

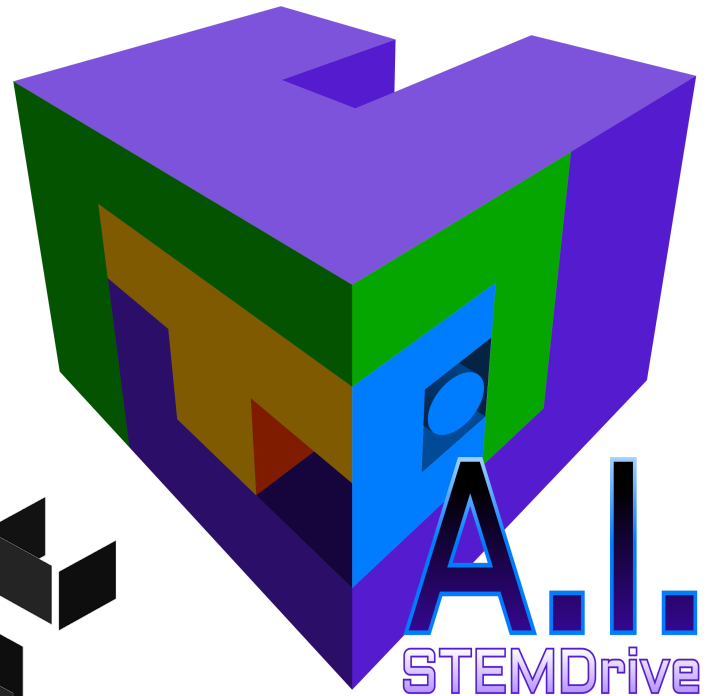
PHOBOS TECHNOLOGIES LLC

Proudly Presents

STEM Theory & The AI STEM Drive

**A Science-Based Approach
For Establishing Sustainable Social Transcendence**

Incorruptible Institutions | Educational Excellence | Secured Privacy, Health & Happiness
Scientific Integrity | Maximized Efficiency, Productivity & Advancement | Social Cohesion



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Company Overview

Phobos Technologies LLC was founded on Monday, July 2nd, 2018 with a singular mission in mind: to rigorously test the viability of 'STEM Theory'.

Our mission includes the careful planning and execution of four fundamental studies necessary to test the theory's central hypotheses.

Should the null hypothesis be rejected, our mission extends to the careful development of The AI STEM Drive, and the installation thereof as a smart-city network within a designated and prepared test-bed city for further investigation.

Otherwise, if the null hypothesis cannot be dismissed, the findings will be released and stand as the foundation for further study and refinement.

As with most other scientific endeavors; the direction of the research at this point greatly depends on the specific results of the final research analysis. In the best case scenario, the original hypothesis will be minimally reformulated to better fit the data. In the worst case, the complete rejection of the hypothesis must be entertained; however, even in such an event, it is quite likely that something of value will be discovered.

Phobos Technologies LLC Mission Statement

*Our mission is to expand the capacity of human potential;
to elevate humanity through the elevation of the individual.*

*To elicit personal autonomy,
engender personal and social competency,
and strengthen social relationships.*

*We aim to catalyze the ignition of a
self-sustaining and self-stabilizing
social auto-actualization¹;
the intrinsically motivated
Supra-Organism Optima².*

The decision to engage this mission was the result of several years, beginning in 2008, of personal study and intrigue into human behavior. Most notably, the vast array of negative, self-defeating, yet unbelievably common social behaviors.

¹ Social Auto-Actualization (SAA): A hypothesized, self-stabilizing feedback loop of continually self-actualizing individuals. The emergence of SAA within the proper technological and structural social framework (The STEM Epiconomy) is indicative of phase-change wherein a specific percentage of the population becomes self-actualizing.

² Supra-Organism Optima: A eusocial community nearly identical to that of a superorganism with one significant difference: whereas individuals comprising a superorganism are incapable of surviving for an extended period of time outside of the community, individuals comprising a supra-organism optima are incapable of achieving and maintaining self-actualization outside of a healthy communal structure.

The original behavior-set that sparked such an interest into these matters are the same self-defeating behaviors generally perceived as acts of corruption.

Between 2008 and 2016, frequent and astoundingly blatant acts of obvious corruption (several which were unquestionably illegal) had been witnessed across four terms of corporate employment. A keen interest and awareness of social imbalances quickly began to emerge.

A sample of the more poignant and destructive imbalances are listed here:

<ul style="list-style-type: none"> ● Corporate & political corruption ● Unemployment ● Homelessness ● Lack of medical care ● Involuntary hunger ● Financially driven crimes ● Gaping social divisions ● Anger & discontentment ● Disheveled families 	<ul style="list-style-type: none"> ● Financially driven divorce rates ● Greed ● War ● Poor quality in production ● Bad science ● Lack of quality education ● Financial disparity ● A glaring lack of self-actualizing individuals
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After a careful analysis of each imbalance, it quickly became obvious that there were only a few fundamental themes at play; some psychological, some sociological, and some economic.

