JPods, from Oil to Ingenuity:

JPods solar-powered, digital mobility networks changing economic lifeblood.

2019-09-30

REF: #RFI 2019-DOT-PPD-4

JPods LLC is replying to the RFI in the format of the RFI to be supportive. But technology is not the problem. Self-driving pods networks have delivered radically safer mobility for half a century.

The root cause of Climate Change is the process represented by this RFI, government monopolies.

Adopt the Solar Mobility Act (enclosed) and private capital will invest $6 billion in San Jose in the next 3 years to build a solar-powered Physical Internet® in accordance with the Prime Law of Networks.

Contact JPods LLC if you are interested in ending Climate Change in 3 years.

Bill James, 612.414.4211, bill.james@jpods.com

RFI Response:

1. Profile:
    1.1. Name: JPods LLC
    1.2. Address: 3939 E 60th PL, Tulsa, OK 74135
    1.3. Status: Corporation
    1.4. Contact: Bill James, CEO
    1.5. Email: bill.james@jpods.com
    1.6. Phone: 612.414.4211
    1.7. High-level Description: JPods are urban, overhead networks of robotic, self-driving cars that move people and cargo on-demand, non-stop from origin to destination at 1/10th the cost of existing transport networks. Solar collectors over the guideways power the networks.

    1.8. High-level Description of the Business Plan: By Dec. 15, 2021, privately fund construction of $3 billion of JPods solar-powered mobility networks in San Jose economic community resulting in:
        1.8.1. 60% reduction of car-miles driven and a similar reduction in GreenHouse Gas production.
        1.8.2. Reduce taxpayer subsidies for mass transit by 50%.
        1.8.3. Eliminate taxpayer capital costs for transportation by 80%.
        1.8.4. Make San Jose as safe to ride a bike as is Palo Alto.
            1.8.4.1. 44% of Palo Alto high school students ride bikes to school.
            1.8.4.2. Between 2014 and 2017 37 cyclists lost their lives in Santa Clara County.
        1.8.5. JPods becomes a major taxpayer under the 5X5 Standard of the Solar Mobility Act (See Appendix A, Massachusetss Senate Bill S.1993).

1.8.6. Demonstrate to the world how the root cause of Climate Change and perpetual oil wars can be ended in 3 years by restoring free markets in transportation.

2. Proposed Concept:

2.1. Privately fund building 250 miles of JPods solar-powered mobility networks in the next 3 years in Silicon Valley. A prerequisite for private capital to invest is the enforcing of the Constitution to restore free markets.

2.2. Create a merit-based process for making transportation decisions based on free markets and metrics of efficiency (Paragraph 2.12). For the past century, these decisions have been based on political influence, resulting in Climate Change and perpetual oil-wars.

2.3. Repeat in transportation the success that resulted from enforcing the US Constitution in communications:

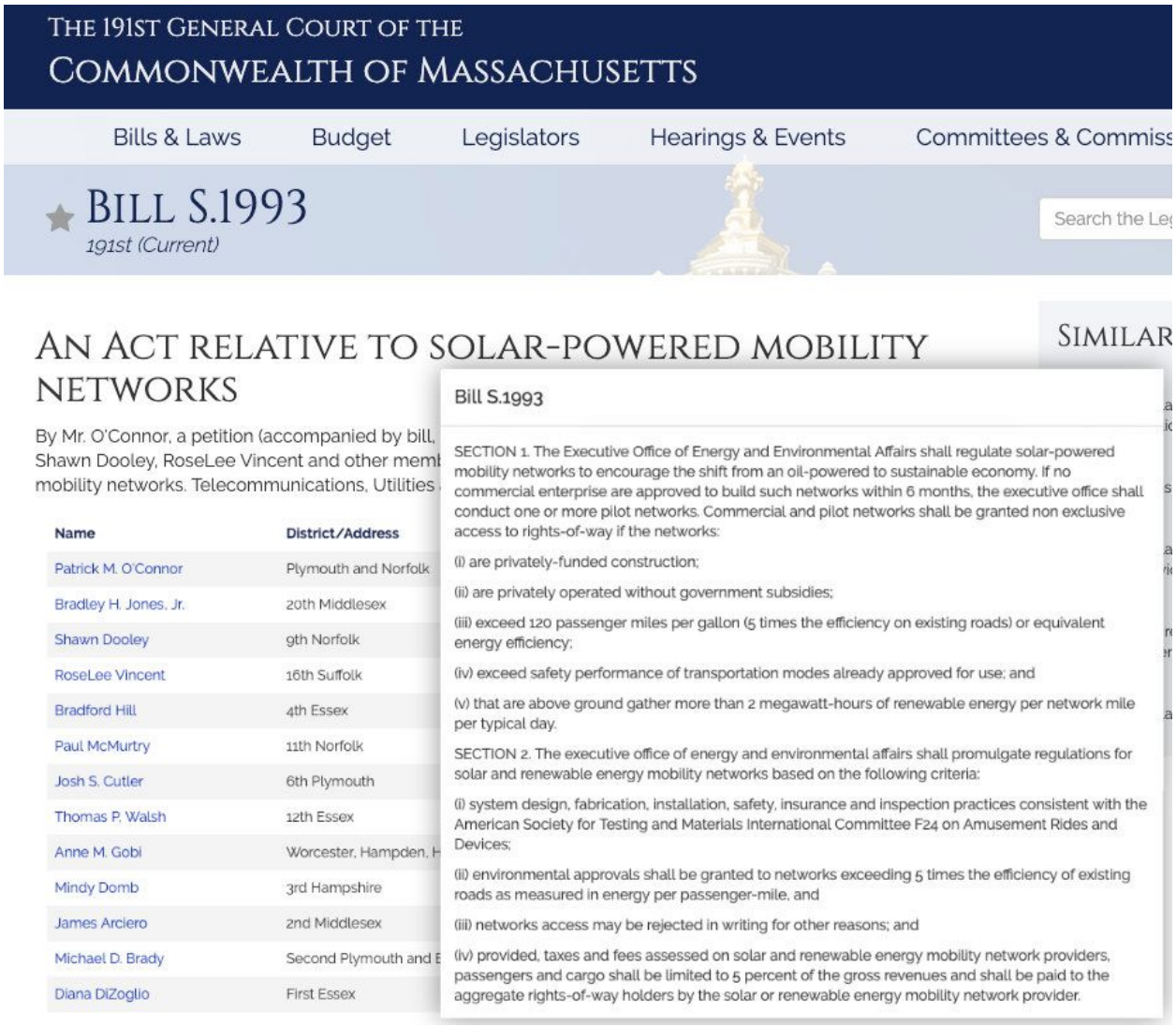
2.3.1. In 1982, the courts declared the Federal communications monopoly unconstitutional. Millions of jobs, vast profits and unplanned innovations resulted as digital communications replaced a century of rotary telephones under government monopolies.

