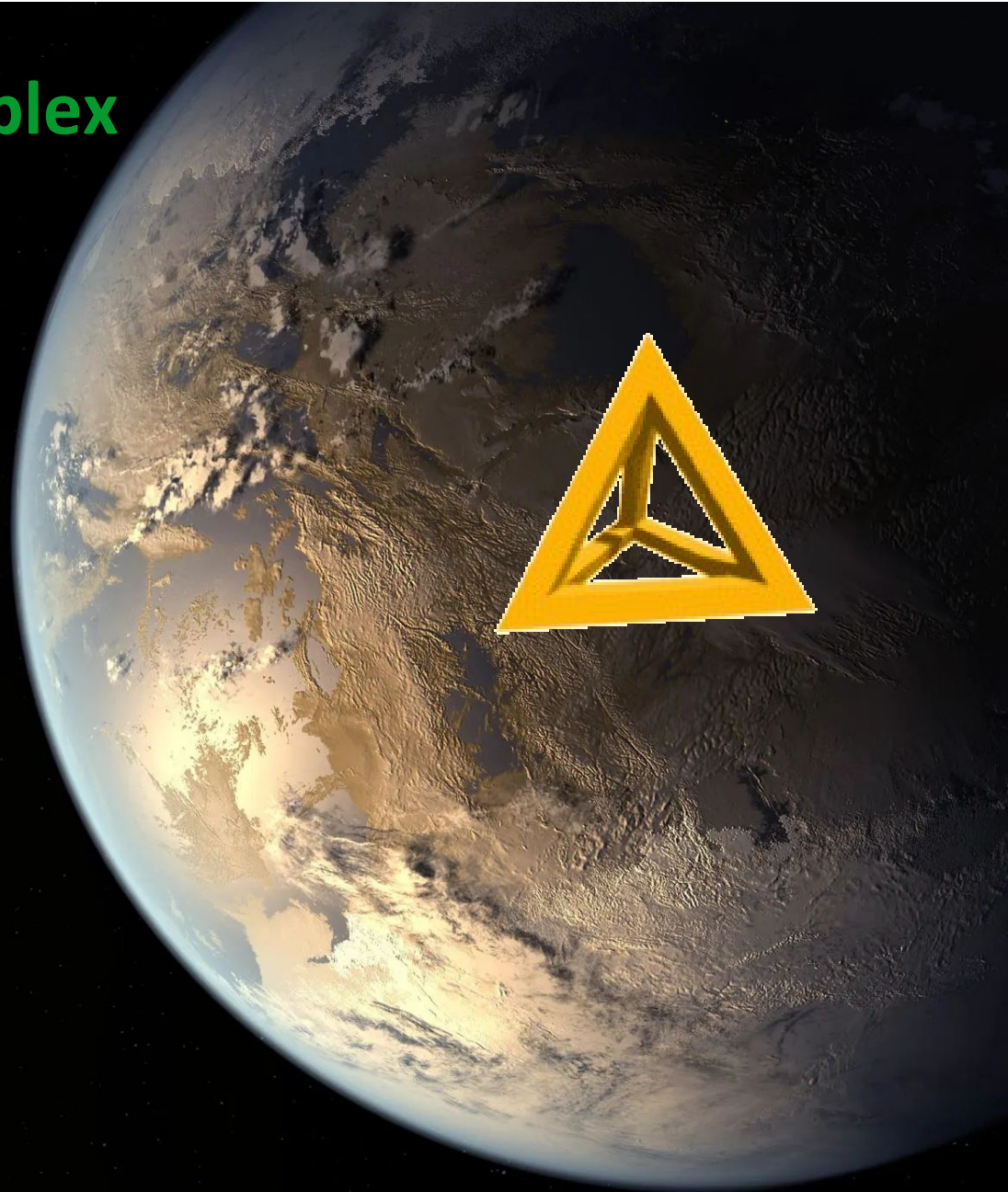


**ARC Renaissance Complex**

**A R C**



**Vision and Realization**

# **Welcome to**

# **ARC Renaissance Complex**

**This document presents an introduction to**

**ARC Activities in the Sciences and Arts**

**including**

**ARC Special Projects in Education and Communication**

**ARC is a confluence of people and projects initiated through the works of**

**Prof. Martin Dudziak and the TETRAD Group**

~~~~~

**TETRAD Institute of Complex System Dynamics**

**Intelligence Renaissance Industries**

**Mirnova Foundation**

**Argonauticus**

**Oasis Clinic**



# Contents

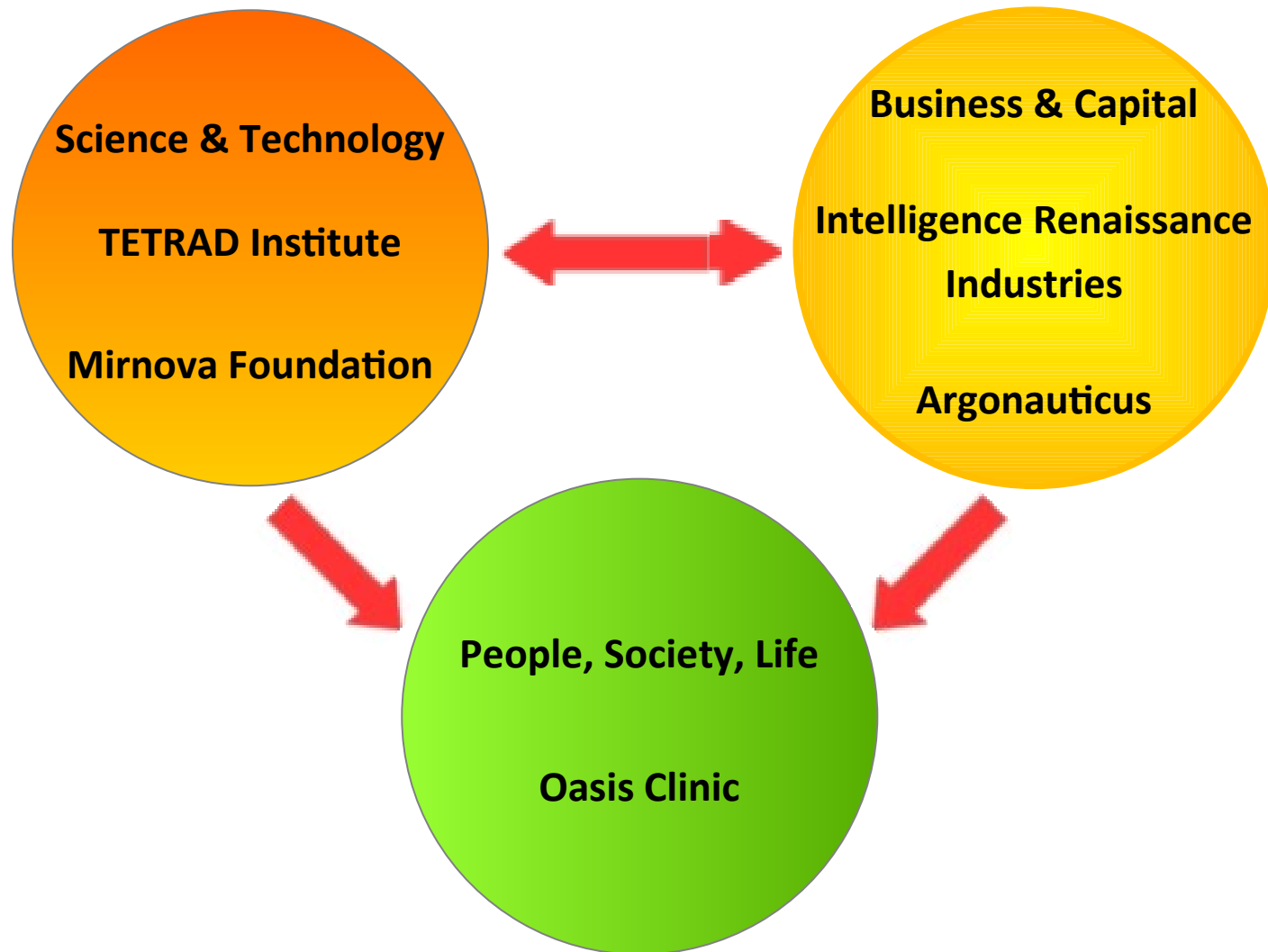
|                                                      |           |
|------------------------------------------------------|-----------|
| <b>[I] Introduction</b>                              | <b>5</b>  |
| <b>[II] Education and Communication</b>              | <b>14</b> |
| <b>1 Core Theme Projects</b>                         | <b>22</b> |
| <b>2 STEM-centric Projects (research origins)</b>    | <b>57</b> |
| <b>3 STEM-centric Projects (application origins)</b> | <b>65</b> |
| <b>4 STEM+Social+Medical Projects</b>                | <b>68</b> |
| <b>[III] Future Horizons</b>                         | <b>94</b> |





# Introduction

***Our World of Action***  
***Our Roots and Origins***  
***Our STEM and STEAM***  
***How things grew in the***  
***Garden of the ARC***



**TETRAD Family, Mission, Purpose**

## Research Institute

Integrative, fundamental research  
investigation and education in the sciences.

[www.tdyn.org](http://www.tdyn.org)

**TETRAD Institute  
of  
Complex  
System Dynamics**

**Initiator, Principal Facilitator  
& Coordinator of ARC**

## Corporation

Product development in areas of intelligent  
systems for communications, public health,  
medicine, environmental change.

[www.intelrenaissance.com](http://www.intelrenaissance.com)

**Intelligence  
Renaissance  
Industries**

**Oasis Clinic**

## Partnership

Center for neuropsychological health and wellness with  
concentration upon integrative methods based upon analytical  
psychology and wholistic approaches to dysautonomia,  
arrhythmia, and autoimmune disorders

[www.tdyn.org/go/](http://www.tdyn.org/go/)

**Mirnova  
Foundation**

## Philanthropic Program

Offering STEAM scholarships and  
educational project sponsorship to  
individuals of special merit.

[www.mirnovafoundation.tdyn.org](http://www.mirnovafoundation.tdyn.org)

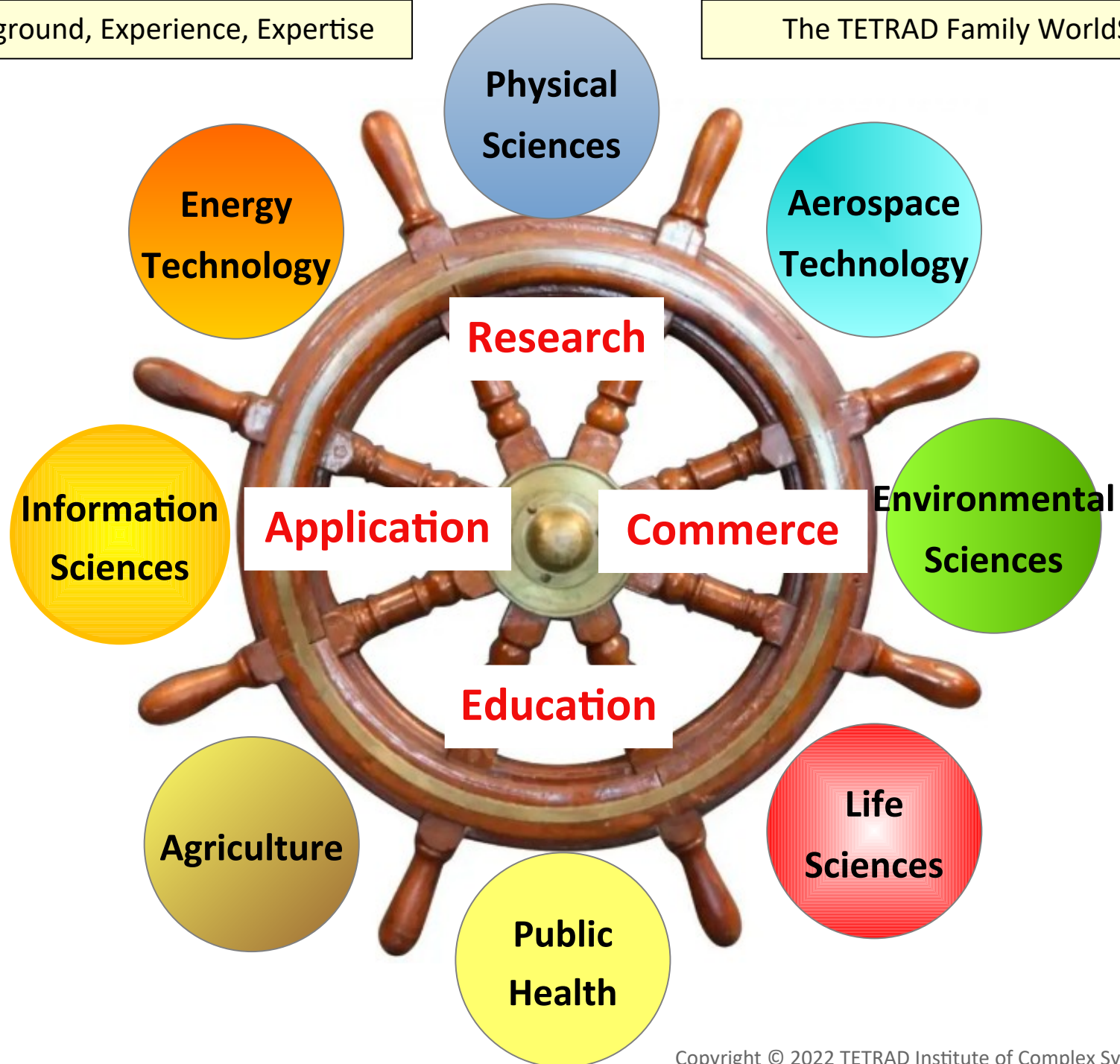
## Partnership

Consultancy and expert service with focus  
on specialized arts, antiquities, rare  
manuscripts, fashions, designs, and travels.

[www.argonaut.tdyn.org](http://www.argonaut.tdyn.org)

**Argonauticus**

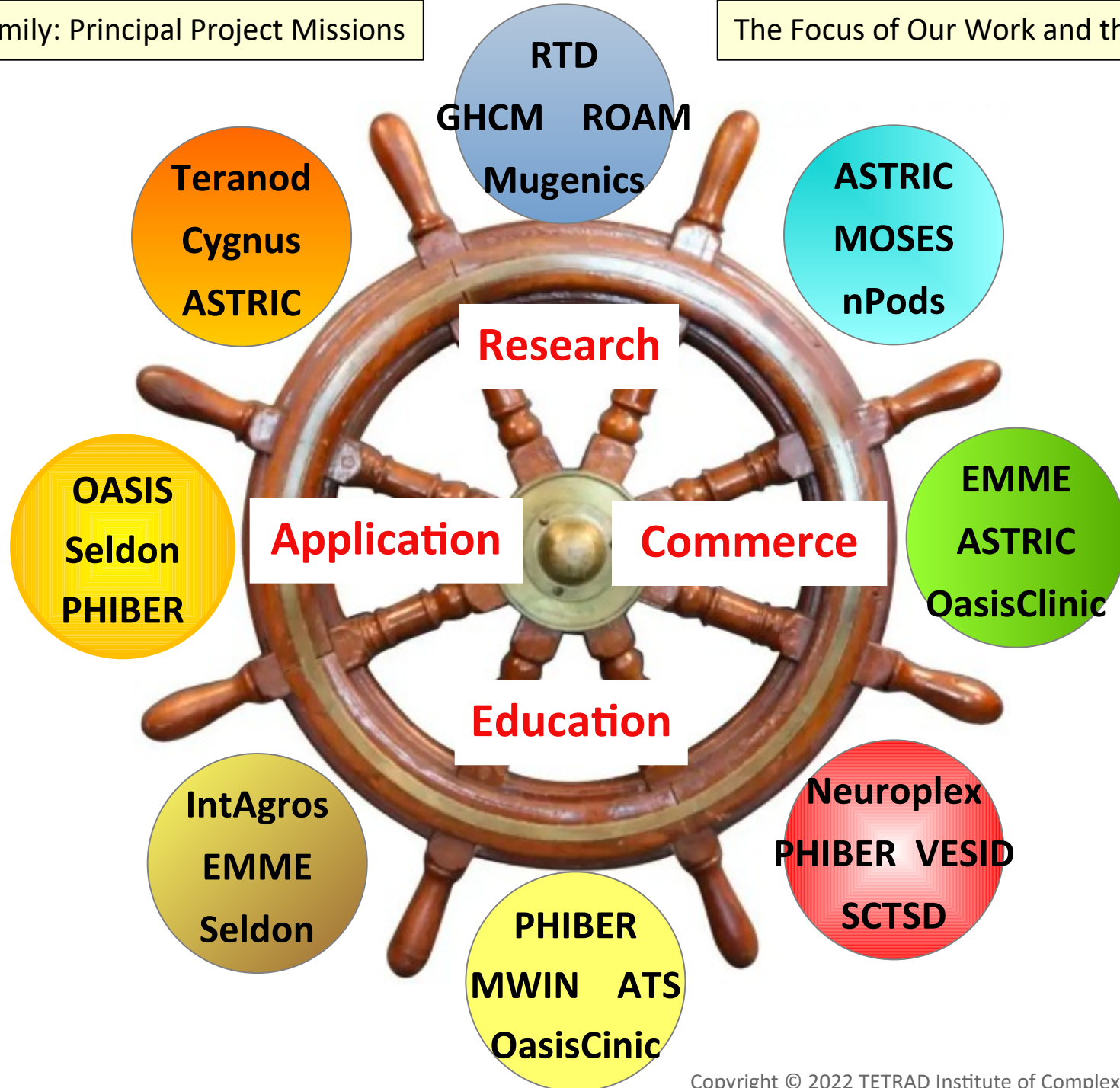
**Relationships between TETRAD Institute  
and other organizations within the  
TETRAD Family**



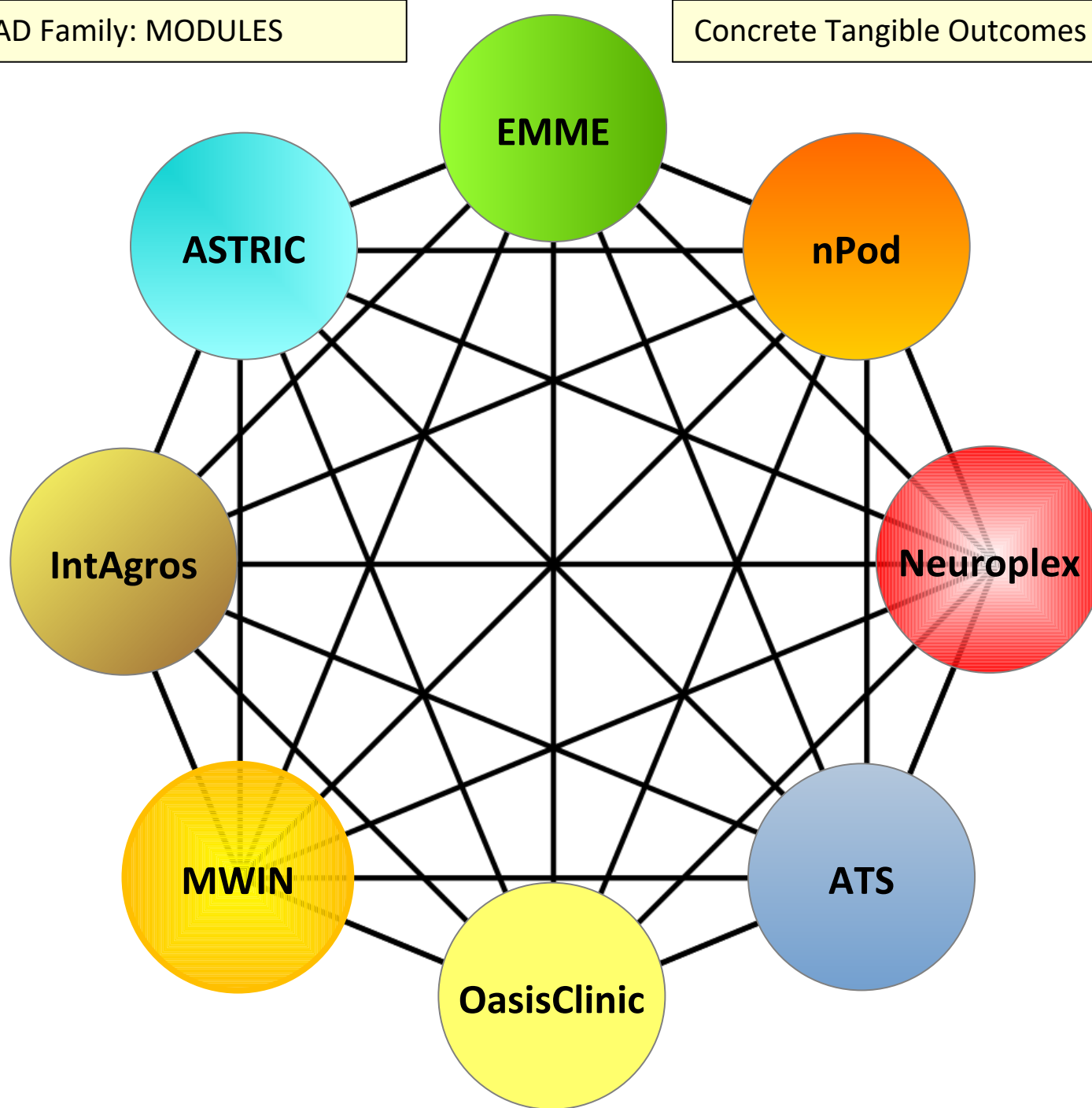
What Matters Right Here and Now

What Pertains to Our World Today in  
Special Human, Social Ways









# ARC Research and Development Today

**We are active in twelve research projects and several applications of our research for the development of products and services.**

**These are describe more fully in other documents and websites, including:**

**<http://tdyn.org>**

**<http://intelrenaissance.com>**

**All of these activities are also expressly directed into Education at the levels of middle and high schools and universities, through an offering of special projects and customizable classes that can fit into the curricular needs and interests of different schools and colleges. This is explained further on the following pages ---->>>>**



## Education and Communication

# ARC Special Projects in Education

**A program prepared for implementation in partnership with one or more academic institutions, providing unique educational experiences to students and faculty.