirement fulfillment optimally, given what is known and possible. What is known and possible must be accounted for and specified so that sufficient information is available to operate services as required. Neither the market nor the State are stand alone [material] objects. In social engineering, the market is the defensible division of common heritage. In social engineering, the State is an organization of humans and resources to organize the rules for compliance, while coercing and enforcing their finality as the classification of a criminal (or more accurately, criminalized) or personalized [as a player] in the socio-economic market. It turns out that there are better ways of configuring resources by deciding optimal solutions to human issues at the planetary scale. Conscious human beings can point to other humans and point to material objects, but "you" can't point to the market or the State. The "market" and the "State" are just concepts, which can be encoded into a societies information-decision system with reciprocal affect on the individuals' feelings of well-being. The habitat service system is the record of, and also the result of, the flow of resources and humans through the constructively materialized information system.

3. "Civilized" people do not use violence, economic life competition, or threats of punishment to resolve decisions/solutions to human fulfillment.

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Project Approach

Travis A. Grant,

Affiliation contacts: *trvsgrant@gmail.com*

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Abstract

An organization that process information and or objects can have selected methods applied to it. An approach is the selection of concepts and methods that facilitate a more correctly aligned orientation. As a societal-level project, it is necessary to select a set of conceptions and methods of approach that are likely to orient society most greatly toward the experience of mutual human fulfillment. For anything that is created in the world, there are a set of tools that allow for its creation. It is possible to come nearer to in distance and time a societal operation that meets the expectations of individual human fulfillment, through a recognition of how patterns are identified, designed, and contributed to. In order to unify, a unifying method is required. The systems science approach involves the application of the systems language in order to facilitate the identification and synthesis of useful patterns. In order to act upon information usable to societal organization, there is a necessity to use project-based in combination with engineering-based processes and knowledge sets. In order to optimally plan an execute the cycling of information and objects through a societal environment, project-engineering is used to optimize standards, contributions, decisions, and solutions to society. By viewing all global service systems as project plans, it is possible to plan the life-cycling of fulfillment for a global population with consideration to the individual dimensions of information, socialization, and material resource utilization. An integrated approach is necessary to remain sufficiently confident that thinking and actions are likely to facilitate mutual human fulfillment at the societal level.