2.3.2. By enforcing the Constitution's "post Road" clause to end government transportation monopolies in 2019, millions of jobs and vast innovations will replace a century-long monopoly of the 25 mpg efficiency of the Model-T with a Physical Internet® of JPods, Hyperloops, Uber, scooters, self-driving cars, etc.

2.4. JPods will ask government officials to enforce the Constitution by adopting the 5X5 Standard of the Solar Mobility Act in one of two mechanisms:

2.4.1. Legislation/Ordinances. Link to the Solar Mobility Act as currently pending in the Massachusetts Legislature, S.1993. Image of S.1993 is included.

2.4.2. Contracts. Link to the contract JPods negotiated and signed to build solar-powered mobility networks in China.



THE 191ST GENERAL COURT OF THE
COMMONWEALTH OF MASSACHUSETTS

Bills & Laws Budget Legislators Hearings & Events Committees & Commiss

BILL S.1993
191st (Current)

Search the Le

AN ACT RELATIVE TO SOLAR-POWERED MOBILITY NETWORKS

SIMILAR

By Mr. O'Connor, a petition (accompanied by bill, Shawn Dooley, RoseLee Vincent and other memb mobility networks. Telecommunications, Utilities

Name	District/Address
Patrick M. O'Connor	Plymouth and Norfolk
Bradley H. Jones, Jr.	20th Middlesex
Shawn Dooley	9th Norfolk
RoseLee Vincent	16th Suffolk
Bradford Hill	4th Essex
Paul McMurtry	11th Norfolk
Josh S. Cutler	6th Plymouth
Thomas P. Walsh	12th Essex
Anne M. Gobi	Worcester, Hampden, H
Mindy Domb	3rd Hampshire
James Arciero	2nd Middlesex
Michael D. Brady	Second Plymouth and E
Diana DiZoglio	First Essex

Bill S.1993

SECTION 1. The Executive Office of Energy and Environmental Affairs shall regulate solar-powered mobility networks to encourage the shift from an oil-powered to sustainable economy. If no commercial enterprise are approved to build such networks within 6 months, the executive office shall conduct one or more pilot networks. Commercial and pilot networks shall be granted non exclusive access to rights-of-way if the networks:

(i) are privately-funded construction;

(ii) are privately operated without government subsidies;

(iii) exceed 120 passenger miles per gallon (5 times the efficiency on existing roads) or equivalent energy efficiency;

(iv) exceed safety performance of transportation modes already approved for use; and

(v) that are above ground gather more than 2 megawatt-hours of renewable energy per network mile per typical day.

SECTION 2. The executive office of energy and environmental affairs shall promulgate regulations for solar and renewable energy mobility networks based on the following criteria:

(i) system design, fabrication, installation, safety, insurance and inspection practices consistent with the American Society for Testing and Materials International Committee F24 on Amusement Rides and Devices;

(ii) environmental approvals shall be granted to networks exceeding 5 times the efficiency of existing roads as measured in energy per passenger-mile, and

(iii) networks access may be rejected in writing for other reasons; and

(iv) provided, taxes and fees assessed on solar and renewable energy mobility network providers, passengers and cargo shall be limited to 5 percent of the gross revenues and shall be paid to the aggregate rights-of-way holders by the solar or renewable energy mobility network provider.