**

**"STEAM" projects in conjunction with established curricula for high-school level students. Science + Arts + Philosophy. Integrative, cohesive, synergistic.**

**Independent study for individuals and groups, projects that are within a course, multi-term projects.**

**The following Special Projects are offered and suggested.**

**Each may be incorporated into existing or new curriculum offerings.**

**Each makes use of what ARC is all about, in ways that serve the needs of the full body of students and faculty.**

**These are based upon prior and current works spanning research, application, psychological and medical practice, and time in the forges and kilns of Life.**

# **These project themes are the basis of the**

## **ARC Network**

**A set of online media channels providing talks, lectures, presentations, interviews, forums on a variety of topics linked with projects described herein.**

**These communications are designed in conjunction with projects undertaken by students, faculty and other members of the community.**

**Each media event can be an opportunity for creative artistic expression that employs the STEM and helps to make it more communicable to People.**

**More about the ARC Network and its Channels can be found here:**

**<http://arc.tdyn.org/arc-network.html>**

**ARC** is a philosophy, a network, a forum, an agora, a coadunatio experience

Come, meet, dialog, argue, exchange, invent, trade, co-create

ARC encompasses and includes many things

ARC is discovering, uncovering, revealing, creating

in the context of education and practice

ARC is ἀλήθεια

There are Muses and Personas

Dionysos sings and dances, Apollo aims his arrow with precision

Inanna and Tammuz perform the Rite of Spring

A monolith appears in the dawn over the misty steppes

Rising Ra becomes orb, torus, eye, star

We present here the following:

**[1] Ten (10) Core Projects as examples of activities that can be tailored to meet the interests and desires of school, faculty, and students**

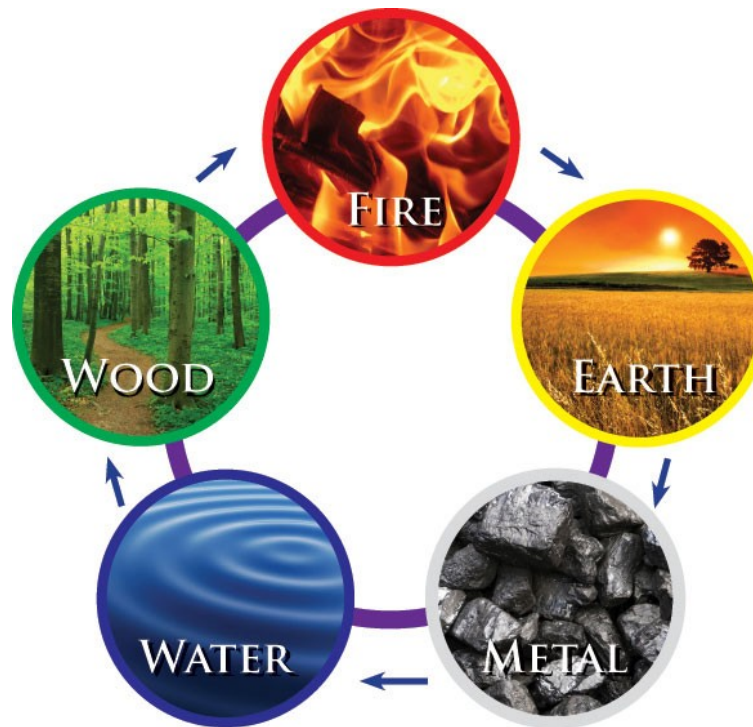
**[2] STEM-centric project ideas that derive from prior Educational Activities we have produced with students and schools and/or from research projects**

**[3] STEM-centric project ideas deriving from previous and ongoing application and commercial product development**

**[4] STEM + Social + Medical project ideas deriving from prior and current activities**



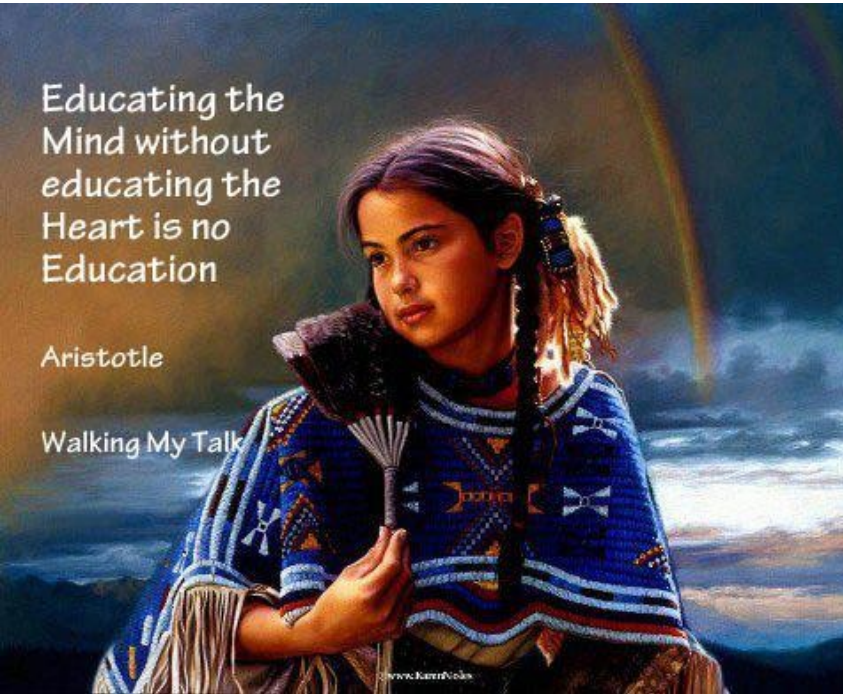
# *Manifest Creative Potentialities*



Educating the  
Mind without  
educating the  
Heart is no  
Education

Aristotle

Walking My Talk



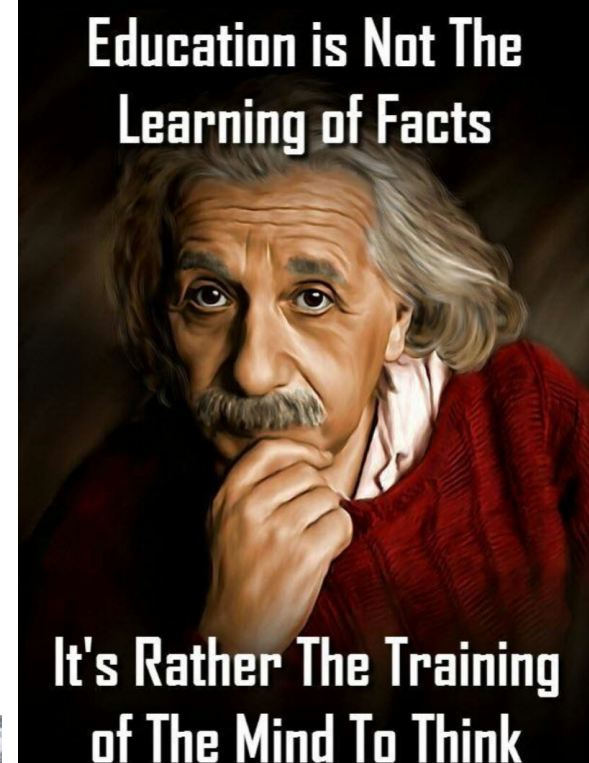
We Do Have a Path  
That we All know  
How to Walk

~~~~~

We are here,  
Committed to this,  
So Let us Walk this Path  
And Build  
Together!

*Viva la Vida!*

Education is Not The  
Learning of Facts



It's Rather The Training  
of The Mind To Think



Each of the projects introduced herein can be implemented in a manner that fits within the context of different curricula plans and schedules, student and faculty interests, institution objectives. These are presented in the form of outlines which convey subject areas, topics of directed learning, and creative outcomes.

**[1] Projects deriving from STEM-focused research and development**

**[2] Projects deriving principally from the arts and humanities**

**[3] Projects deriving from creative writing and film**

Each project opportunity presented here can be adapted with faculty participation for different targets, modes, purposes. Applicability can vary:

- individual students, small teams of 2 or 3, or whole classes
- students of different ages and interests
- short (one-semester) or open-ended extension over multiple years

Many offer the realistic possibility of “taking things further” with respect to extension or production in partnerships involving other organizations and people. Many have prior histories in academia, industry and other venues.