Graphical Abstract

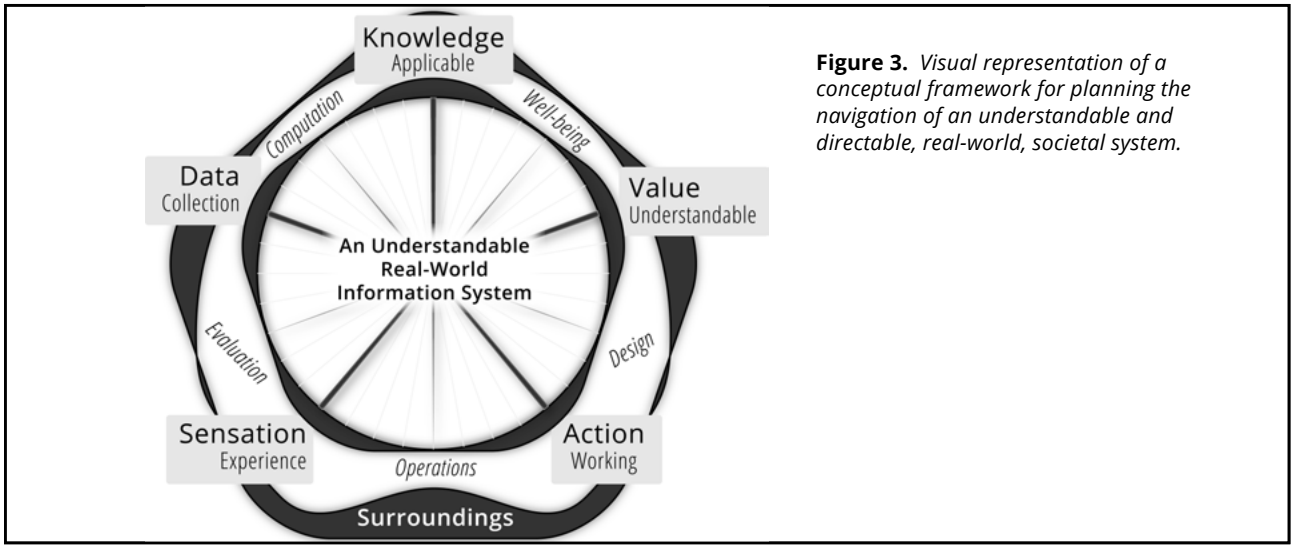

Figure 3. *Visual representation of a conceptual framework for planning the navigation of an understandable and directable, real-world, societal system.*

1 Introduction

Every approach to state change in a material environment requires work. The approach is to work toward cycling through time a system [materialization] that meets (through project-engineering) human needs (decision), given what is known (standardization), and contributed (contribution). The approach is to view all work, all intentional change, as an engineering project, within which decisions are determined about the next [to be]existent state of the society.

The approach to planning is the same approach outlined in the Social System specification: the systems methodology resolves into the selection of the systems-based methods. Science is a systems-based method of discovery. Engineering is the systems-base method of working for development and operations of services. Project coordination is the systems-based method of computing a schedule, given what is known, and what is available from contributions and resources in time.

> **INSIGHT:** *To de-compose and re-compose, every system must be assumed based on some kind of structure (structural pattern), which may be personally and socially understood through a complex of association networks..*

2 The systems-science approach

> **INSIGHT:** *Simply, the approach is to work with patterns together for our mutually directed benefit. Systems in the real-world express behavior (motion) and exist within a context (network). To fully identify a system, it's behaviors and context must be identified. Whole-system engineering—optimizing an entire system for multiple benefits, not isolated components for single benefits.*

Systems sciences provides a potential to explore what are the temporal patterns inside of society. Within the system 'society', how is it possible to recognize and control temporal patterns (of access and creation), optimally, using [a temporal] data [stream of needs and values, projects, solutions, and resources]? Systems science studies, seeks to describe and explain, systems in nature and society. In the context of this study, systems thinking is an approach to organization and problem solving that considers the parts of a system as interconnected (interrelated), rather than independent. The systems approach enables an understanding of the relations and interactions between the various components of a system. The adoption of systems thinking can be especially helpful in illustrating the complexity inherent in socio-technical systems through better problem definition processes and visualizations; synthesizing complex wholes, as opposed to breaking them into parts; understanding causal relationships between parts; and putting forward differing perceptual views by creating awareness of the differences in social relations. The application of systems thinking in design is a required approach to address the increasing complexity of society and societal problems. The systems approach is explained in depth in the Social System Specification.

> **NOTE:** *A classification of systems approaches is detailed in the Social System Specification, which aims to identify relevant criteria for the adoption of systems thinking into design and operations.*

Technically speaking, every societal solution design specification is like a societal motion tracking signature (based on a pre-existing information system), and can be identified again, because of its patterns of information that form its model. Every society can have a model built for (or, of) it, to which other models of society can be compared (to identify individual differences).

Systems theory is a formal language, and like any formal language (e.g., mathematics) , it is independent of any external subject matter and is solely dependent upon its own internal logic. If logic is consistent, then it 'works' (conveys capability, extensionality). If there are logical inconsistencies within the syntax of the language, then does not work. The same is true of any formal language (e.g., the programming languages that operate instructions in a computer).

1. Errors in syntax cause mal-functioning.
2. Errors in communicating syntax as semantics cause [human] mis-understanding.
3. Errors in symbolically reifying (real world modeling, pragmatics) cause [human] mal-adaptation.