2.5. Transfer the risks of bad transportation decisions from the taxpayers to the innovators with privately funding networks. Three links and two letters illustrate private capital's interest in putting billions of dollars into digitizing mobility:

2.5.1. $28 billion was invested in mobility startups in 2017

2.5.2. 'A physical version of the Internet': How Hyperloop could be the broadband of transportation

2.5.3. Why Waymo Is Worth A Staggering $175 Billion Even Before Launching Its Self-Driving Cars

2.5.4. Letter from Senator Beach, Chairman of Georgia's Senate Transportation Committee, on adopting the 5X5 Standards of the Solar Mobility Act:

BRANDON BEACH
District 21
303-A Coverdell Legislative Office Building
18 Capitol Square, SW
Atlanta, Georgia 30334
Phone: (404) 463-1378

E-mail: brandon.beach@senate.ga.gov

COMMITTEES:

Transportation, Chairman
Economic Development and Tourism
Higher Education
Science and Technology
MARTOC

The State Senate
Atlanta, Georgia 30334

February 12, 2019

Dear Ms. Murray and Mr. James,

I appreciate efforts to solve Georgia's traffic problems as documented by your 2011 TEDx Atlanta presentation.

I have reviewed the Solar Mobility Act, currently filed as Massachusetts SD629. I intend to bring this to the Transportation Committee to explore the restoring of free markets and inviting innovators to solve Georgia traffic problems. The 5X5% Performance Standard provides a simple and practical framework:

- Privately fund the building and operating solar-powered mobility networks. This places the due diligence responsibility on private capital without burdening the taxpayers.
- Networks must be 5 times more efficient than roads or mass transit.
- Networks pay 5% of gross revenues to use public Rights of Way.
- Enforce safety standards using the outstanding safety record of existing Georgia laws for thrill rides at theme parks. This preempts the long delays associated with writing new regulations and leverages existing enforcement, insurance, and common law.

Digitizing communications networks, replacing rotary telephones with the Internet created millions of jobs. It seems likely that digitizing mobility networks will create similar numbers of jobs while solving traffic jams and creating a new source of revenue.

I would like to see Atlanta and Georgia become the economic center for building a physical version of the Internet. I believe there is a world market for solving problems of traffic, pollution, and foreign oil addiction.

Sincerely,

Senator Brandon L. Beach
District 21

2.5.5. Letter of High Interest from Goldman Sachs for investing in the Georgia networks of the Georgia Mobility Company:

Goldman Sachs **Asset Management**

Private Credit Group

This letter non-binding and is intended for discussion purposes only. It does not purport to summarize all the terms, conditions, representations, warranties and other provisions with respect to the transactions referred to herein, which transactions, if agreed, would be entered into on the basis of mutually satisfactory documentation after, among other things, satisfactory completion of due diligence (including without limitation technical, legal and tax due diligence) and receipt of necessary internal and external approvals. The proposed Issuer below acknowledges that this Summary is not an expressed or an implied commitment by Goldman Sachs BDC, Inc. or any one of its affiliates to provide any form of financial accommodation in connection with the proposed transaction..

March 20, 2019

Mr. Bill James and Mr. Charles Fletcher
JPods, LLC
3939 E 60th PL
Tulsa, OK 74135

Dear Mr. James and Mr. Fletcher,

In connection with JPods, LLC ("JPODS") proposed development of the Georgia Mobility Project (the "Project"), this highly interest letter is intended to confirm the interest of one or more funds managed by Goldman Sachs Asset Management Private Credit Group ("GSAM PCG"), in providing financing of to support the Project.

Based on our discussions to date and subject to further due diligence and negotiation of definitive documents, GSAM PCG is interested in providing the financing to support the Project.

We look forward to learning more about the Project as the process develops.

Best,

Goldman Sachs Asset Management Private Credit Group

By: _____

Name: David Yu
Title: Managing Director

2.6. Recognize that current government transportation monopolies cost Californians $77 billion/year by mandating the burning of oil to move two tons to move a person with the 25 mpg efficiency of the Model-T.

2.6.1. [$32.4 billion per year for oil].

2.6.2. $33.5 billion per year of accidents

2.6.3. $11.0 billion per year for congestion

Albert Einstein: *"We cannot solve our problems with the same thinking we used when we created them."*

2.7. Recognize that radically more efficient transportation has been well understood for two centuries. Over 140,000 miles of freight railroads in the US average 470 ton-miles per gallon. DOT regulations protect the 25 mpg efficiency of the Model-T from free market competition. Since The Federal-Aid Highway Act of 1916 started subsidizing highways, 46% of the then 260,000 miles of railroads were driven into bankruptcy and ultimately abandonment.

2.8. Recognize that radically safer transportation regulations have existed for over a century:

2.8.1. Wuppertal's suspended bus moves 25 million passengers/year with one fatal accident since it opened in 1901.

2.8.2. Morgantown's Personal Rapid Transit (PRT) network of grade separated, self-driving cars has delivered over 150 million passenger-miles with two minor injuries since it opened in 1972. In that same period, 1.8 million road-deaths occurred on US DOT monopoly networks.