## Ten Core Project Ideas

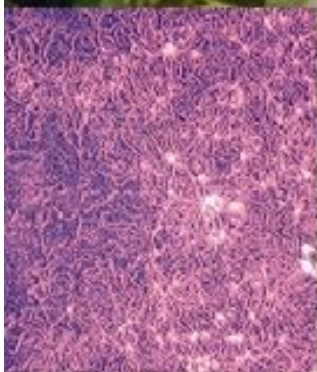


# ArsBio



# ARS BIO

## Diversidad en Arte y Vida



## **ArsBio**

**Diversity and Unity in the Arts of Nature  
Mineral, Plant, Animal, Human, and Beyond  
Learning about the Science, the Maths and the Beauty**

**Creating and Curating an Exhibit  
Onsite and physical, online and digital**

**Paleo, archaeo, classic, modern, futuristic  
Nano, micro, bio, geo, social, mytho, astronomical  
All visual art forms, many cultures, many worlds**

**Based upon projects conducted over a 20-year history  
in several countries**

**[www.mirnova.tdyn.org/arsbio/](http://www.mirnova.tdyn.org/arsbio/)**



Galleries

## Totibadze Gallery

22 entrance  
Tue-Sun 12:00-20:00 // Mon – weekend

TOTIBADZE

Educational projects

## Creative Workshops for all ages

6 entrance  
Mon-Sun 10:00-21:00

Творческие  
мастерские

Educational projects

## School of Collectors and Experts

10 entrance  
Mon-Fri 10:00-22:00 // Sat,Sun – weekend

ШКОЛА  
КОЛЛЕКЦИОНЕРОВ  
И ЭКСПЕРТОВ

Galleries

## ARTIS Gallery

22 entrance  
Tue-Sun 12:00-20:00 // Mon – weekend

ARTIS

Galleries

## XL Gallery

XL

Galleries

## Osnova Gallery

Galleries

## “Fine Art” Gallery

22 entrance  
Tue-Sun 13:00-20:00 // Mon – weekend

Galleries

## Triangle Gallery

22 entrance  
Tue-Sun 13:00-19:30 // Mon – weekend

GALLERY TRIANGLE

Galleries

## 11.12 Gallery

19 entrance  
Tue-Sun 12:00-20:00 // Mon – weekend

11.12  
GALLERY

Galleries

## Vladey Space

11 entrance  
Mon-Sat 11:00-20:00 // Sun – weekend

VLADEY

Galleries

## REGINA Gallery

REGINATA REGINA

Galleries

## 21 Gallery

21



## Futures Gateway



## **Futures Gateway**

**Creative writing and art interwoven with**

**New perspectives on STEM**

**New ideas, relations, functions, values**

**Onsite and physical, online and digital**

**What will the future be like – home, family, school, travel, work, Earth, Space, health, wealth, and any-everything else one can imagine and put into colors, words, sounds, movements...**

**Art, sciences, techno, dreams, fears,**

**Visions that shock and rock,**

**Risks to take, barriers to break,**

**What is realize-able, possible, desire-able**

**Based upon projects conducted over a 25-year history in several countries**



# Argonauticus





## **Argonauticus**

### **Argonauticus**

**Arkhe-Intel – a new method in archaeology and history –  
technologies and art-object-artifact targets for investigation**

**Hero - heroes in myth and legend, our collective archetypes, and  
the cults of celebrity in modern society**

**Apocalypto - the motifs and myths of "apocalypse" throughout  
history and into the present era**

**"Doctrine of N" – ancient philosophies from China or ??,  
explored by Benjamin March and others**

**Palimpsests – the art and happenstance of how history and our  
view of ourselves changes over time, in all the arts we make**

**Persona and Shadow Haute Couture – fashion that discloses,  
reveals, hides, allures, pretends, and truths our wholes**

**[www.argonaut.tdyn.org](http://www.argonaut.tdyn.org)**





## The Huntress --- Paleo Art in the Present



## **Paleo Art in the Present Era**

**Doing it in the styles of Altamira, Chauvet, Lascaux, Kakadu, Koonalda and many others**

**Themes about who Neanderthals and Denosovians really were, the meetings of species, home life, art, living and dying, beliefs.**

**The art of Inna Panasenکو and other contemporaries**

**Dream Paintings and more**

**Explorations, investigations, a flexible span of what this can be for each group, each student. Potentials for a serious program that can involve exhibits of diverse works from several museums and collections, with student creations, and even live performances.**

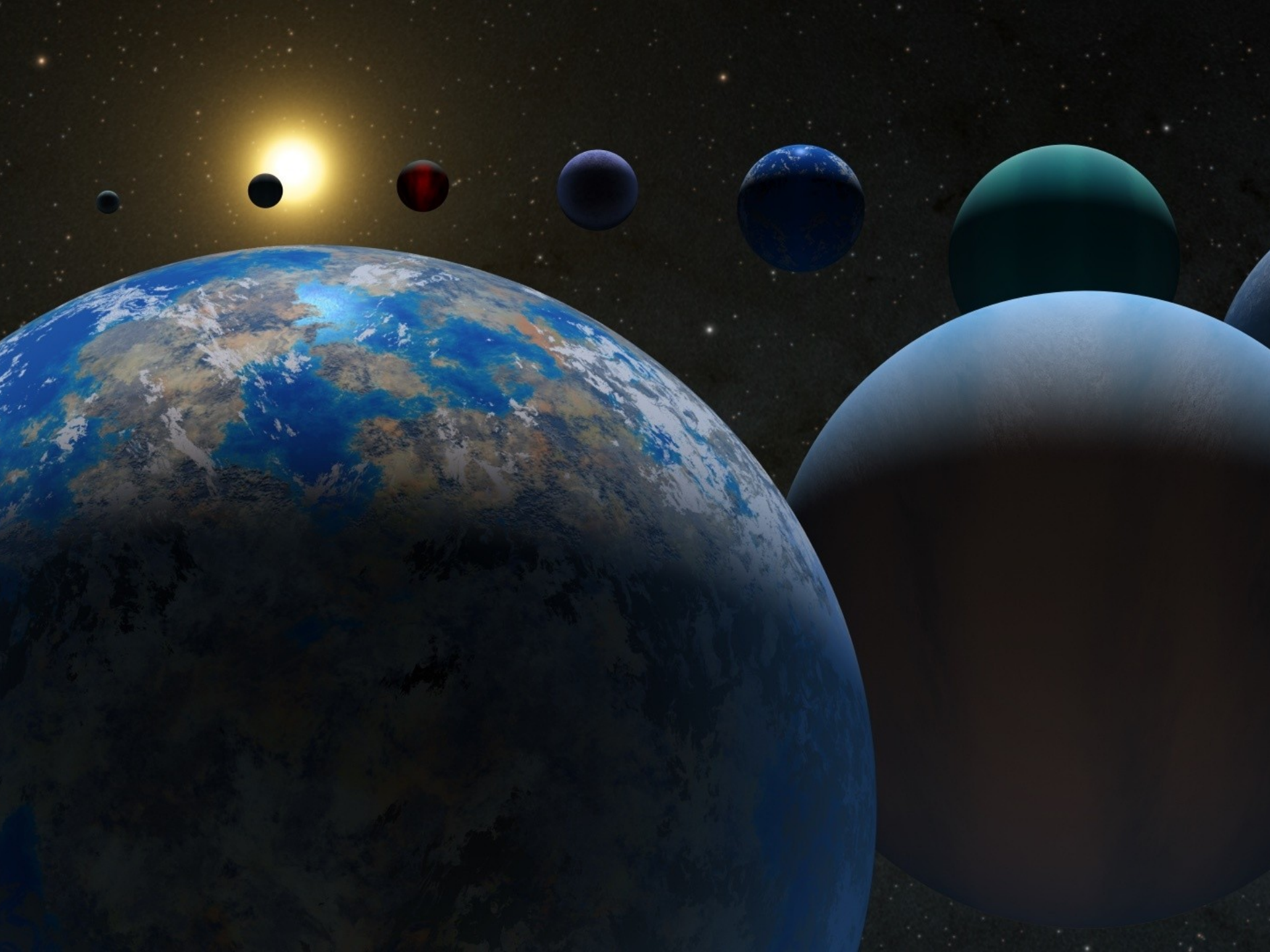






**ET, what are you really like?**





## **ET, what are you really like?**

**Exploring, through science and art, what life and mind may be in other worlds. Exoplanets. Exobiology. What could be and what may be.**

**Different minds, different intelligences, different consciousness.**

**Why not also on Earth, too, all around us?**

**What could be other forms of society? What will the impact be when we finally Meet? SETI is a search with telescopes. A kind of Dating Site, perhaps... What will happen here on Earth when we meet ET? What will you think of us? What will we think of ourselves?**







## Fata Humana



## **Fata Humana**

**Making the film, based upon the script as defined on a harsh winter day of a future-challenged life.**

**This is a comparatively short film, with a minimalist soundtrack.**

**It is inspired by the much more well-known Werner Herzog film, *Fata Morgana*, with elements of a Sartrian philosophical outlook and the effects from a few decades of living hard in a hard world.**

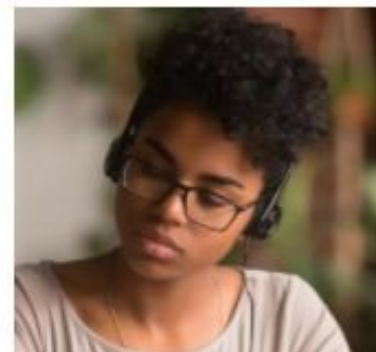
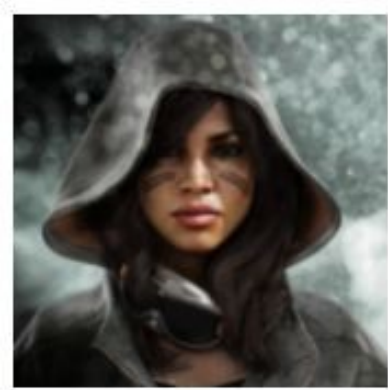
L'homme est condamné à être libre parce qu'une fois jeté dans le monde, il est responsable de tout ce qu'il fait.

Man is condemned to be free because once thrown into the world, he is responsible for everything he does.

J P Sartre



## Cyber Robin and the Hood





## **Cyber Robin and the Hood**

**There can be several paths with this group of precocious genius teens who “first by happenstance and prior lives and then by reason of commitments to principles and oh by the way some sudden urge to stay alive took on fighting the Hydra who are very rich and very influential and very effective in human trafficking of all sorts”.**

**Some possible paths:**

**Class project and beyond - complete the book(s), based upon the original 2018+ text**

**Or, make graphic novels(s), similar to those started in 2018**

**Or, make the film – in keeping with themes and variations of 2022**

**naturally - because we Are in a War, I remind you, and that HYDRA is a Very Very Very REAL Monster, and a very Smart Enemy. Smarter and more powerful than you think.**





**Look Up! Look Up!**



## **Look Up! Look Up!**

**Making the film or a dramatic performance, based upon the ASTRIC Project (space robotics, drones and something like synchronized dance) and the prior designs and proto-projects for a play that ends with a bang and definitely no whimper.**

**Youth and definitely some “we-don’t-fits” are the main protagonists along with a few over-the-edge wizard-type scientists.**

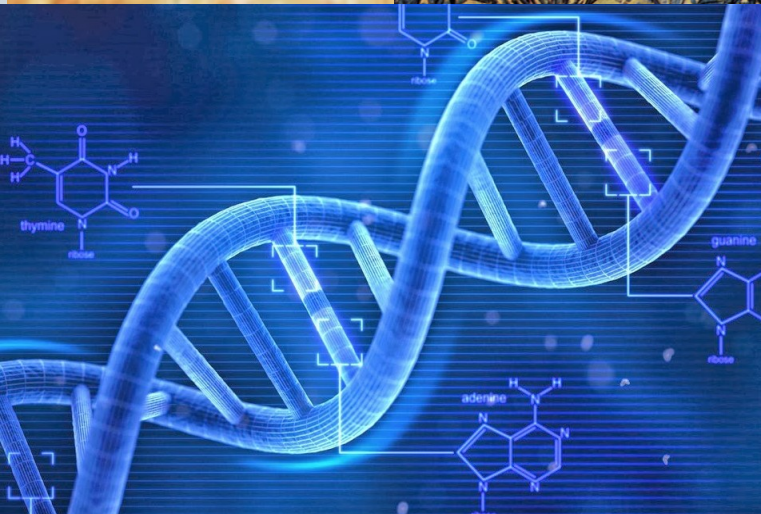
**An “inverse” to the mainstream movie, “Don’t Look Up”. (And I’m told that Leonardo thinks the idea is Cool, too.)**

**This brings in the real science and technology about asteroids and other space-related things, and the opportunity for creative multimedia art that can express a whole range of emotions and reactions to something that is, quite really and actually, on our horizons as a human race living on this thin film of blue and green.**



**Sum ergo miror**





## **Sum ergo miror**

**A play, in twelve short acts.**

**I am, therefore I wonder.**

**Then I imagine.**

**Then I make.**

**Then I learn.**

**Then I make better ways to dominate, to control, to kill, to destroy.**

**Tsar Bomba and Pharma Sutra.**

**The chant goes on and on but reaches a point of final limitations and catastrophic points of no return.**

**Perhaps ART can reawaken something of what it is to be Human.**



## **NAROD: The Witcher's Brew**





## **NAROD: The Witcher's Brew**

**A play in four acts that must be produced and seen by many.**

**Dialog, song, dance, video, a full spectrum of Theatre in the Real.**

**Scenes include:**

**Double, double toil and trouble**

**I don't have a home**

**Mama, where are you?**

**L'homme est condamné à être libre**

**Life Divided by Zero**

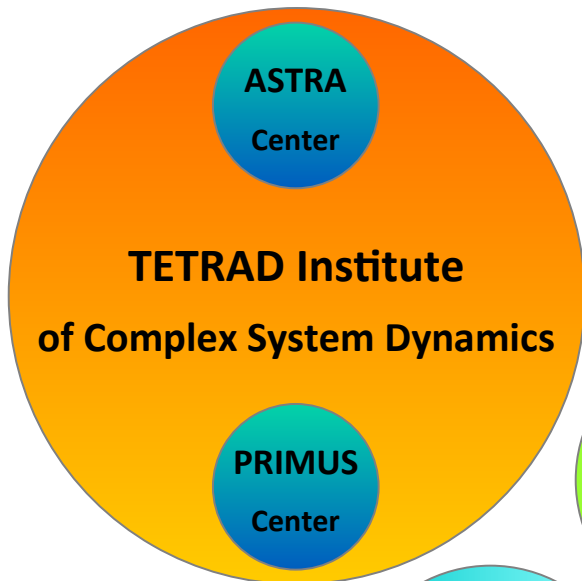
**The Great Unraveling**

**Vyrishute!**



## **STEM-centric Projects (research & education origins)**



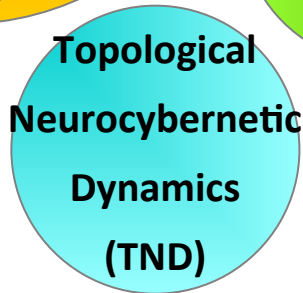


**Seldon** (synthetic intelligence and pattern learning)

**OASIS** (mass-population behavior prediction)

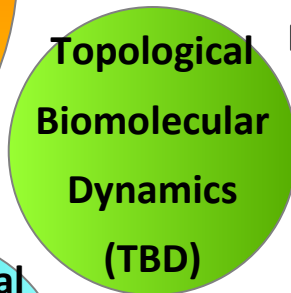
[www.psd.tdyn.org](http://www.psd.tdyn.org)

