A Detailed, Modern Space Economy

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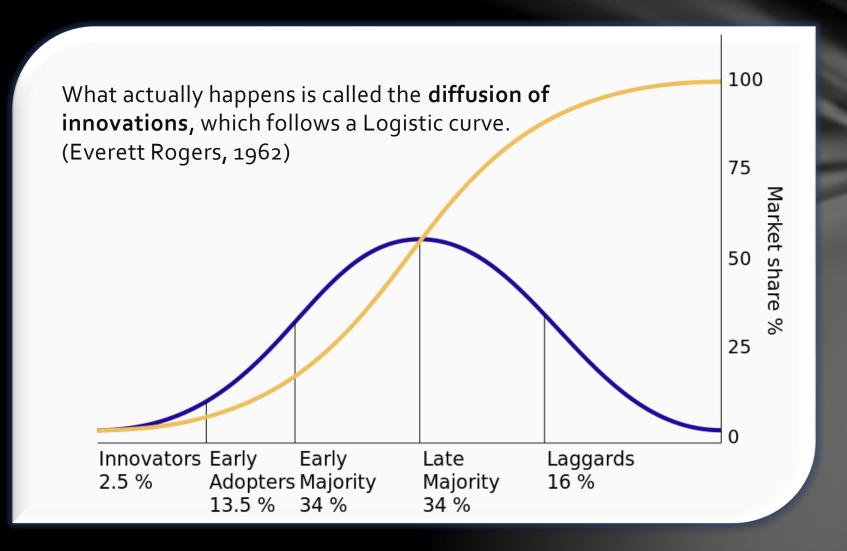


Lessons from History

As Settlements Grow, They Find Independence... Or Corruption



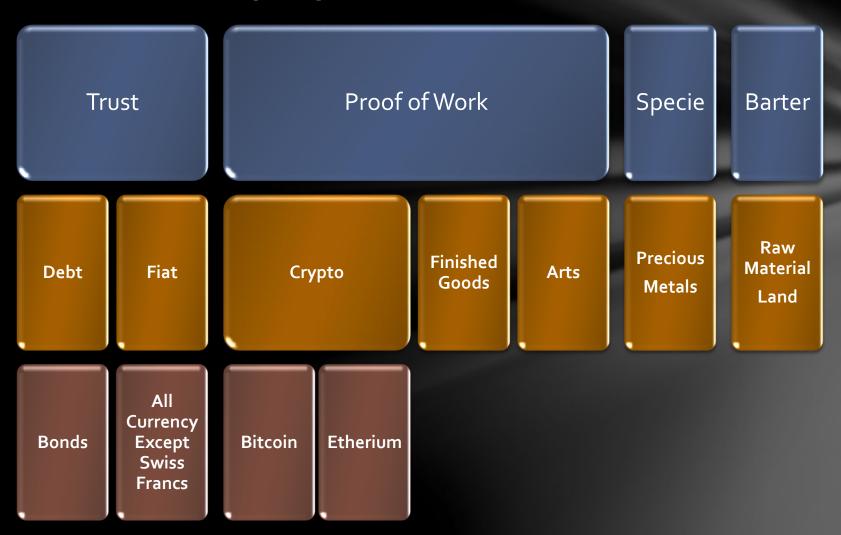
Diffusion of Innovations



Economic Cycles and Waves

Name	Years	Industry/Impact	
Bullwhip Effect	1-1.5	Supply Chain (1)	
Leeman Wave	1-1.5	Supply Chain (many)	
Moore's Law	2-4	IT Hardware	
Juglar Cycle	7-11	Fixed Investment	
Kuznets Swing	15-25	Infrastructure, Land, Migration	
Kondratiev Wave	45-60	Technology	
5 0 -5			

The Money Spectrum



Combining Solutions

Distributism

Parameter	Value	
Basis	Distributism (AKA Distributionism): US/UK, 1900-1945	
Summary	"Unbridled capitalism doesn't produce too many capitalists, but too few." - G. K. Chesterton	
Basic unit	Family/ Small businesses are individuals and families with means of production.	
	Embraced	Avoided
Credit	Credit Unions	Banks
Labor	Training Guilds	Labor Unions
Incorporation	Employee-Owned	Investor-Owned
Economy	Distributed Manufacture	Economy of Scale
Class structure	Middle-class stabilized	Middle-class exploited from Statists and/or Oligarchy