2.8.3. Theme park thrill rides injure between 4 and 7 people per million. In contrast, DOT regulations result in 11,200 injuries per million. Theme park operators are subject to the Rule of Law, held accountable for failures in judgment. DOTs have sovereign immunity exempting them from accountability.

2.8.4. Bike safety in Palo Alto, CA is radically different than bike safety in San Jose, CA. See paragraph 1.8.4 above.

2.9. Recognize that the technology of self-driving cars is half a century old:

2.9.1. Since 1972, Morgantown's PRT network has operated self-driving cars providing 150 million passenger-miles (see Paragraph 3.6).

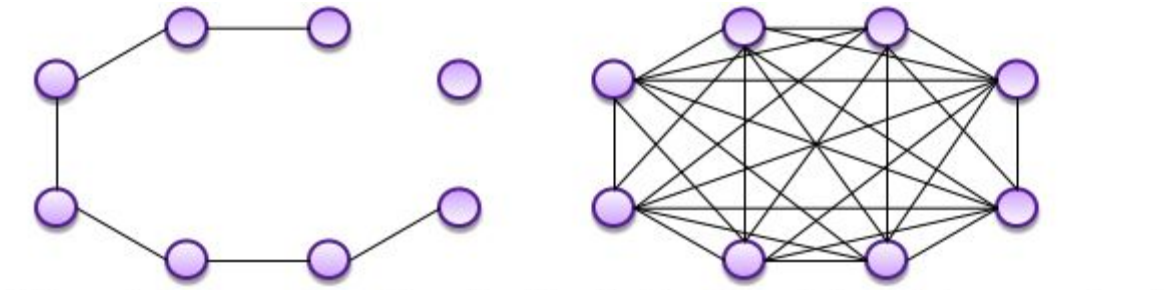
2.9.2. Tesla has 1 billion self-driving miles.

2.9.3. Kiva provided a 40X ROI with warehouse robots.

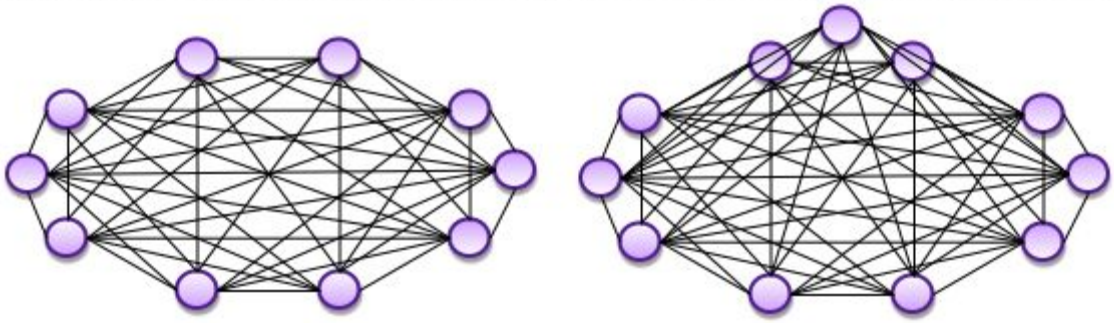
2.9.4. Alphabet's Wing drones will soon deliver FedEx and Walgreens packages.

2.10. Design networks in compliance with the ***Prime Law of Networks***, "*Network value and capacity increases exponentially based on the number of interconnected nodes divided by packet size.*"

2.10.1. The highway network, using automobile packets, illustrates the ***Prime Law of Networks***. People can go from where they are to where they wish to go, when they wish. There are many nodes.



"Value explodes exponentially with membership, while this value explosion sucks in more menbers."



2.10.2. To solve traffic problems, end Climate Change, end oil-wars, etc. requires building digital mobility networks that provide people with better mobility at a lower cost than highways.

2.10.2.1. The linear corridor in this RFI illustrates the institutional failure of DOTs to understand the Prime Law of Networks.

2.10.2.2. Funding solutions is relatively straightforward because government transportation monopolies are so inefficient that JPods can achieve multiple 10X paybacks. Our guess is that $5 trillion of investments will convert $1.1 trillion/year of current costs into profits, jobs, and customer savings.

2.10.2.3. As this Red Bull TV documentary forecasts, the Physical Internet® will likely have three overlapping networks similar to the Internet:

2.10.2.3.1. High-speed: Hyperloops are likely to be the tube networks between cities - the "fiber optics."

2.10.2.3.2. Commuter Local Area: JPods, SkyTran, etc. are the "WiFi" of the Physical Internet.

2.10.2.3.3. Last-device: Scooters, self-driving cars, walking, biking, will provide the "BlueTooth" – last-mile devices.

2.10.2.3.4. Free markets are required so that these and other innovations can be offered to customers, and customers can sort between the ideas for those that best meet their wants and needs at affordable prices.

2.10.2.3.4.1. The free market migration from mainframe computers (IBM, DEC, Control Data), to Apple, Microsoft, and Google is a computer example.

2.10.2.3.4.2. Two aspects of liberty intertwine in a Darwinian crucible of creative destruction to create the general welfare:

2.10.2.3.4.2.1. Liberty is tolerance of disruptive minorities offering choices.

2.10.2.3.4.2.2. Liberty is tolerance of free speech and free markets so the Wisdom from the Many can sort those choices. The aggregated wisdom of all of us, with each of us acting in our own self-interest, is wiser than the wisest of us at choosing between choices. (Ref: ***The Wisdom of Crowds***).