[www.oasis.tdyn.org](http://www.oasis.tdyn.org)



**GHCM** (generalized heterogeneous computing machine - quantum computing, non-Turing and Turing computation)

[www.tnd.tdyn.org](http://www.tnd.tdyn.org)



**BMCC** (biology, chemistry, medicine)

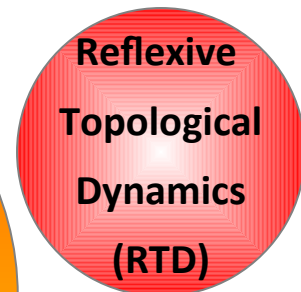
**ANCES** (neurobiology)

**Neuroplex** (neuro-cardio-autoimmune disease and medicine)

**VESID** (virology, epidemiology)

[www.tbd.tdyn.org](http://www.tbd.tdyn.org)

[www.neuroplex.tdyn.org](http://www.neuroplex.tdyn.org)



**Teranod** (physics)

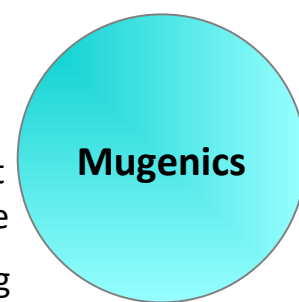
**Cygnus** (physics)

**Sirius** (astrophysics)

[www.rtd.tdyn.org](http://www.rtd.tdyn.org)

Genetic engineering + species adaptation to climate/environment change and Space life

[www.mugenics.tdyn.org](http://www.mugenics.tdyn.org)

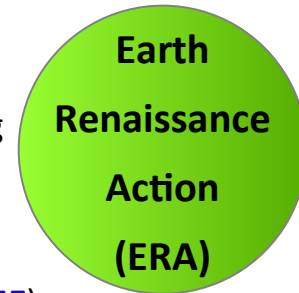


**ASTRIC** (cybernetics, space engineering)

[www.astric.tdyn.org](http://www.astric.tdyn.org)

**Tethys** (environment, climate change, terraforming - **EMME**)

[www.era.tdyn.org](http://www.era.tdyn.org)

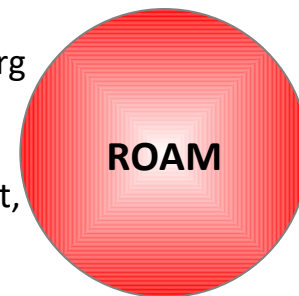


[www.emme.tdyn.org](http://www.emme.tdyn.org)

Interplanetary and exoplanetary

exploration, transport, habitation, industry

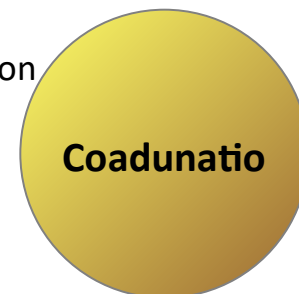
<http://roam.tdyn.org>



**Librarium** (knowledge and culture preservation)

**Mirnova** (STEAM education for interpersonal/social health and stability)

**Seminar** (communication and dissemination)



**8 Permanent “(R)Evolution” Programs  
and 12 Principle Permanent Projects**

**Theory + Application**

serving

**Renaissance, Evolution and Sustainability**

in Social

## STEM research-origin Projects [a]

§ ROAM - what it would be like, all aspects of such interstellar-travel life, the STEM aspects, the psycho-social, the contrasts with sci-fi books and films

§ Coadunatio

◆ Librarium - student-projects to investigate, review, select, prepare books and other documents that should be in the Librarium

§ Mugenics - what it could be like, on future Earth, in deep space, and all the issues and challenges including ethics and politics, about conscious genetic re-engineering of the species

§ ERA

◆ ASTRIC – space, robotics, asteroids, terraforming, colonies

◆ Tethys (EMME) – Earth, environment, climate, viruses, diseases

## STEM research-origin Projects [b]

### § TND

- ◆ GHCM – quantum computers, real Synthetic Intelligence - what it would be like, an artistic approach (bringing in work with Cubit-Candide and the Vienna circle)

### § TBD

- ◆ BMCC and especially Neuroplex and VESID – the science and the art of molecular biology, cells, viruses, bacteria, neurons

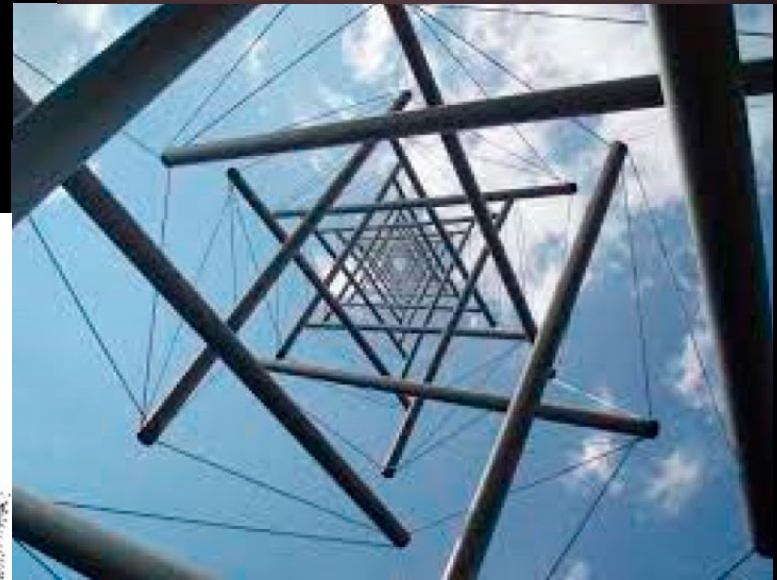
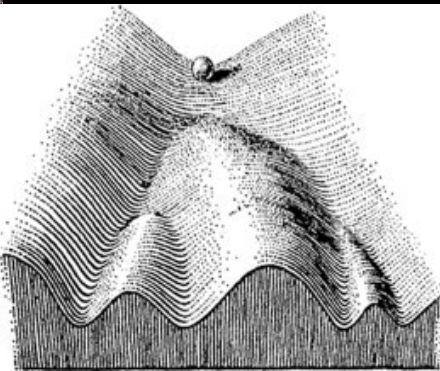
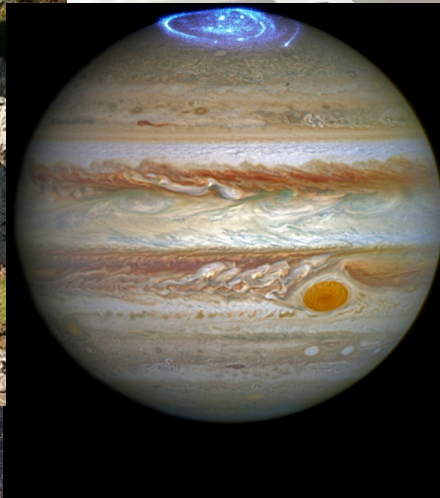
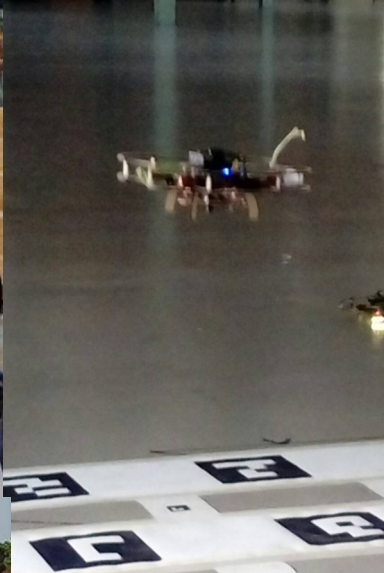
### § RTD

- ◆ Teranod - what it can be like, real fusion power
- ◆ Cygnus - what it can be like, new forms of energy from deep-space
- ◆ Sirius - what it can be like, travel through wormholes, black holes

## STEM education-origin Projects [a]

- § Robot drones Dancing to the Music – this can be a fantastic integration of science, robots, music, dance, more!
- § Tensegrity sculptures and architecture – this is also not limited to static art forms or traditional math and geometry!
- § The “Sands of Time” (chreodes, curves, arcs, and Nature) – the outcome could be mobile sculpture or dance or music or all together
- § The Maths of the Megaliths – yes, about Stonehenge and more.
- § Sounds of the Stars - visual, dance, music that connects with the "sounds" (different spectra) emitted by various stars and black holes





## STEM education-origin Projects [b]

- § Fibonacci meets Da Vinci and Darwin - aspects of Fibonacci series and other intersects between mathematics, visual arts, architecture
- § Viruses, bugs and Geometry --- connecting with environment, climate, and epidemiology – about geodesics and virus topologies
- § CubeSat of the Arts --- design and build an artistically expressive component that is incorporated into a CubeSat (small satellite of the type that many student-groups of different ages have done and these actually get launched into space)
- § The Ultimate Tetrahedron – more than just a sculpture or a math class, with some unexpected creativity of its own!

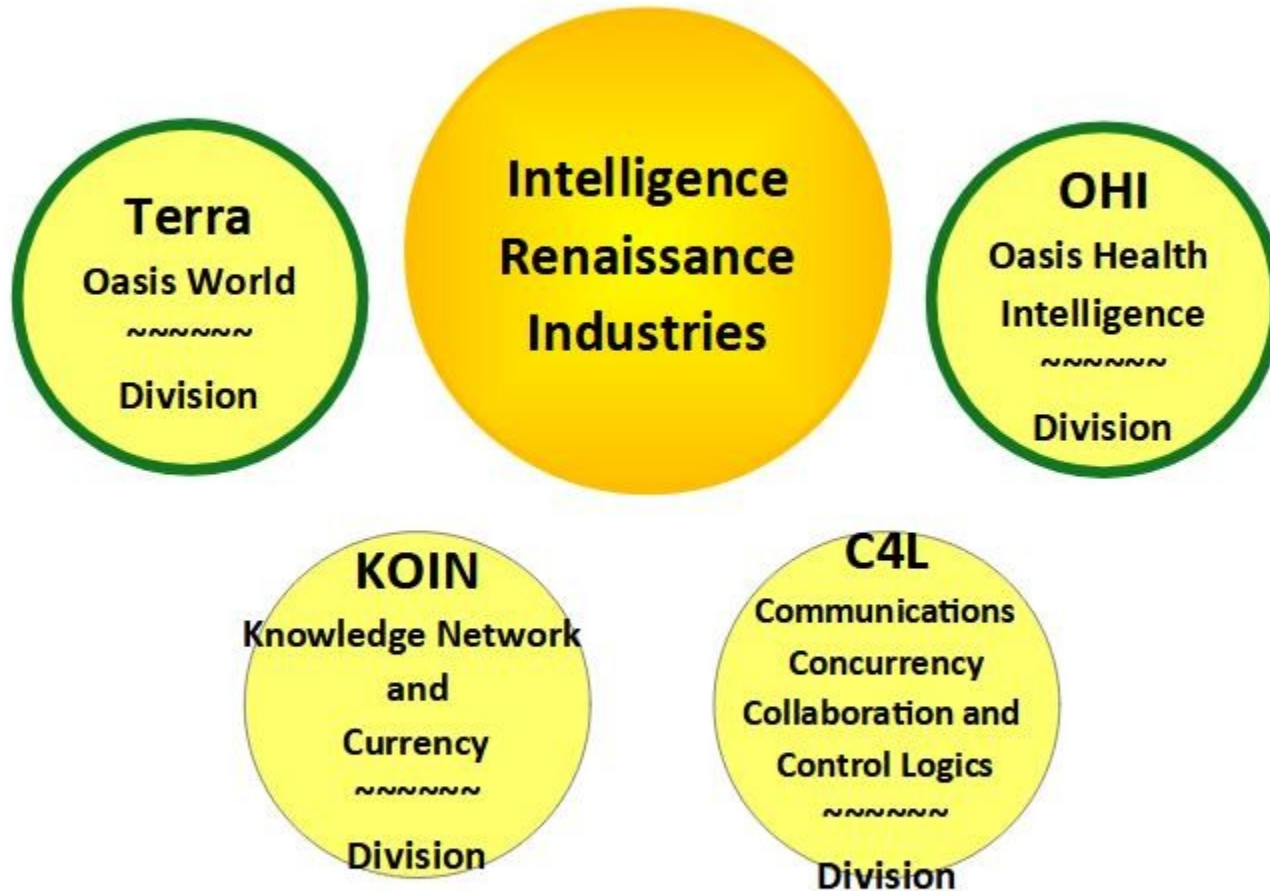






## **STEM-centric Projects (application origins)**

## Intelligence Renaissance Industries – 4 Divisions



## STEM application-origin Projects (4 examples)

§ Terra - designing an Oasis-world, all the features and the media graphics – how this can enable the Arts to Reach and Change Society

§ KOIN - new currencies, new thinking about economics, money, capital, capitalism – how the Arts can drive forward new-thinking about socioeconomics

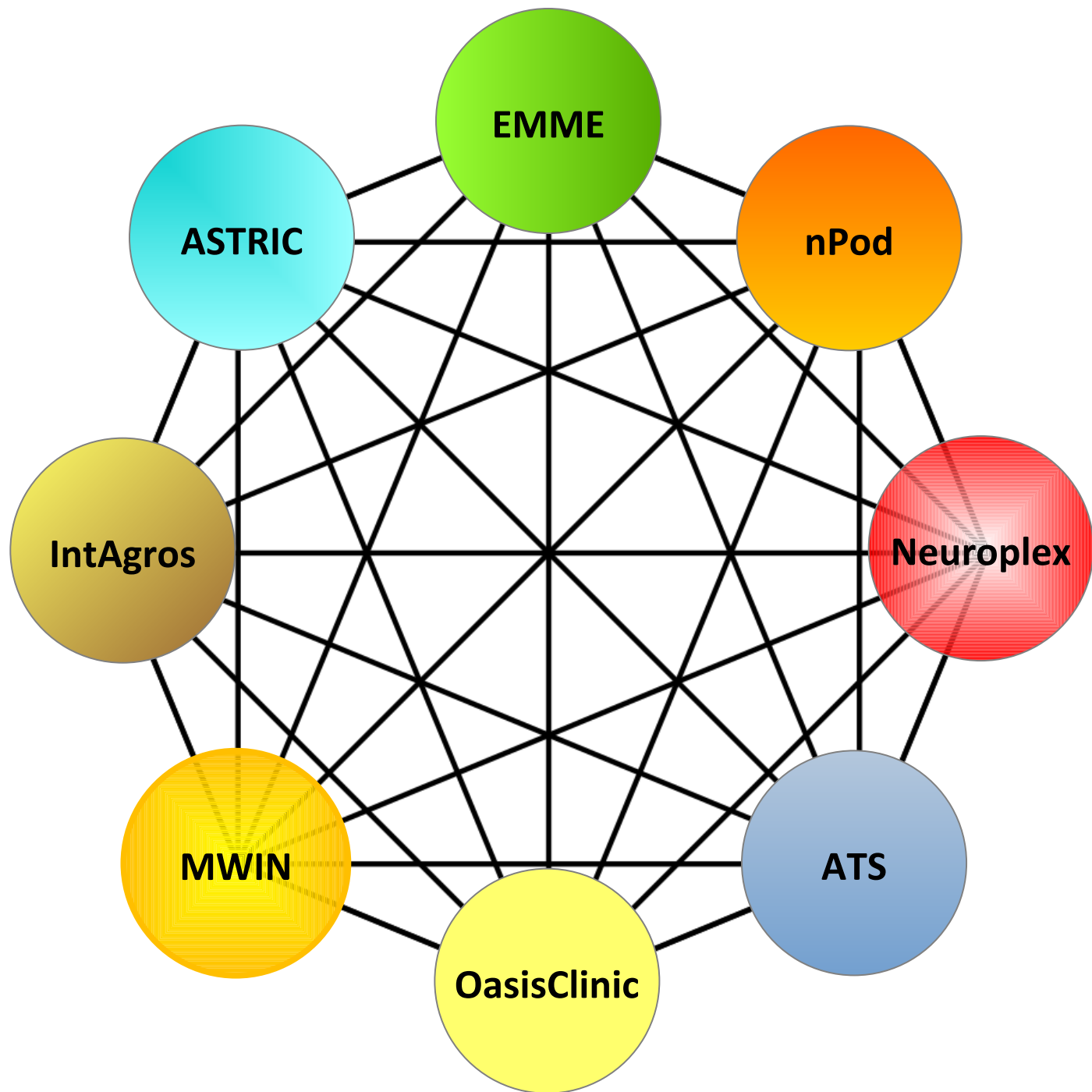
§ C4L - focus on robotics and synthetic intelligence in everyday life, at home, for special needs, for the community, bringing in architecture of Wright, Soleri, many others