Much like our current understanding of the incredible levels of damage which spring from the simple act of enforced prohibition; similar such simplistic structures also appear to be at play here.

STEM Theory & The AI STEM Drive

STEM Theory's physical implementation consists of two necessarily interacting components: The AI STEM Drive and The STEM Epiconomy. The two systems have an "auryn-esque" relationship, each plays an inseparably fundamental role in the stability and correct operation of the other.

The AI STEM Drive provides the following necessary infrastructure-services:

1. The SAAS APIs, virtual soft-networks, and other software-based resources necessary for the carefully guided self-actualization of each citizen and the social auto-actualization of the society.
2. The intimate (and inherently private) psychological and social care for every single citizen. This is accomplished by producing AI-driven plans to motivate and create the psychological and physical atmosphere required for the attainment and continuation of self-actualization for each and every individual. The quality of production, creativity, happiness, empathy, and ingenuity correspondingly follow.
3. Consistent AI-driven analyses and strategies, generated on-the-fly in order to maximize the efficiency of energetic and material consumption as well as the minimization of all species of waste. This is achieved by the manipulation of delivery schedules and routes, smart-home efficiency management modules, and several other methods such as the "modular delivery network" and "cross-stream meta-nodes".

The STEM Epiconomy, in turn, provides:

1. The physical products, infrastructure, and network structures upon which the STEM Drive runs.
2. The required social dynamic, or 'epiconomy'.

Technically, The STEM Epiconomy is the naturally occurring social dynamic which occurs when the majority of citizens are actively engaged in self-actualization. Suffice it to say, the implementation of such a system requires an initial educational initiative.

The STEM Epiconomy has been designed to be completely natural and intuitive once the feedback cycle of social auto-actualization begins. For this reason, only the initial educational program is required.

Maslow's Theory of Self-Actualization and The Hierarchy of Needs have both been expanded and refined throughout the years since their inception in 1943. The most recent embodiment of said refinement is The Self-Determination Theory of Motivation (SDT) published by Deci and Ryan in 2000.

STEM Theory utilizes the most recent findings in psychology and SDT research. In order to be better understood by the general public, well-known terminology such as "self-actualization" are frequently used, though admittedly, somewhat outdated.

Self-actualizing individuals have generally been shown to display a very specific set of behaviors and mental paradigms. According to Maslow and many others who followed in his footsteps, such individuals are deeply invested in the progress, happiness, and productivity of others as well as their own. They are not swayed by greedy financial motivations and they avoid corruption at all cost. They are deeply engaged in their professions and their work tends to be of a quality and pace which is vastly superior to their traditional counterparts.

The primary goal of these initial investigative studies are to show what a society would look like wherein the majority of its citizenship consists of such individuals.

The secondary goal of these studies is to answer the question of how to ensure perpetual self-actualization for every single individual within The STEM Epiconomy.

Such a feat, thus far, is theorized to only be accomplished through the symphonic use of technology, artificial intelligence, and the proper implementation of mature psychological and sociological theories.

Product, Service, Development, and Market Differentiation

Product Description

The “consumer-facing” side of the STEM Drive network is peppered with personalized STEM nodes, referred to individually as a “confidant-familiar”³.

Each community member is paired with a confidant which is trained to be uniquely suited for its human counterpart. The confidant’s interface would function much like Siri or Google Assistant might, although its purpose and internal functionality is quite different.

As smart-assistants such as Alexis and Siri are designed to couple information collected about its user with market forces and financially-driven motives; the user’s STEM familiar is designed to privately collect, protect, and analyze its ward’s⁴ personal information according to multiple psychology-defined submodules. The goal of such extensive analyses is the carefully planned elevation of its ward’s happiness and personal potential; that the familiar’s human charge⁵ is ethically and morally motivated to become their best possible self.

We would promote the idea that the relationship between the familiar and its ward should be viewed both as two very close friends as well as how the relationship between the conscious and subconscious mind is generally perceived. Despite the fact that the subconscious is generally discounted as an official term in the sciences; our

³ “Confidant-Familiar” is in reference to two individual names; having been combined to serve as an overarching term. The term ‘confidant’ is usually in reference to the mechanical or technical side of this particular type of STEM node. The term ‘familiar’, on the other hand, is usually used in reference to the more emotionally stirring side of the device. “Confidant” is to “familiar” as “homo sapien” is to “best friend”.

⁴ The terms “ward” or “charge”, both refer to, “A person who is under the protection and care of another”

⁵ See footnote 2

perception of what such a relationship *would* look like, minus the negative aspects, fits the profile.