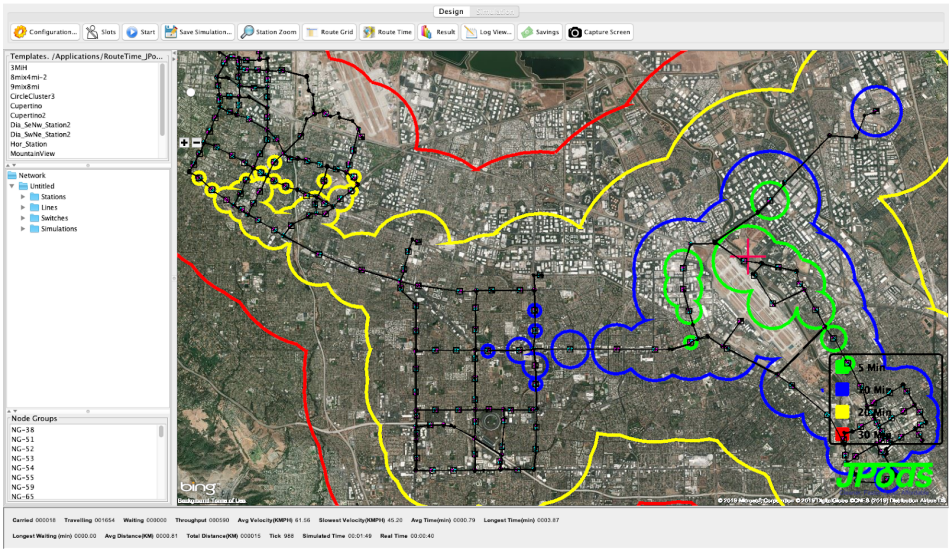
2.10.2.4. This RFI completely fails to recognize the networking principles that made Silicon Valley an economic powerhouse.

2.10.3. Restoring free markets in 2019 will trigger investments of $1 to $6 billion in San Jose by 2022. It will trigger a race between JPods and our competitors to build networks 3 to 6 times bigger than the networks illustrated here. These illustrations use JPods' Route-Time™ software to design networks that comply with the Prime Law of Networks. Local Area networks will develop, then cross connect, then spread.

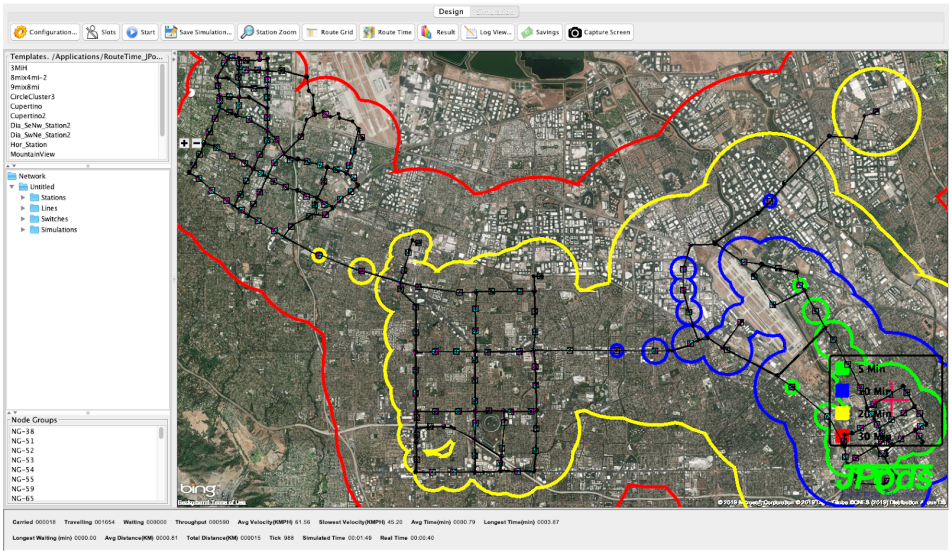
2.10.3.1. Simulation starts at the Red Cross. From the Red Cross, where you can walk-ride-walk is illustrated in circles around stations. 5 minutes is Green, 10 minutes is Blue, 20 minutes is Yellow, and 30 minutes is Red.

A Route-Time™ simulation for a network in the Silicon Valley. The Google campus is in the upper left, BART is in the upper right, Applie is bottom center, and San Jose is in the bottom right.