§ OHI - Population health disparities, inequalities, and how the Arts can effect and drive forward Change in public health and lives



## **STEM, Social, Medical Projects (10 examples)**







## STEM, Social, Medical Projects

- § ATS - all aspects including making a film based upon *Cyber Robin* themes
- § Neuroplex - art projects that illustrate the different disorders and diseases and effects within individuals, families, communities
- § nPod - artistic designs based upon the nPod architecture
- § IntAgros - about climate change, water, crops, farming, future situations
- § MWIN - about maternity, population health, all the issues and problems and potential solutions
- § ASTRIC - about asteroid operations and other applications in space
- § EMME - about climate change and emergent pandemic diseases
- § Oasis - the architecture, the Terra system, and the main emphasis on the clinic and the new school of N-therapy
- § The Business of Integrating Art and Science in our present society

SPACE SCIENCES

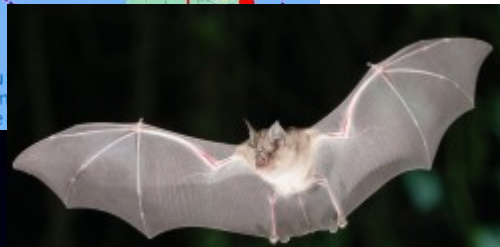
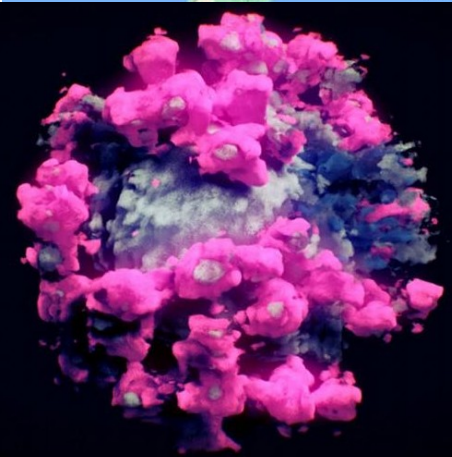
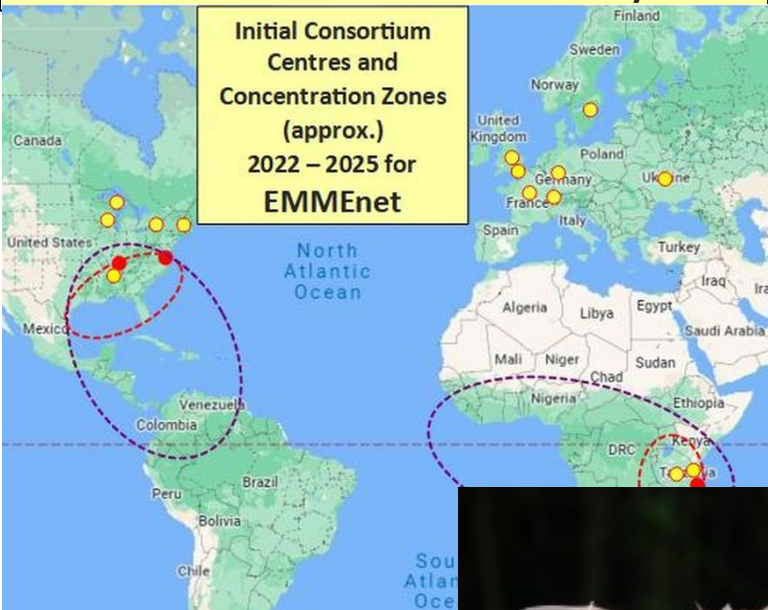
MEDICINE &amp; PUBLIC HEALTH

ENVIRONMENT &amp; CLIMATE SCIENCES

SOCIAL COMMUNICATION &amp; LEARNING

The *FAR FUTURE* is closer than one may think

Initial Consortium  
Centres and  
Concentration Zones  
(approx.)  
2022 – 2025 for  
EMMENet



Planetary Early Warning System for Emerging Infectious Diseases of pandemic risk to Humans (directly) or to Agriculture and Livestock

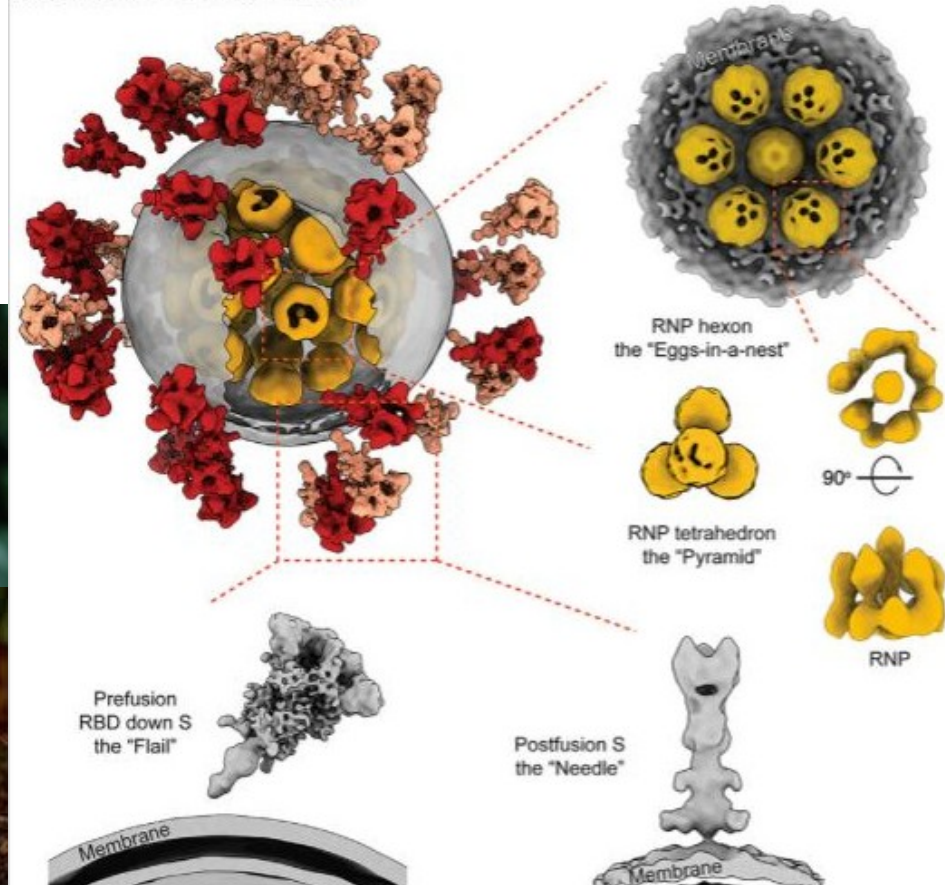
Satellite Data + Earth-based Monitoring + Public Education

Including custom-designed CubeSats with multiple functions

Employing social media and “ordinary social communications” extensively (!!!), using powers of Synthetic Intelligence (“AI”)

Plus a bit of TETRAD “Magic” Tech [www.emme.tdyn.org](http://www.emme.tdyn.org)

Avoiding another COVID-19 and WORSE is the Outcome from EMME  
the authentic SARS-CoV-2 virus





The Triumph of Death --- Pieter Bruegel the Elder



SPACE SCIENCES

MEDICINE & PUBLIC HEALTH

ENVIRONMENT & CLIMATE SCIENCES

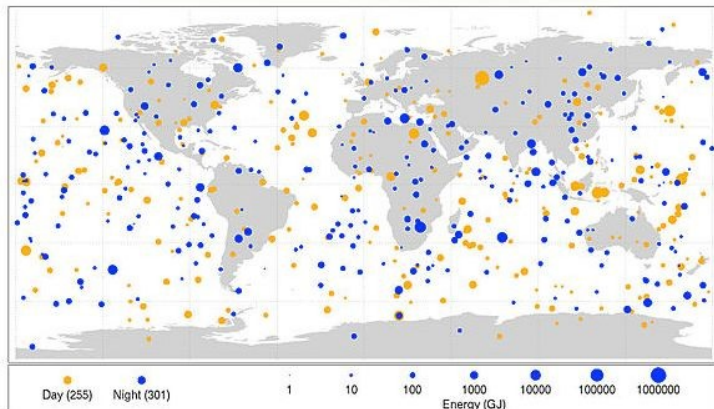
SOCIAL COMMUNICATION & LEARNING

The *FAR FUTURE* is closer than one may think



### Bolide events 1994-2013

(Small asteroids that disintegrated in the Earth's atmosphere)



Frequency of small asteroids roughly 1 to 20 meters in diameter impacting Earth's atmosphere.

**ASTRIC =**

Planetary Defense System for Diverting Asteroids from likely/certain  
Catastrophic Impact with Earth

Cooperative multi-modal reconfigurable robots + control theory

Plus a bit more of that TETRAD "Magic" Tech

**Avoiding an Extinction Event (certainly for Humans)**

- § Original focus mainly on Space and Asteroids – critical needs now
- § Also focused strongly upon Earth and Climate applications ("EMME")
- § Offers robust commercial, social and cultural benefits along with long-term high-visibility purposes and functions
- § Makes use of CubeSats (involving Students at multiple education levels) for a variety of data acquisition and simulation tasks
- § Produces value-outputs for other businesses (agriculture, social media networks, the mining industry)
- § Cultivates entrepreneurial and joint venture Tech Business Development attracting multinational commercial & financial partners
- § Extends machine intelligence into cooperative networks of self-reconfigurable, self-repair, self-assembly teams and communities of



## SPACE SCIENCES

## MEDICINE & PUBLIC HEALTH

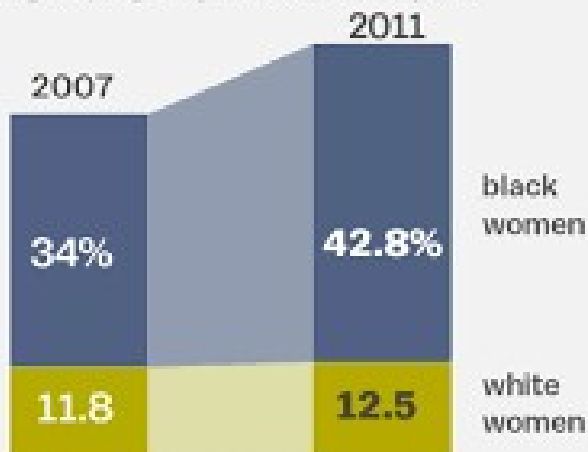
## ENVIRONMENT & CLIMATE SCIENCES

## SOCIAL COMMUNICATION & LEARNING

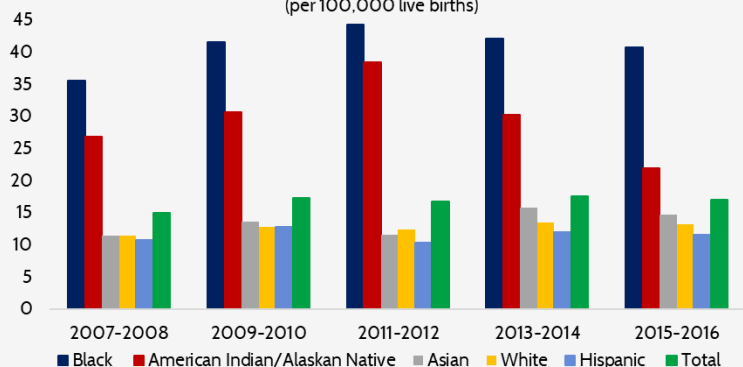
The *FAR FUTURE* is closer than one may think

### America's black-white maternal mortality gap is widening

Percentage of pregnancy-related deaths by race



### Pregnancy-Related Deaths, by Race/Ethnicity (per 100,000 live births)



MWIN =

4.3

Focuses public health initiatives including education and free access to DIY and public-access tests that can Save Lives especially of Pregnant and Recent Mothers – Restoring and Increasing Maternal and Infant Health and Survivability Worldwide

Avoiding Unnecessary Early Mortality, Suffering and Family Distress

- § Both serve and advance Public Health for the Whole Society
- § Both offer robust commercial here-now social and commercial benefits along with long-term primal purposes and functions
- § Both can involve participation by Students, multiple education levels
- § Both produce value-outputs for other businesses (healthcare)
- § Both cultivate entrepreneurial and joint venture Tech Business Development attracting multinational commercial & financial partners

### MORTALITY GAP FOR U.S. MOMS

In the U.S., black women who are expecting or who are new mothers die at rates similar to those of the same women in lower-income countries, while the maternal mortality rate for white U.S. mothers more closely resembles rates in more affluent nations.