If systems science is the application of systems organization to scientific inquiry, then that is a strange definition, because science is a systems-based method. In other words, to select scientific inquiry as the method of discovery is to have selected a systems based method. One of the definitions of science is rational explanation. The scientific method is the method of rational, physical explanation using the language of systems. In the case of physics, science is rational explanation involving physical objects and cause mechanisms, of phenomena that occur. Systems science is just science, it is called systems science because in the market, the scientific profession is divided by discipline, and so the term system is often added before science to show its systematic application in a particular context. Science is a process for explaining the workings of systems in the real world. In their design and operation, systems involve measurement, applied toward the useful representation of information.

Science is an empirical [system] method; meaning, that it is dependent upon reference to some real world experience ("subject matter") in order for its validation. Whereas collection and analysis is the information processing domain of science, design and operating is the information processing domain of engineering. Set theory mathematics currently acts as the formal proving method for proof of scientific fact validation. Systems-based language formalization is the foundation out if which to build a robust framework for highest fulfillment of all of humankind.

Systems science is a framework powerful enough to describe our 'world' and our 'work', in all its richness. Our working world requires the qualitative capacities of system science that allows us to properly contextualize existence and the rigorous quantitative methods of analysis that allow us to properly compute this information, with the net result as a full[-fillment] visualization of the real world. Along with the individually social method of participation, contribution, humanity has the tools it requires to flourish.

Science as a single body of knowledge, must by definition, be unified. Systems science is a holistic approach the inputs, processes, and all possible outputs, together. Seemingly separate domains, upon closer inspection, fit together at points of integration.

Systems science allows for a recognition of the important interplay between people and technology, and may thus be considered an accountable method for socio-technical understanding and the foundation of [systems engineering] development.

Traditional science rests upon an objective view of the world (Read: analysis) which rests upon removing the subjective interpretation of the view from the model. Systems science is philosophically sophisticated enough to deal with the questions surrounding the subjective nature of the human experience (human condition) that are required to truly resolve an optimal society for all human individuals.

When we infuse belief into any step of the problem-solving process, it can easily become the frame through which all outcomes are viewed. In the market system of belief, in societal projects, a solution is not deemed successful unless it carries a financial upside. This financial upside doesn't have to mean actual revenue; it can simply mean shareholder market value, as is see with many software companies. Whether the solution solves the original problem or not is almost entirely irrelevant to market value. This prioritization of profits over progress puts a ceiling on the amount of real, human value we can actually deliver. It also papers over any resulting collateral damage. In this sense, the idea of human-centered design is about prioritizing human needs over human beliefs.

This principle isn't just about human life sustainability; it's also about the quality of human design solutions. At the societal level of intersystem team operations, the standards and protocols used to control life need fulfillment and life safety are developed based upon societal inquiry (including risk) tolerances aimed to meet the human requirements of all individuals. It is through standards and protocols that we discover, and it is through discovery that we improve standards and protocols.

Nothing create exists in isolation; it all lives within the overall natural cosmo-ecological system. Through systems science, solutions [for the next human societal iteration] can be constructed with safely optimized tolerances that support every individual human of that system. Through science and engineering we are likely to actually craft a more effective and efficient societal solution for human fulfillment.. Here, holistic thinking focuses on problems, processes, solutions, and orientations, given an environment with probabilities.

Does every problem need to be solved? The question of whether, every problem needs to be solved, is a useful one to facilitate recognition between actually necessary, and actually unnecessary, problems? Do any market-based problems need to exist? Do products and services in every human system need a trading price? How does belief-centered thinking keeps consciousness locked a self-centered, power-over-others regulated materializing life bubble. Society could otherwise be structured upon verifiable (falsifiable, verifiable and validatable) measures like well-being, sustainability, equity, and growth opportunity. Human life values could become a base filter through which we evaluate all of our design solutions instead of otherwise solved value orientations.

2.1 Data science

From an information system's perspective (because, this is a project to develop and operate an information