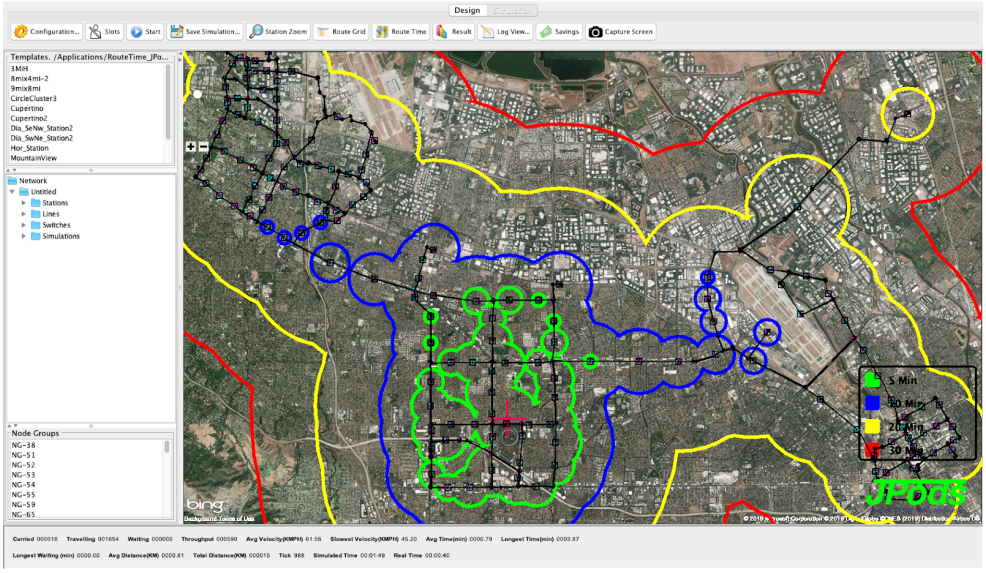
Red Cross at San Jose Airport.



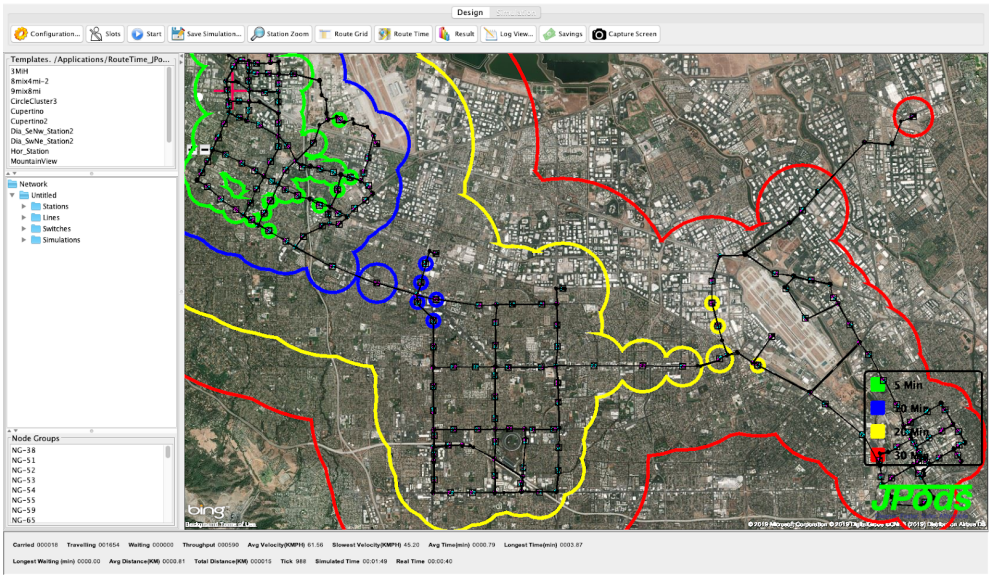
Red Cross in downtown San Jose.



Red Cross at Apple's campus.



Red Cross at Google



2.11. Implement a merit-based system of metrics to replace the current system of defining contracts so they are granted to the politically powerful. Question #16 of the RFI's Q&A illustrates the problem:

2.11.1. Question: *Will you use the metric Energy Consumed and CO2 produced per passenger-mile?*

2.11.2. Answer: *We have not selected a sustainability metric.*

2.11.3. Consequence: For the past century infrastructure decisions have been made to benefit the politically powerful at the expense of the general welfare. See harms in paragraph 2.10.5 below.

2.11.4. Madison warned of this risk in Federalist #62:

"...the unreasonable advantage it gives to the sagacious, the enterprising, and the moneyed few over the industrious and uniformed mass of the people. Every new regulation concerning commerce or revenue, or in any way affecting the value of the different species of property, presents a new harvest to those who watch the change, and can trace its consequences; a harvest, reared not by themselves, but by the toils and cares of the great body of their fellow-citizens. This is a state of things in which it may be said with some truth that laws are made for the few, not for the many."

In Federalist #9, #10, #17, #28, #51 and others explain the importance of Divided Sovereignty between the Federal and State governments to correct democracy's flaw of a Tyranny of the Majority. Slavery, Climate

Change, and mortgaging children are American consequences of Tyranny of the Majority.

Federalist #45 summarizes the Preamble, post Roads, Ports, Commerce, and Necessary and Proper clauses relative to infrastructure:

"The powers delegated by the proposed Constitution to the federal government are few and defined. Those which are to remain in the State governments are numerous and indefinite. The former will be exercised principally on external objects, as war, peace, negotiation, and foreign commerce; with which last the power of taxation will, for the most part, be connected. The powers reserved to the several States will extend to all the objects which, in the ordinary course of affairs, concern the lives, liberties, and properties of the people, and the internal order, improvement, and prosperity of the State."