#### NON-HISPANIC BLACK WOMEN

40

United States

Comparison: Women of all races

44

Brazil

40

Malaysia

38

Mexico

36

Uzbekistan

#### NON-HISPANIC WHITE WOMEN

12.4

United States

11

New Zealand

9

United Kingdom

8

France

5

Japan

Maternal deaths per 100,000

Sources: U.S. ratios (2011-2013): CDC Pregnancy Mortality

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The *FAR FUTURE* is closer than one may think



A systematic, information-centric, synthetic-intelligence enabled approach to one of the major and most critical, endemic, dangerous causal factors in Neuroplex type disorders:

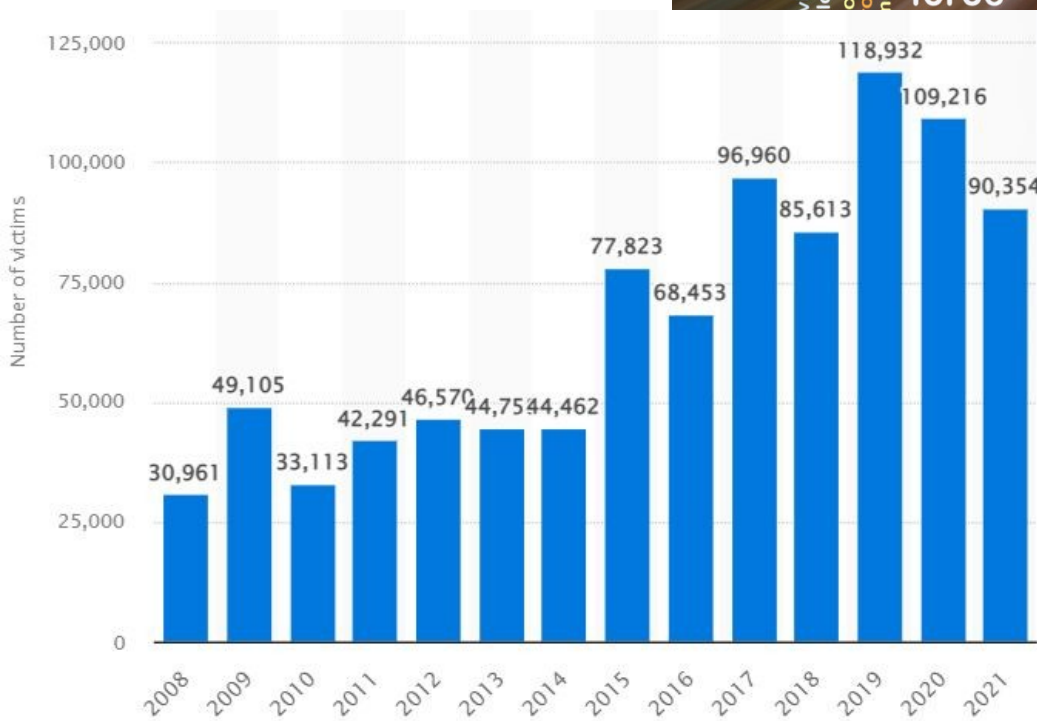

Abuse, Trafficking, Subjugation and related social violence

A very new approach to addressing this Problem in Our Society

Reducing the spread and intensity and lethality of how we humans abuse and destroy ourselves and each other





[illegible]

**modernDAY  
slavery**  
also known as HUMAN TRAFFICKING

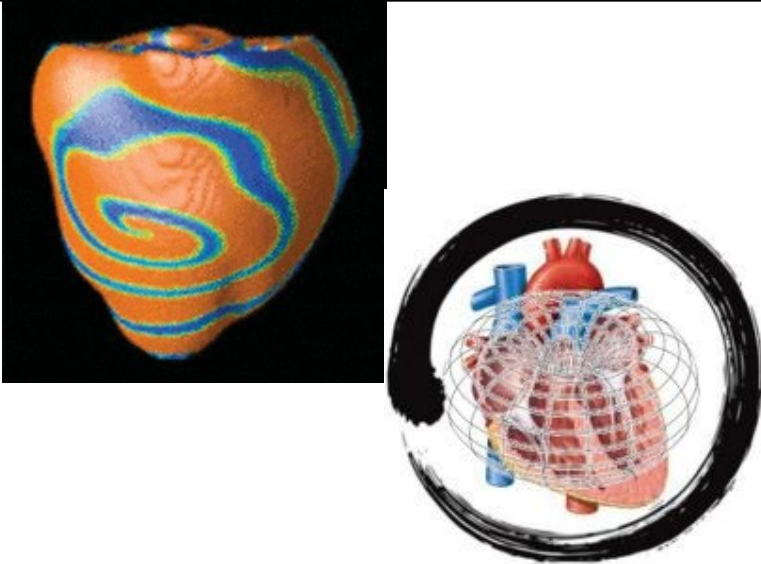
SPACE SCIENCES

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The *FAR FUTURE* is closer than one may think



## Neuroplex =

A theoretical-diagnostic-therapeutic approach to  
Neuro-Cardio-Autoimmune-Inflammatory Disorders and Diseases – on  
the Rise Globally from Chronic Sustained Stressors both physical and  
psychosocial in their origins

Addressing causal agents not generally recognized in mainstream  
medicine and healthcare systems

**Avoiding Deterioration of Individual Lives and Society as a Whole**

## PHIBER =

Population Health Informatics Biomedical Equity Resource

Required to Progress in areas of multiple diseases including  
deterioration of Maternal and Infant Health and Survivability  
Worldwide

**Avoiding Racial and Species Decline and more Pandemic Impacts**

§ Both work together in their STEM

§ Both offer robust commercial here-now social and commercial  
benefits along with long-term primal purposes and functions

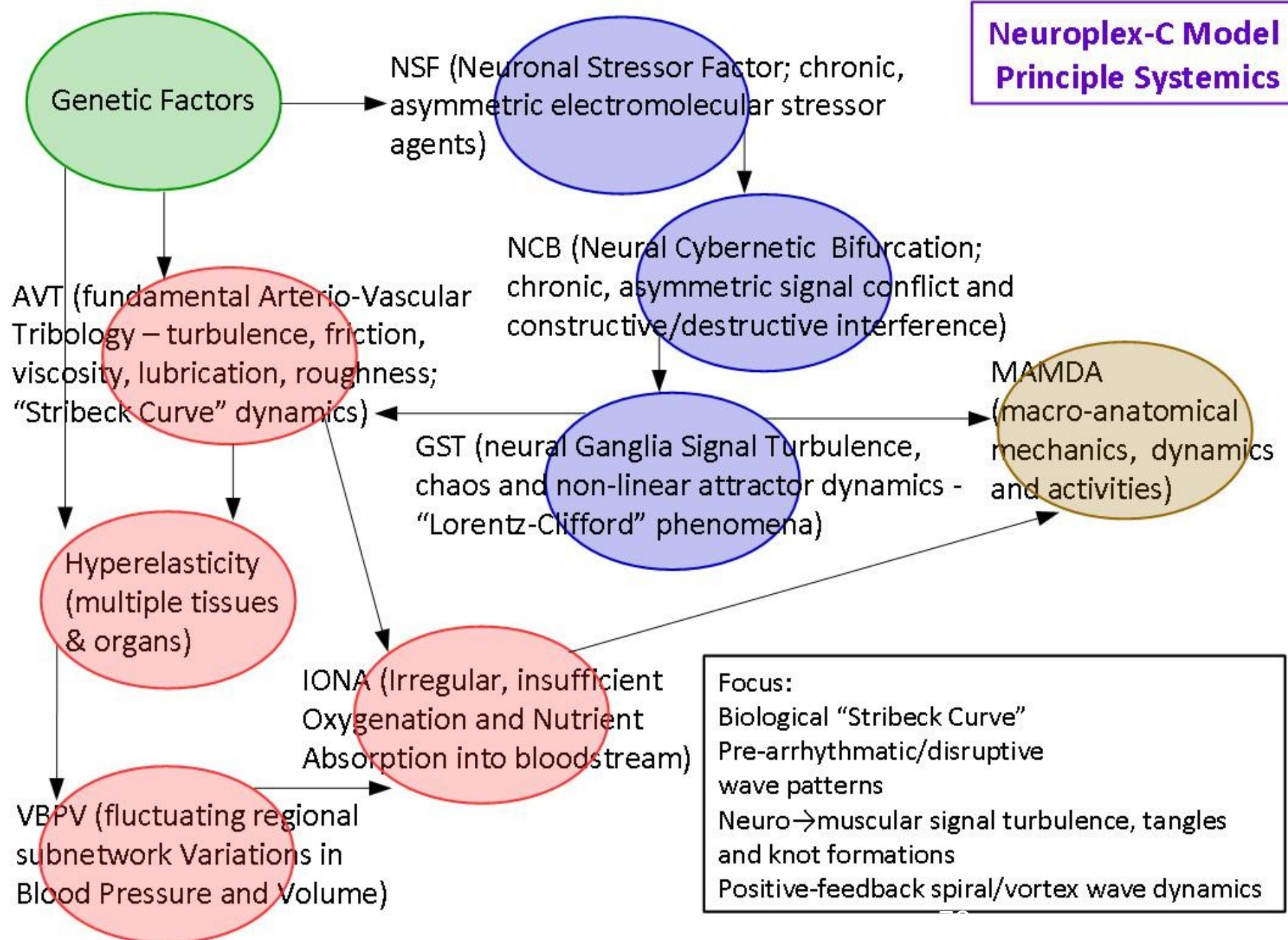
§ Both make use of Information Technology that can be engineered by  
Students at multiple education levels

§ Both produce value-outputs for other businesses (computer sciences)

§ Both cultivate entrepreneurial and joint venture Tech Business  
Development attracting multinational commercial & financial partners