Our purpose in promoting such a perception is to give life to the user's perceived bond between themselves and their familiar. As one ebbs, the other flows; and vice versa.

It should go without saying that privacy is of the utmost importance in undertaking the task of designing such a system. Already a great deal of careful consideration and thought has gone into the conceptual design of the confidant-familiar. Likewise, extensive testing and research will continue until the general public and experts alike are satisfied that the confidant's capacity for privacy exceeds all expectations.

The confidant's interface will be available on multiple platforms and device mediums. Currently, the possibility of a mobile application with limited capabilities (considering the privacy concerns associated with such a heavily connected device) is under careful consideration. It may be more likely that a dedicated mobile device, such as a watch or a ring, may be a much more suitable candidate.

The majority of the familiar's collected data and reactive suggestions will be processed on a specialized computing device located within the user's residence. This home-core is in frequent communication with the user's familiar as well as the smart-home's IOT hub. The home-core is designed to perform heavy-duty analyses of energy consumption patterns throughout the home, IOT usage patterns, all other electrical usage, water use patterns, gas, internet usage, user mobility throughout the home, fridge contents, nutrition patterns, wake/sleep cycles, and a vast array of other metrics. The purpose for this is two fold. The first is to minimize waste and unnecessary, accidental consumption of valuable resources; a necessary and heavily implemented strategy across the entire STEM architecture. Such systems are necessary in order to guard against the current practice of excessive waste; ensuring the sufficient levels of resources required for sustaining all community members. The second purpose is to analyze the particular behavior patterns the system requires in order to organize and detail a variety of suggestions and automated tasks, statistically determined to be the most probable and effective means for maximizing the happiness, potential for self-actualization, and capacity for betterment of its human charge.

The confidant system also interfaces with the user's major institutional relations such as the user's place of employment, recreation, relaxation, consumption-based interactions, medical and psychological treatment, education, and many others. Such communications are limited, and information is only requested if it is deemed vital to the familiar's purpose.

All red-flagged user actions are carefully reviewed with the goal of finding the root cause of such red-flag behavior and developing a helpful and healthy means of relieving them.

All confidant activities are fully transparent and can easily be reviewed by the user. In this way, the relationship between the user and their familiar is fully open, garnering trust and appreciation.

A great deal of planning and design has gone into solving the problem of user privacy. A method has been developed which strips all up-tier datastreams of the information required for the current tier's proper function. It is also correct to say that all lower tiers necessarily function at that particular level of privacy; becoming more intimate as the information down-tiers. A system codenamed "Shadow Req" is responsible for this behavior. Shadow Req is built into the systems architecture with very little software components which makes the up-tier information redaction inherently ineluctable.

The AI STEM Drive's network make-up is composed of two separate dimensions of activity; the tier structure and the stream structure.

The network tiers are similar to modern internet subnetwork structures. The first tier is the end-user interface; or the confidant-familiar system as it concerns each individual. The second tier is the home-core. From here, each tier connects a range of subnets. The number of subnetworks is determined by several algorithms to keep the networked bundles socially appropriate, limited in size by the Dunbar number and other similar social boundaries.

The tiers continue upward with separations similar to the physical expansion into neighborhoods, cities, counties, states, etc. Monitoring the entire system are the

meta-nodes, a network of highly sophisticated super-computers tasked with network analysis and maintaining the network's stability and health.

The STEM Drive's streams are overlaid soft-networks which are regulated by the STEM Drive network itself. These are meant to represent and facilitate major social sub-structures such as military, government, education, personal, professional, distribution, healthcare, etc.

As the network develops, it will become necessary for some tiers to have several sub-streams and even some streams to have several sub-tiers; depending on the network's needs and self-analyzed efficiency scenarios.

The production and distribution networks are among the most important when it comes to maximizing efficiency and properly monitoring and minimizing waste; a requirement if the system is to see that everybody's needs are properly met in the safest and healthiest way possible.

Stage of Development

Currently the AI STEM Drive is in the preliminary research phase composed of four pre-planned studies. The first simulation study is scheduled to be completed by the end of 2021. Each subsequent study has been designed to build upon its predecessor. These studies are designed to determine the viability of STEM Theory.

The first simulation is the TerraSTEM ProtoSim, designed to compare the traditional currency-driven economy and The STEM Epiconomy with an extremely meticulous thermodynamic analysis of each system. The three functions of money, according to economic theory, is a special-case metric to be used as a unique type of control. This is due to this study's unusual construction.

The second simulation study is an extension of the first. This study requires the inclusion of a more complicated psychological agent construction. A hierarchy of needs, emotional tensors, and a system of social interactivity based on The Self-Determination Theory of Motivation, are all crucial components of the agent's psychological makeup.