Internal improvements, roads, power and infrastructure of all kinds constitute state sovereignty or a free market. The war-making purpose of the Federal government forbids said government from creating the foreign oil addiction and Climate Change we see today.

President Trump's current effort to prevent California from requiring better fuel emissions violates the Constitution's divided sovereignty. California is sovereign over internal improvements. The Federal government is forbidden to tax for highways beyond delivering letters.

2.11.5. Metrics of harms created by Federal and state transportation monopolies:

2.11.5.1. Climate Change

2.11.5.2. Since 1916, DOTs replaced 46% of the 470 ton-miles per gallon railroads with 25 mpg roads. Pollution from roads is a major driver of Climate Change.

2.11.5.3. Ignoring calls to actions by eight Presidents to end foreign oil addiction because it is a direct threat to national security.

2.11.5.4. Ignoring the blood-sacrifice of soldiers buying time in oil-wars since 1991.

2.11.5.5. Ignoring resource depletion and risk of war as Admiral Rickover summarized in his 1957 "Energy Slave" speech.

2.11.5.6. Ignoring that US Peak Oil was in 1970.

2.11.5.7. Ignoring the economic harm to the general welfare from oil supply/price shocks in 1973, 1979, and 2008.

2.11.5.8. Ignoring the immediate risks of oil supply/price shocks from attacks on tankers in the Straits of Hormuz (June 2019) and Saudi oil infrastructure (Sept. 2019).

2.11.5.9. $22 trillion in Federal debts growing in tandem with oil imports and oil-wars since US Peak Oil in 1970. Debt is the tax on future labor. Debt beyond 19 years repayment is a tax imposed on the labor of children without their consent. Taxation is a known path to domestic war between Americans. Energy Economics explains debt, Net Energy and Fracking risks.

2.11.5.10. Ignoring the calls of children to end our pollution of their future with half a century of RFIs since Morgantown opened and US Peak Oil. Children demonstrating is similar to slave revolting - the powerless confronting those harming them. The Constitution's Preamble is vividly clear on our duty to defend liberty for Posterity, children.

2.11.6. For the purpose of this document, "political corruption" uses Wikipedia's definition, "*Political corruption is the use of powers by government officials or their network contacts for illegitimate private gain.*"

2.11.6.1. "*Illegitimate*" is limited to government actions that violate the clear and simple text of the written US Constitution. This forbids using Federal taxing powers to fund infrastructure projects.

2.11.6.2. "*Private gain*" is limited to receiving paychecks, pensions and other personal benefits while implementing actions that clearly violate the Constitution and harm the general welfare. There is no insinuation of bribes.

2.11.6.3. Foreign oil addiction, oil-wars, and Climate Change are examples of the harms to the general welfare created by current DOT acts of political corruption.

2.11.6.4. It is not the intent of this document to accuse specific people of intentional corruption. As with Federal support for slavery, Federally mandated foreign oil addiction and Climate Change are institutional corruption.

Individual government officials enforcing laws which violate the clear text of the Constitution and are the root cause of Climate Change is the corruption identified. This corruption began over a century ago with the 17th Amendment and The Federal-Aid Highway Act of 1916.

As a cross-reference, Rachel Carson's book ***Silent Spring*** documents similar Federal violation of the Constitution in agriculture.

It required a West Point education, time in the Infantry, half a century of effort, multiple oil-wars, the 2008 Great Recession, and a deep study into the ending of Federal support for slavery and the Constitution for the author of this paper to come to recognize he had supported this political corruption for most of his life and still depends on it to be economically competitive today.

Corruption does not require intent. Corruption is outcome-based. We all benefit from producing 0.6 pounds of CO2 per passenger-mile for the immediate use of a car/bus/train. It is children who will suffer from our illicit gain.

2.11.6.5. Open Letter to West Point Class of 1972 (45th Reunion) on the high probability of Oil Famine before 2023.

2.11.7. The written Constitutions of the US and State governments clearly forbid, made "*Illegitimate*", Federal taxing to fund infrastructure and the resulting Climate Change and oil-wars.

2.11.7.1. Sept. 14, 1789 vote to specifically forbid Federal involvement in internal improvements beyond delivering letters in defense of free speech. Summary.

2.11.7.2. Ratification documents affirming the "post Roads" restriction.

2.11.7.3. Presidential veto messages (21) affirming the importance of the "post Roads" restriction.

2.11.7.4. Clauses from several of the 34 States that have direct prohibitions against monopolies. The Boston Tea Party was a demonstration against a government transportation monopoly that triggered war. The US and many State constitutions took care in forbidding the rebuilding of that path to war. Since 1916, these prohibitions have been ignored so contracts could

be given to the politically powerful without metrics of efficacy to the general welfare.

2.11.7.5. Foreign oil addiction, a Tyranny of the Majority, created by government transportation monopolies mandated driving cars to be economically competitive.