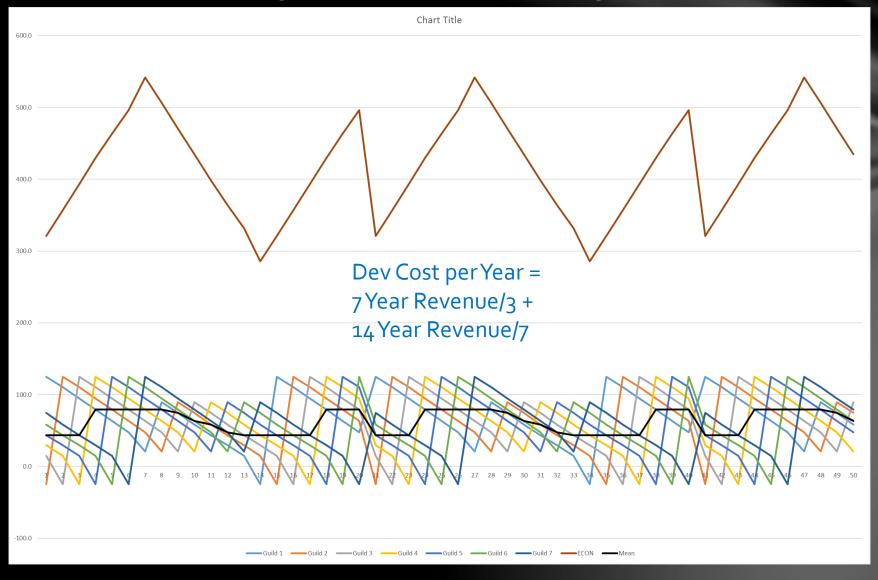
Seven Guilds

Guild	Value
Life and Health	Agriculture, Medicine, Pharmaceuticals
Information	Computers, Sensors, Communications, Robotics
Power	Electricity, Heat, Light, Mechanical
Construction	Habitats, Factories, Industrial
Transportation	Ground, Air, Space, Sea. Roads, Pipelines/Ducts.
Manufacturing	Factory, Mining, Chemistry, Air/Water Supply.
Arts/Sciences	Non-Manufacturing (Pure) Science Education, Entertainment, Arts

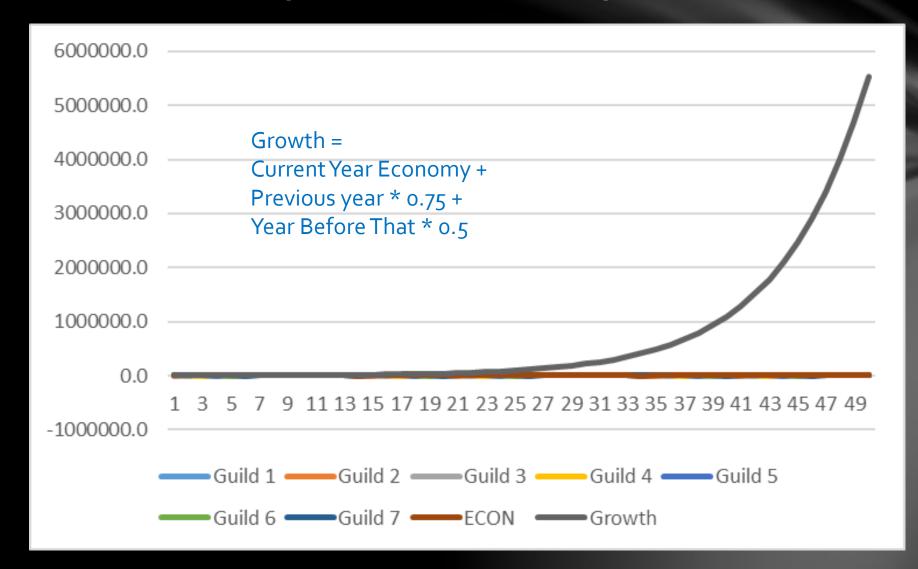
Scheduled IP Resets by Guild

Time Interval	Actions
7 Years	 Intellectual Property goes to open source locally. IP would then depreciate over seven years and reset.
14 Years	 IP traded within the economy beyond the settlement goes open source.
21 Years	 IP becomes part of historic records, education system.
Split Across Guilds	 To distribute the economic impact, would reset one guild per year until 7 years complete. Then repeat.