## Neuroplex-C Model Principle Systemics



# Neuroplex-C Model

## Chronic Stressors leading to Inflammatory and Autoimmune type (IAI) Processes [2]

~~~~~

### ANCES - Autonomic Neurophysiological Control and Electrochemical Stress

NCB (Neural Cybernetic Bifurcation; chronic, asymmetric signal conflict and constructive/destructive interference)

MAMDA (macro-anatomical mechanics, dynamics and activities)

GST (neural Ganglia Signal Turbulence, chaos and non-linear attractor dynamics; "Lorentz-Clifford" phenomena)

Adhesions and other connective tissue aberrations (+ and – growth effects)  
- a major common element in these slow-evolving conditions

AVT (fundamental Arterio-Vascular Tribology – turbulence, friction, viscosity, lubrication, roughness; "Stribeck Curve" dynamics)

Hyperelasticity (multiple tissues & organs)

IONA (Irregular, insufficient Oxygenation and Nutrient Absorption into bloodstream)

VBPV (fluctuating regional subnetwork Variations in Blood Pressure and Volume)

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ENVIRONMENT & CLIMATE SCIENCES

SOCIAL COMMUNICATION & LEARNING

The *FAR FUTURE* is closer than one may think



## OASIS Clinic for Neurophysiological Wellness

introductions to who, what and why we are:

[Intro to OASIS Clinic \(July 2019\)](#)

[Our Nature-Water-Sail Therapy Program \(December 2019\)](#)

[Our I CAN YOU CAN WE WILL Program](#)

This is the garden where the true Enabling Power for Our Health grows, for all of us

A Network of onsite and online clinical outreach, communication, education and healthcare services that serves population groups heavily hurt and disabled by stress, trauma, PTSD, and other dysfunctions brought on by disaster, war, poverty, and more

**Avoiding Unnecessary Early Mortality, Suffering and Family Distress**

- § Serve and advance Public Health and Wellness for ALL
- § Produce data streams that feed into and build PHIBER
- § Can involve participation by Students, multiple education levels
- § Produce valuable gains for unlimited numbers of People
- § Cultivate entrepreneurial and joint venture Tech Business Development attracting multinational commercial & financial partners
- § Build strength, endurance, and wellness within the People

Mobility is in the Picture. Mobile Clinics using vehicles like buses, to take the Services including the Advanced Therapies such as TMS, fMRI, photobiomodulation, ultrasonics and Diagnostics like SIMOA and PCR, directly to the People.



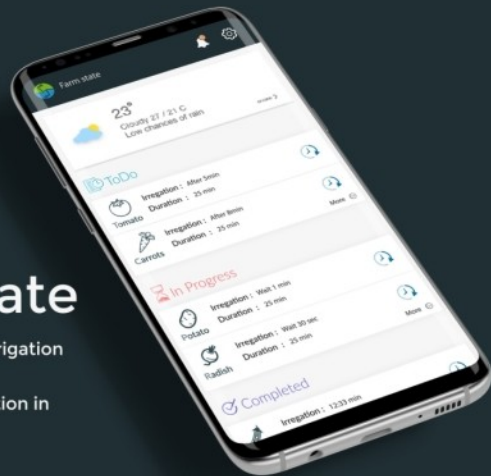
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The *FAR FUTURE* is closer than one may think



**IntAgros =**

A Remarkable MARVEL

Just Right, Just-inTime - for EVERYONE ANYWHERE

It started as “Smart Farming” and “Smart Water”

Intelligent automate-able control and regulation of

Irrigation Fertilizers Pesticides

THEN IT RAPIDLY EVOLVED INTO MORE USEFUL, SMARTER, ESSENTIAL

§ Calculate, regulate, control Water (irrigation), Fertilizers, Pesticides for small garden (home or backyard), small farm, big farm, huge farm

§ Serve as a Network of diverse multi-source fault-tolerant sources of generating (free!) Electricity

§ Serve as access points and repeaters for a MANET (WANET) – a mobile/wireless ad hoc network for rural/limited internet connectivity

§ Provide massive distributed, fault-tolerant parallel computing power to rural, disadvantaged, impoverished populations (**Power the People!**)

§ Serve as the “medium” for even better services than “Alexa” or “Siri”

§ Assist in cultivating and empowering entrepreneurial and joint venture Tech Business Development and Entrepreneurship

§ Build strength, endurance, and wellness within the People

**Truthfully, IntAgros is Incredible. It is Revolutionary. It is Evolutionary. It is not only Cool Smart Technology but it is really Good for PEOPLE.**



**EcoVita**  
**AgrolIntel System**  
**S-Water Module**  
by MIRNOVA



*Can it happen?*

*It has, it does, it will, more.*



*Devastating pandemic blights,  
too?*



*Can we prepare, predict, have  
early warnings, get a head start,  
and avoid the Worst?*





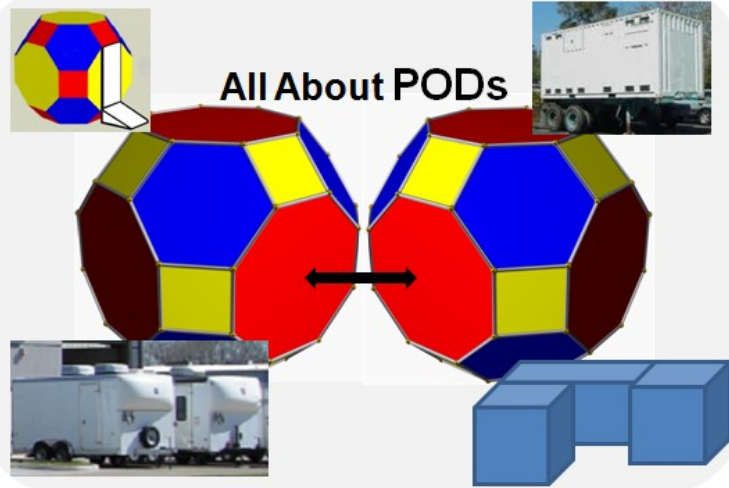
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The *FAR FUTURE* is closer than one may think



The Lego and KNex of Rapid-Deploy Rapid-Reconfigure Structures

It started with trailers and containers

It began with internet after-school places for kids in the jungle

It led to mobile labs in the petrochem industry and for emergency response and counter-terrorism applications

Then it took off to Space and the Infinite Beyond...

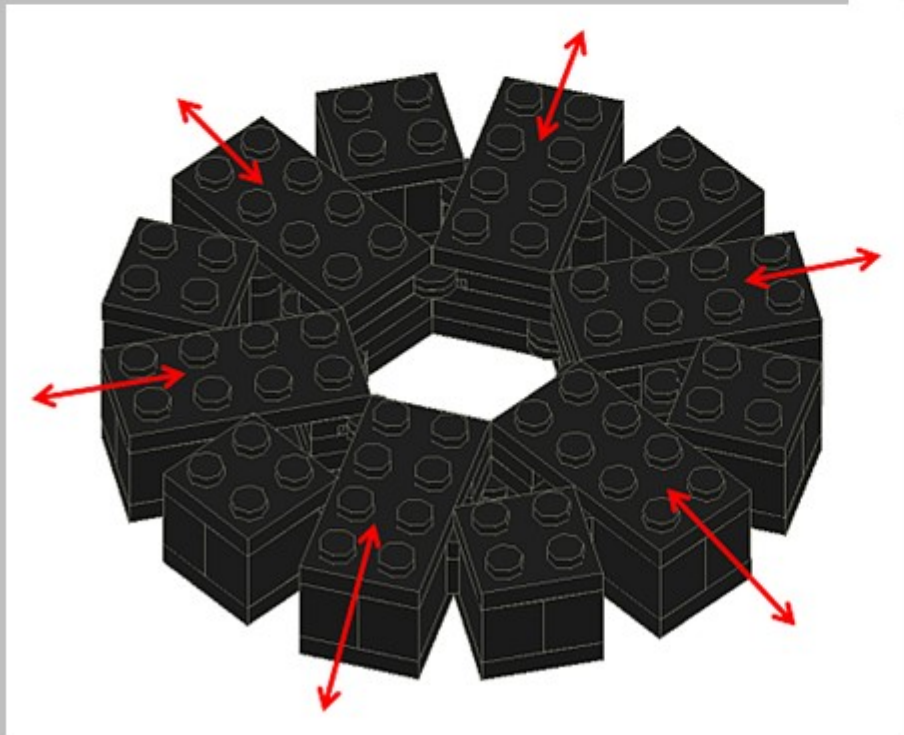
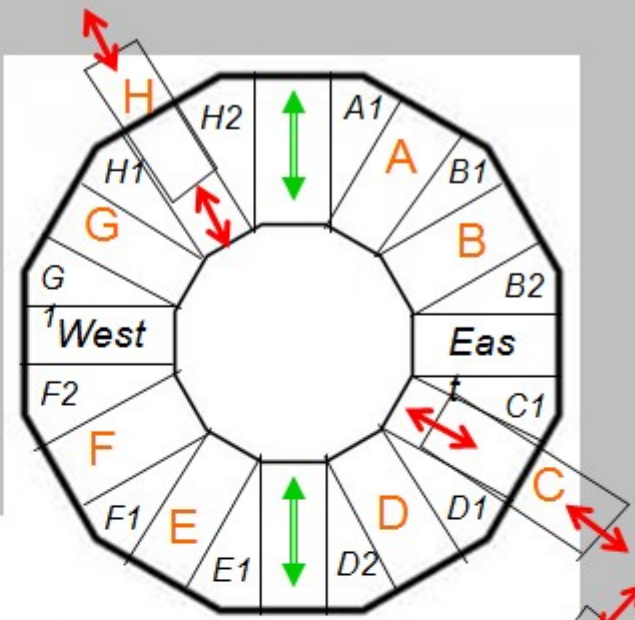
- § Different geometries for structures that can serve multiple purposes
- § Environmentally appropriate and ecologically sensible
- § Extreme reconfigurability including within the overall geometry of units and large composite (multi-unit, multi-storey) structures
- § Designed for Space use in orbital and lunar/planetary bases, habitations, and workspaces, but also for Earth applications
- § Most typical configurations can be assembled or disassembled within hours by only two able-bodied persons using non-electric hand tools
- § Designed to provide efficiency, safety, sustainability, and also comfort for the people (and/or robots) using the structures
- § Build strength, endurance, and wellness within the People
- § Each nPod is also capable of being a high-performance computing and internet module, and together, in one assembly or as a distributed network, they form building that IS an open-ended, can-grow-forever, parallel processing network, a fault-tolerant, redundant, asynchronous, MIMD supercomputer. **People can work and live and sleep inside their supercomputer. What a Wild Idea. It sounds like it came from Outer Space. In a way, it did.**



About those mobile clinics, the MedAtriums, the Outreach to People that Travels to them in their cities, towns and villages – they are compact and totally reconfigurable in terms of functions and equipment:.

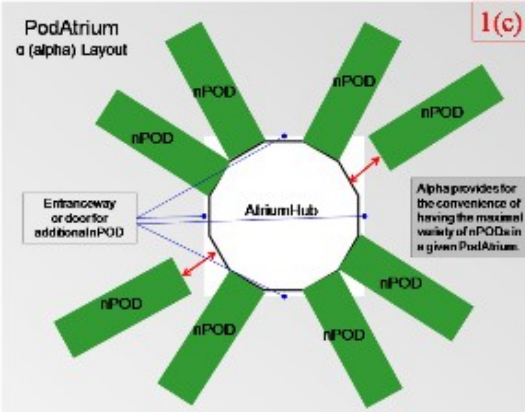


MedAtrium

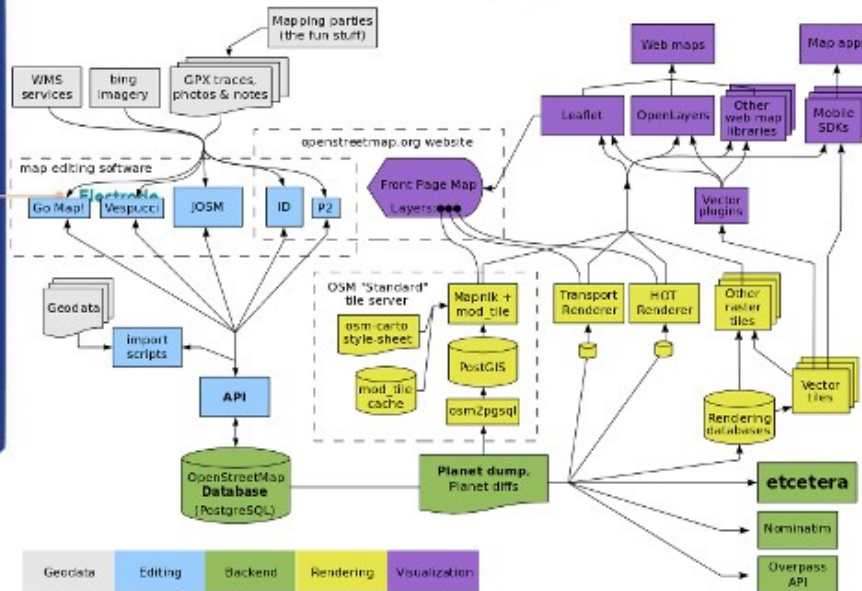
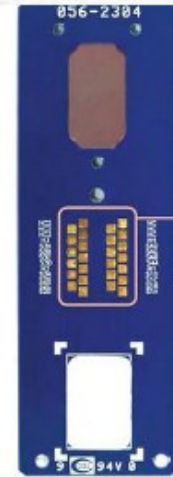
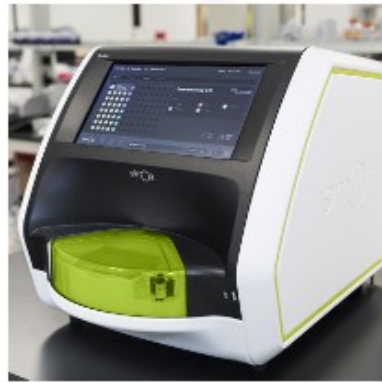




More about the use of nPods as mobile clinics, MedAtriums, with a focus upon Diagnostics and Analysis, for simultaneously different diseases and other conditions which may be dormant and hard to detect.



Series-A MedAtrium  
Unit 1 / Unit 2 & Eyrie  
Component Overview



# BSL-PodAtrium

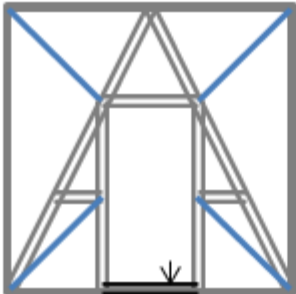
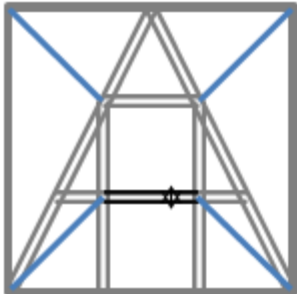
Standard nPod structural elements used within most-common nGons (nRecs and nCubes)

(Note: all square structural element ("SE") types shown here and in detail views on the following slides but only a few rectangular types)

$\alpha$



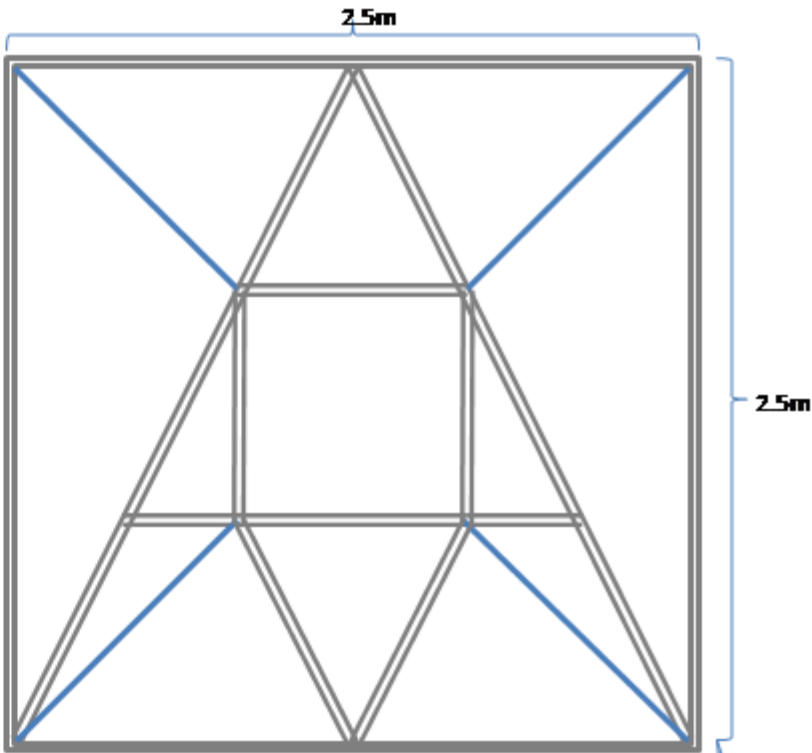
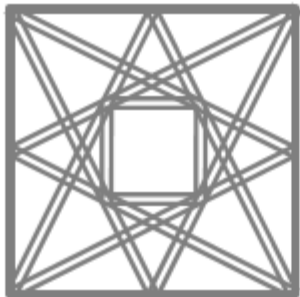
$\beta$



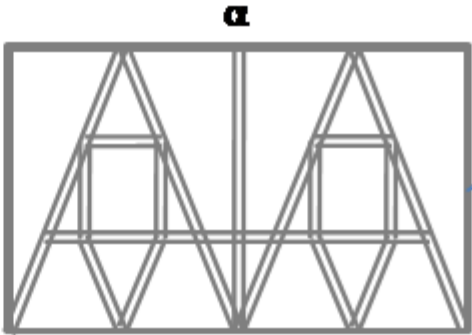
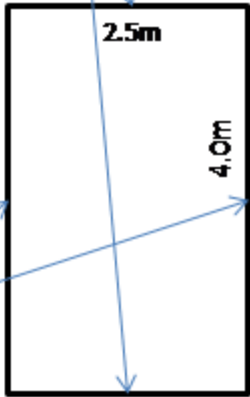
$\gamma$



$\delta$

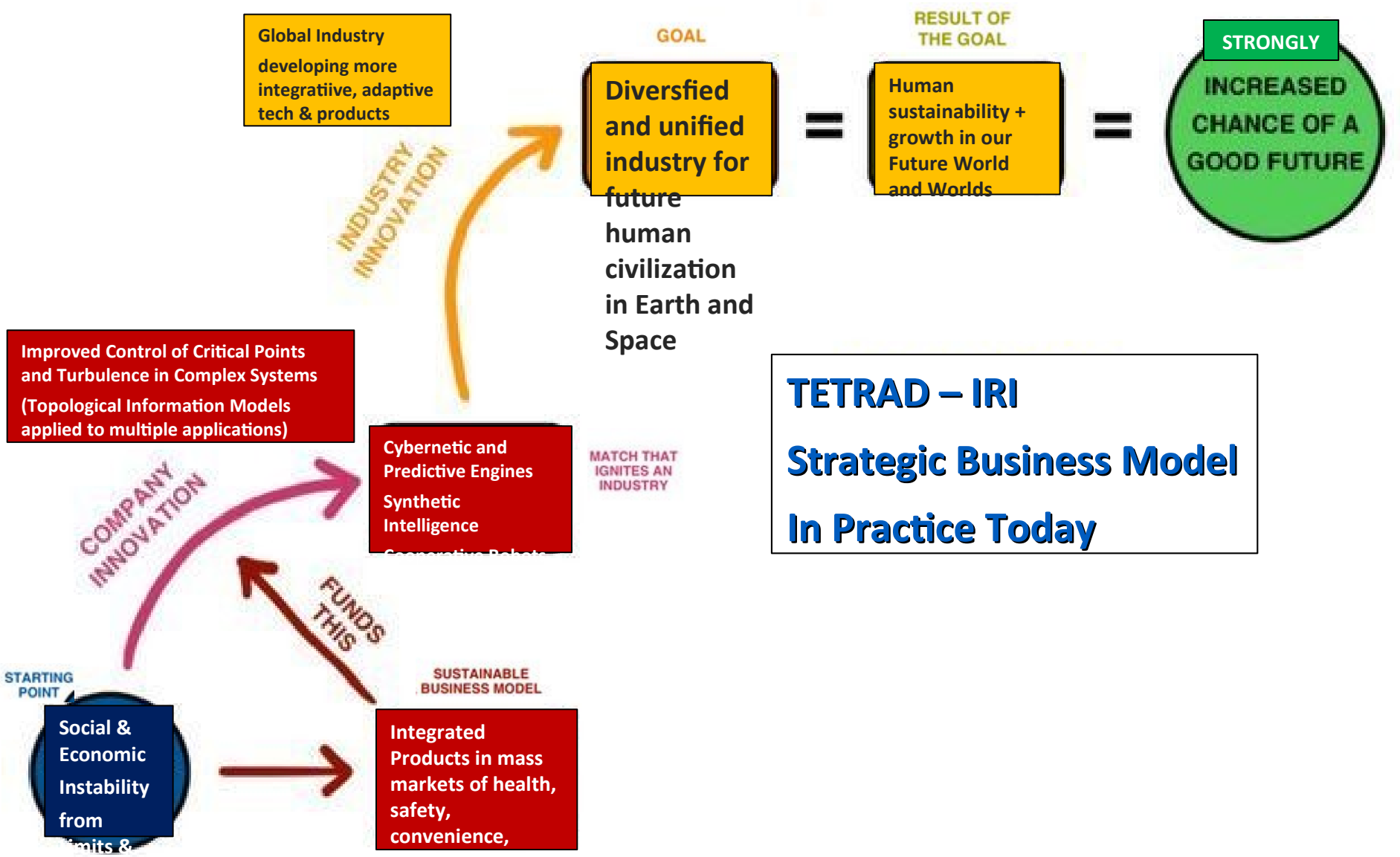


Generic nRec rectangular nPod  
2.5m x 4.0m x 2.5m  