The third study is more expansive and will require human participants. The goal of this study is to determine the level with which a human participant can take-on and project their perceived game-character's psychological states into a virtual environment. Should the participants prove to be easily disposed to projecting such traits into a virtual game-like environment (especially when it comes to behaviors related to happiness, fulfillment, and self-actualization), then the fourth study will utilize a virtual environment. Otherwise, a more sophisticated, real-life study will be necessary.

The fourth, and final study of the preliminary research phase will be a fully simulated (whether virtual or physical) STEM Epiconomy, supplemented with a rudimentary version of The AI STEM Drive in order to determine the practical efficacy of STEM Theory.

If the null hypothesis is properly rejected and STEM Theory holds up to scrutiny and peer review, a full-scale development effort will begin for the production of The AI STEM Drive to be tested in a large testbed-city for the final evaluation of the system. Currently, Toyota is working on such a city; coincidentally, to run city-wide scientific studies. Toyota's "Woven City"⁶ is scheduled for its ground-breaking ceremony sometime early 2021.

The most current information concerning the state of The STEM Theory research project can be found at <https://stempri.me/>

Market Differentiation

The AI STEM Drive and its implementation carries the possibility of being one of the most disruptive systems to be so vigorously engaged within the last several thousand years. Market differentiation may not be the most useful perspective to consider when it comes to the development and implementation of this system due to its unique and controversial nature.

⁶Woven City Project: <https://www.woven-city.global/>

It may, however, be more useful to consider STEM Theory from a social wellbeing perspective. From this perspective, this system, if shown to close the hypotheses seamlessly, may very well be the single most important advancement since the advent of human language itself.

Market Demographics

This system is designed and intended to be initiated upon complete social acceptance. Much like STEM Theory cannot be considered from the perspective of that which would require an analysis of the product's market differentiation; an analysis of market demographics, product and service sales strategies, target market analyses, or even the concept of the competitive advantage are all moot points. Such perceptual frameworks are used in an attempt to construct an understanding of a product's usefulness as a mechanism to generate a return on one's investment. In light of STEM's use-case, such tools would only be counterproductive.

Even though the idea of a competitive advantage is of no great use; allow me to suggest contemplating the perspective of pure, unhindered, non-compete, advantage and advancement.

The preliminary calculations suggest that a currency-driven economy is likely incapable of maintaining the necessary productivity and technological elevation of a society to such a level as to allow for the practical construction of mega-structures (mega-capacity generation ships, dyson spheres, dyson rings, etc). There are many reasons for this - not all are financial. A more fluid system with much less divisive side-effects, less system chaos, and vastly more productive would be necessary. STEM Theory was designed to be just that. In fact, it is within the bounds of these calculations that a low-resistance implementation of the epiconomy could make possible the relatively easy construction and completion of several classes of mega-structures within one century's time.⁷

There is no sales strategy aside from the proverbial "selling" of the idea to the enlightened minds, and further, the enlightening of all others.

⁷ The set of calculations used are extremely rudimentary and should, in no way, be taken as gospel. All the same, the results were mind-numbing.

Support and Project Funding

Currently, Phobos Technologies LLC's research concerning STEM Theory is a fully self-funded endeavor. As of now, all funding has been generated through various contractual engagements; however, this mechanism is quickly nearing the end of its usefulness.

A series of in-house projects have been selected and compiled according to their individual market analyses. We have committed to both quality and speed in the development and completion of each of these projects. Our "live" project queue (the projects deemed to take the least amount of time yet have the higher potential for growth) currently contains nine projects.

In the interest of what STEM Theory represents, we have opted to avoid investors and investment firms. Donations may be considered at some point further on, depending on the source and value; however, resource and product donations are more likely to be an acceptable method for support.

Social Preparation, Encouragement, and Assurance

YouTube, Facebook, Twitter, and other social media platforms are likely the best means of disseminating this information and properly informing the public of this project.

Social encouragement and assurance, in conjunction with carefully delivered scientific explanations and validations; should be based on the results of the research.

The most important device, however, will likely be the implementation of the AI STEM Drive and the STEM Epiconomy in the proposed test-bed city. This will have the potential to display a fully realized and working model of STEM Theory in action.

Utilizing these tools together, with a sober presentation and carefully delivered arguments, will be vital in gaining the public's acceptance.

Research & Development Team, Associations, and Advisors⁸

Thomas Wright

Position: Lead Researcher and Software Engineer

Experience: 25 years of software engineering experience

⁸ There exists a very small, yet very intelligent and wise selection of advisors and/or partners who I hold great respect for and whose help I am deeply grateful for. Given the controversial nature of STEM Theory; these names will remain in redaction for fear of accidentally or inadvertently causing harm to their professional and/or academic reputations. If, however, these persons expressly agree to and/or request to have their name added to these research papers; I would be both honored and overwhelmingly humbled to oblige.