Economic Cycles (Rev – Exp)



Economic Cycles (Rev – Exp)



Shifting Sabbatical - Advantages

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Guild	Value	
Economy	Economic cycles are predictable 49 year pattern.	
Employment	Incentive for talent to shift guilds periodically – allows transfer of skills and methodologies across industries.	
Technology	By shifting talent and technology, able to merge abilities across the entire industrial spectrum rather than silo into specific isolated areas.	
Stability	Since most people would know multiple industries, a split or disaster would not eliminate knowledge pool (opposite of "technology trap")	

Spontaneous Corporations

Guild	Value
Start Project	 Project voted on within guild web site, then to direct democracy if large enough. Resources invested in project as needed. If consumer product, "Kickstarter" style pre-sales.
Determine Resources	 Employment contracts for freelance work teams within/across guilds as needed Construction resources allocated (Guild + Private). Use Etherium-equivalent contracts for product/ service /materials/ talent.
Hire Talent	1. Put call out for talent/bids.
Assemble production run	 Managed through guilds, then membership. Ad hoc, employee owned company.
Dissolve or Continue	 If economically viable, continue structure. Add/change membership as needed.

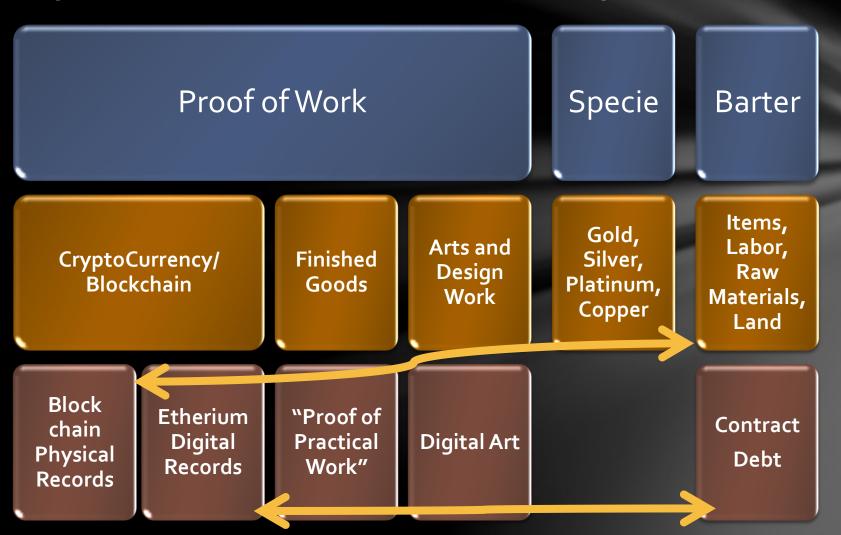
Career Path (Local)

Age	Skills	Rewards
0-7	Early Childhood/Literacy	Computer Core
8-14	Start basic agricultural work Trivium/Quadrivium training	Food production module
14-21	Spend 1 year learning basics of each guild	Habitat module (basic)
22-28	First guild choice or Advanced education (Ph.D.) Work within guild	Additional Habitat/ Food Space for Family. Workshop modules.
29-35	Guild cycle 2 Expand role or switch fields	Repeat to age 42, 49, 56, 63. Able to work all seven guilds.
64-	Optional retirement	Sell off unneeded resources or leave to family/guild.

Career Path (New Arrivals)

Year	Skills	Rewards
0-3	Learn/work in basics of two or more guilds. Learn legal, financial systems.	Computing, food, habitat.
4-7	Work in guild that sponsored person's arrival at settlement.	Remaining resources for independence.
8+	Work in guild of choice	Will need to earn keep without sponsorship.

Space Settlement Currency



Contracts, Regulations, Law, Rights

Guild	Value
Contracts	 Use fixed structures with drop-down lists. Automated economic models to avoid exploitive contract terms. Etherium-type software is open source and reviewed regularly for issues.
Regulation	 Underwriters Labs (UL) model – only insure what is certified by private testing lab. Also use testing lab for R&D.
	• FAA Model – only fix things that are broken.
Limited Law	 1000 pages of basic law. 500 per specialty for regulations. Review every 7 years and purge obsolete laws.
Rights	 Constitutional rights are foundational.

Fixes

Category	Status
Economics	Cycles become part of business models – predictable yet dynamic.
Career Paths	Individuals can switch to any or all careers over a lifetime as desired, or remain in one.
Money	Easily transferred across settlement or entire solar system. Basis of informational trade at any distance.
Government	Limited in scope to absolute minimum, yet safety, law enforcement maximized for personal freedom at minimum cost. Fraud and graft minimized. Absolute minimum corporate/government "B Ark" jobs

Further Research

Category	Status
Realism	 Detailed Technology Model Detailed Resource Model Detailed Labor Model
Settlement	Technology Growth ProjectionsPopulation Growth ProjectionsSkill of Population
Habitat	 "Starter Kit" scale and capacity Trade required with Earth Trade across settlements

Questions?

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