(8.2' x 13.125' x 8.2')





## The Fine Art of Business in the Arts



## **The Fine Art of Business in the Arts**

**How the TETRAD business model can be applied and interpreted for the arts and humanities. How it can increase support, financially and in the community.**

**This is about the ecosystem and the eco-nomics of integrative science, art, philosophy, humanity.**

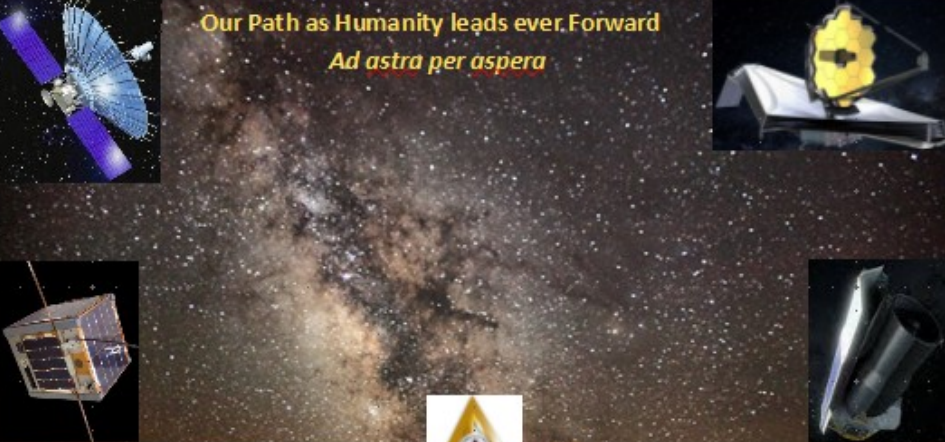
**This can be tailored to serve a class (audience, participants) of faculty and administrators, as well as students. (example: Earth University).**

**Based upon projects conducted over a 30+ year history in several countries, spanning the corporate and academic spheres.**





## **ARC Itself – the Origami Unfolding**



## **ARC Itself – the story of all this, the history and the Now**

**Everything about how things evolved, the whole experience, the Sisyphus, Faustus, Prometheus, and other themes and personal experiences, everything leading up to doing things like these special projects in educational and performance settings.**

**Opportunities to explore many pathways that involve STEM, our collective human experience, many issues about society in response (and lack thereof) to Big Things affecting our world and all people, and most certainly, opportunities to give artistic expression to ideas and themes that are both “deep” as science and “deep” in the impacts upon our society and us as individuals.**



## Future Horizons

**There is even more to the**

**ARC**

**It is all about our Future**

**As the one Human Race that we are**

**One Species**

**Which has still not learned how to live together as Community**

**As One Family, Extended but United,**

**Full of Variety yet Still One Species, One Race, living on**

**A thin film of habitable surface of a small rock orbiting a star in one galaxy...**

***RENAISSANCE = (R)EVOLUTION***



# ARC

This is a vision that is a long time in gestation. It is digital, it is physical. It will manifest into what People as a community of artists, scientists, and many others make it to be.

A network, tele-community connected through the internet. Sure, of course. But also...

One particular place, a small but beautiful campus, park-like, and with interesting architecture to the buildings.

Real cool architecture. Think: Gehry, Wright, Soleri, and the architects that have built so much in places like Dubai, Singapore, Brasilia, Shanghai. But also! Integrating the New, the futuristic, with the Ancient, the Continuity of History, of the Human Experience.

Influences and models come from all over and many eras.

- Library of Alexandria.
- Alhambra in Grenada, Spain.
- Bayt al-Hikmah (House of Wisdom) in medieval Baghdad.
- Other “science-wisdom” centres in ancient India, Constantinople, and in the most ancient universities of Europe and America.



What will the ARC look like on the ground, on Earth, as a campus for Research, Education, Application and Commerce? These are only “roughly similar” as examples. The ARC will not be some huge campus! It will not have huge buildings. It will not be looking like some of these big developments – we need to concentrate on the Work, the Doing, the Results, and not the impressive, grandiose architecture.

**What is More important is What will be INSIDE the ARC... !!!!**

A few modern-day examples – [clockwise from left top]

Chengdu Science City, China; Biblioteca Alexandrina, Cairo, Egypt; Cuban National Art Schools, Havana; Parque científico mérida yucatán



# ARC

**A totally new BioSphere. A different approach, a different architecture.  
(Not locked up and separated from the rest of the environment)**

**A psychosocial workspace, for living “Out There”.**

## **“Mugenics”**

**How must humanity adapt, and plan genetic re-engineering, adaptation of our future generations, for living in the radically different environments of Space -- and... for being able to sustain our living on this rapidly changing and unpredictable Earth with Her climate changes and all the environmental consequences for our air, water, nutrition?**

**How can we avoid the scenarios of sci-fi novels and movies like “Interstellar”?**

**How can we avoid Killing Ourselves as we have been doing for so long and**

**Now, right now, with even unimaginable violence, hate, and terror?**

**A LabSpace for the ROAM – a Future Way we will live and travel Out There.**

**Modeling, simulation, experiment, and also Trying It Out, Doing It.**

**Right Here on Earth – and then, as soon as possible, Out There.**

**An EducationSpace.**

**For Our Future – Our Children.**

**To give them Vision of a Future that is more than**

**Boring same-same dull-dull full of uncertainty, fear, shock, terror.**

**To give them a Vision like Kids had when Sputnik, Gemini and Apollo went into  
the Heavens and Back, to the Moon and Back!**

**Not an EPCOT, not a Disney Fantasy, but**

**Real, Touch-it, Feel-It, Try-It, Learn-It, Dream-It into Your Future!**

# ARC

**Beyond EPCOT.** Future Community and Life that you can see, feel, touch, and actually Use.

## **ROAM. The ROAM**

The Spaceship. Space Ship. Ship about and for Space.

Roam Operations (for) Astrogalactic Mission(s)

Reconfigurable Organic-architecture Adaptive Mega-Machine

The feeling, the atmosphere, the ambiance, the visuals, too, of being In, OnBoard, an Interstellar Spaceship. Not a feeling or atmosphere of pseudo- and make-believe and Hollywood look-and-feel. This is not about something that “looks like” the Starship Enterprise or something from Star Wars! NO.

More like being in a New Home.

It is rather about the modules, those nPods, those structures that eventually will be the core designs for the modules that will make up a Real Interstellar Spaceship someday. Someday... Soon!





Remember Who We Are

Where We Live – on a speck of dust circling a dot

And we have learned to stand, walk and talk

And We have sent a Message to the Heavens saying in a loud clear voice: Here We Are

Let Us Not Disappoint Those Who Hear and Look Forward to More



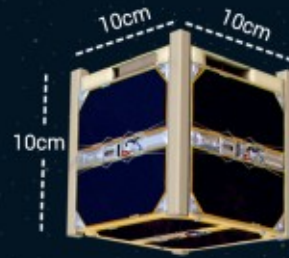
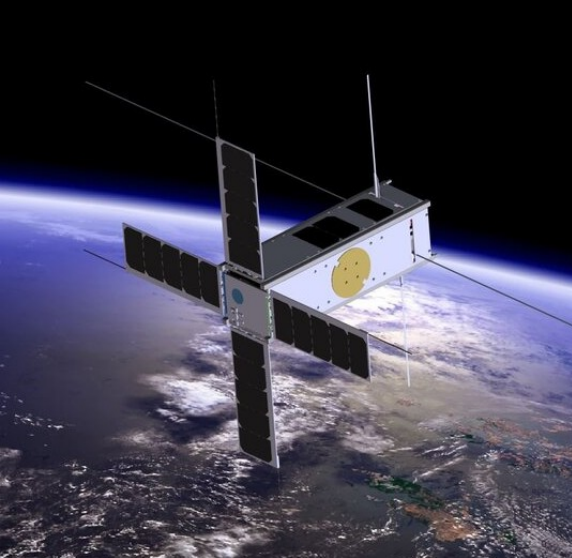
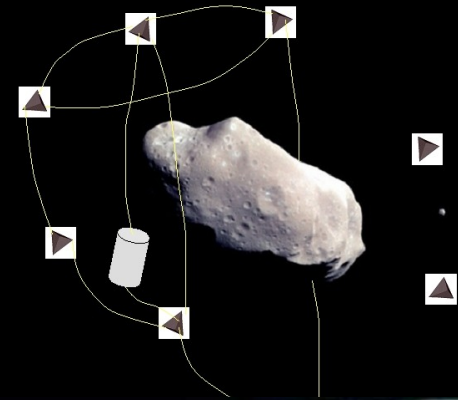


History, Art and Technology remind us about  
Pioneers Before Us Who Dared. Before and through all history,  
people Came to New World.

We follow in the wake of their walking, their trekking, their  
sailing, and now We Dare, too, to not only Dream

but to act, to Build, and to

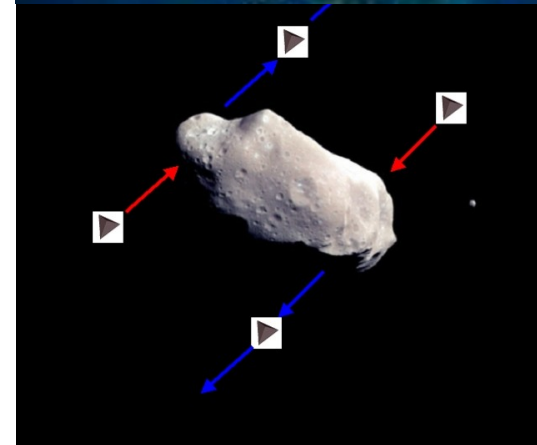
**Do Things that No One has Dared to Do Before**



**CubeSat**  
Small Satellite  
for  
**BIG** Ideas



**If We Build It, It Will Fly**



Kepler-22b

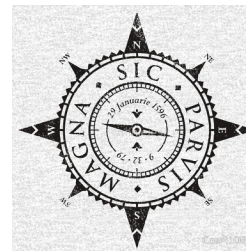
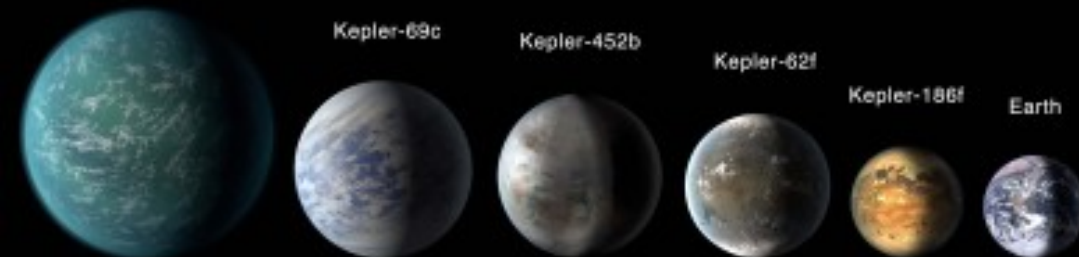
Kepler-69c

Kepler-452b

Kepler-62f

Kepler-186f

Earth

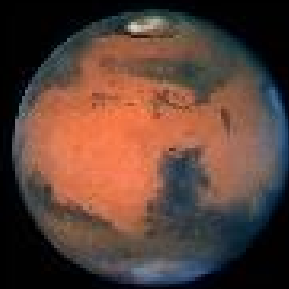


# ARC Renaissance Complex

ARC



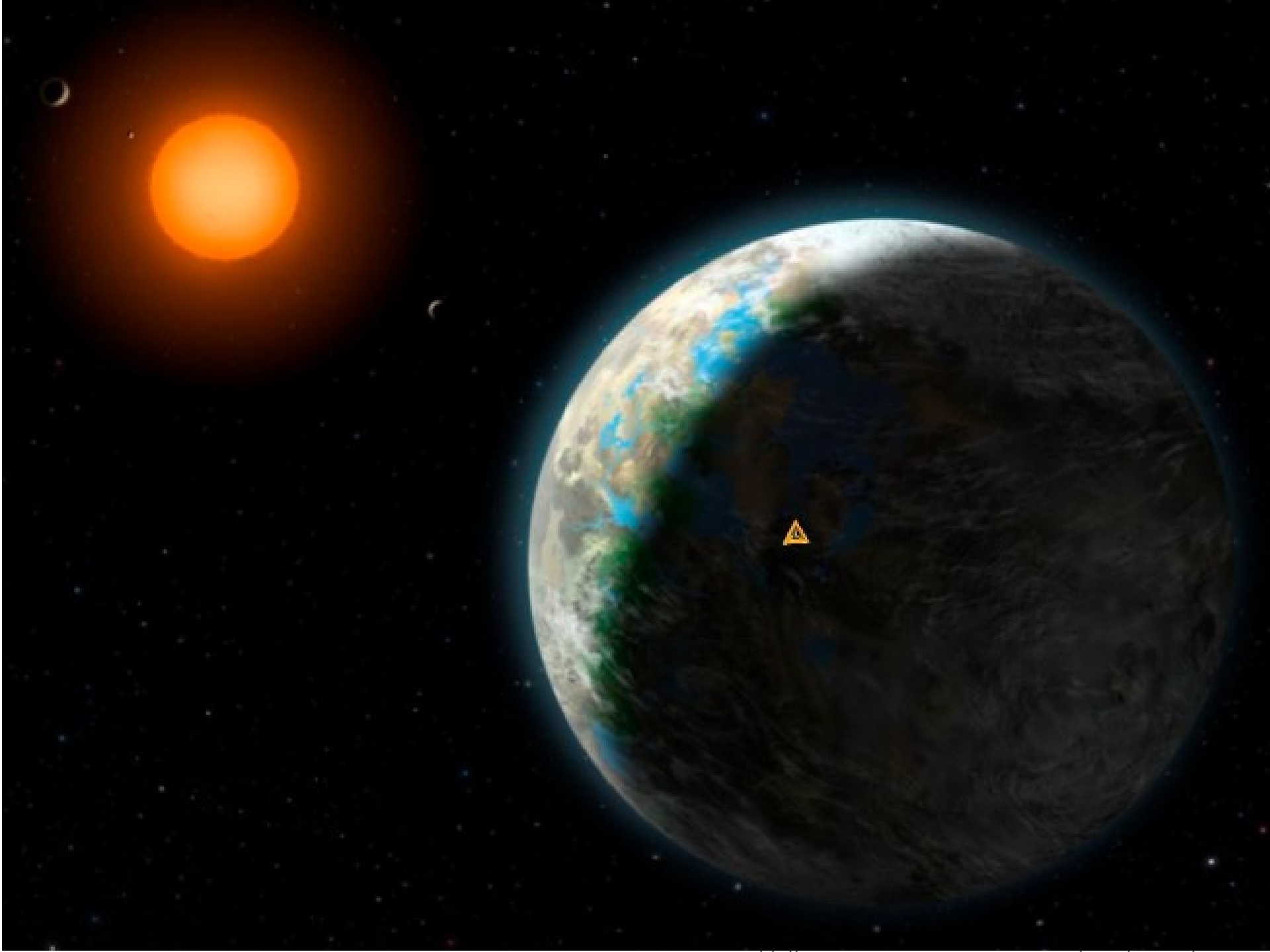
ARC is consciously designed  
to point and lead us to the Far Future Where We Belong



**EXO**



**We Are Already On Our Way**





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[martinjoseph@tdyn.org](mailto:martinjoseph@tdyn.org)