2.11.7.6. From Jefferson's letter, *The Earth belongs to the living*, "*Then no man can by _natural right_ oblige the lands he occupied, or the persons who succeed him in that occupation, to the paiment of debts contracted by him. For if he could, he might during his own life, eat up the usufruct* [to use for profit without harm] *of the lands for several generations to come, and then the lands would belong to the dead, and not to the living, which would be reverse of our principle.*"

"*...nor the nation itself can validly contract more debt, than they may pay within their own age, or within the term of 19 years?*"

2.12. Clarify to the taxpayers that Climate Change, traffic jams, road-deaths, perpetual oil-wars, oil-dollar funded terrorism and $22 trillion in Federal debt are the consequences of a century of unconstitutional corruption.

3. Physical Elements:

3.1. JPods technology is outlined in US Patent 6,810,817. Here is a link to a Red Bull TV documentary on the Future of Transportation (covering Hyperloops, JPods, and self-driving cars). Video on the safety differences with highways.

3.2. Describe the guideway:

For answers to these questions, visit www.SanJoseMobilityCompany.com, download our software, design networks, and display them in GoogleEarth. Go to Santa Cruz and look at the solar collectors over Plantronics parking lots. Go to Morgantown and ride the network. JPods guideway is much smaller. Go to Dortmund and ride the network. Go to Six Flags to ride "*Batman: The Ride*" to get a sense of the advantages of suspended networks.

3.3. Describe the station/passenger access point:

Watch the station video and visit www.SanJoseMobilityCompany.com. There are images showing answers. Again, you can use our software programs to render approximations into any location you wish.

3.4. Describe the vehicles:

The telephone was the correct user device, but the analog network was the wrong network. The digital networks did not replace the telephone.

Similarly, JPods packets carry 1-6 people or a half-ton of cargo. The automobile is the correct packet; the highway is the wrong network.

JPods demonstration set up in front of Boston City Hall. Here is a link to a 2008/9 video of an ABC-7 story with a demonstration in San Jose.

3.5. Operation Elements:

Visit www.SanJoseMobilityCompany.com for details, Route-Time™ maps, download the software to design the networks as you would like to see them operate.

If you want an operation scale model, we sell you one. Go visit the Spartan Superway in San Jose to see similar.

3.6. Current Status of Concept Technology:

Again, as with the Internet, there is no technology barrier to grade-separated self-driving cars. Morgantown's Personal Rapid Transit (PRT) has been operational for half a century. Here is a link to Walter Cronkite covering Tricia Nixon opening the network on Oct. 24, 1972.

Following is a 2013 letter from the Mayor of Morgantown attesting to the efficacy of that network:

The City of

March 12, 2013

Andrew M. Fellows, Mayor
5807 Bryn Mawr Road
College Park, MD 20740

Dear Mayor Fellows:

I am writing to support the endeavor of College Park, MD to bring a solar transportation network (Jpods) to the area. As you are already aware, Morgantown has had a Personal Rapid Transit system in place since 1975, which connects the three campuses of West Virginia University, as well as the downtown area. Some benefits of the system include, but are not limited to:

- It has proven to be a reliable system of automated transit that is relatively inexpensive to operate.
- It has offered on-time service rates far better than the bus system it replaced, boasting a 98% reliability and availability rating
- It has eliminated much of the gridlock of traffic which existed in the hub of downtown Morgantown.
- It has proven to be safe, with no serious injuries reported since the operation began in 1975.
- Approximately 16,000 riders take advantage of the system on a daily basis.

There have been several proposals to extend the line on both ends of the system, which could take place in the near future. Since the Morgantown PRT operates chiefly as a student-mover, it runs primarily during class days. During Fall and Spring semesters, hours of operation are from 6:30 a.m. - 10:15 p.m. weekdays, and 9:00 a.m. - 5:00 p.m. on Saturdays. Summer hours are 6:15 a.m. - 6:30 p.m. The system is closed on Sundays year round, as well as during Thanksgiving, Christmas, and Spring breaks.

A system such as this would be a great asset to your City, and I wish you well in your endeavor!

Jim Manilla, Mayor
City of Morgantown

Read Congressional Office of Technology Assessment Study PB-244854 (1974). It warns that "institutional failure," or political corruption of granting contracts based on political influence and not sound metrics, would likely block deployment of PRT. Following is a US Senate letter from that study:

Insights from 1973 Oil Embargo

PRT

United States Senate

COMMITTEE ON APPROPRIATIONS

WASHINGTON, D.C. 20510

September 10, 1974

Honorable John L. McClellan
Chairman
Committee on Appropriations
United States Senate
Washington, D. C. 20510

Dear Mr. Chairman:

We would like to enlist your support for an increase in the scope of the urban mass transportation assessments currently being conducted for the Committee by the Office of Technology Assessment. As you will recall, one of these assessments is concerned with the question of the degree of automation which is technically feasible, economically justifiable or otherwise appropriate to rail rapid transit. The second assessment addresses the process by which communities select, plan and implement a new transit system or modernize an existing one.

While the need for these studies of conventional rail transit remains unchanged, there have been significant developments since the date of our original request to the Office of Technology Assessment which indicate that the coverage of the assessments should be expanded in two directions.

--First, it seems clear that we will be required to deal with the issue of "personal rapid transit" and related high technology projects earlier and in greater depth than had been anticipated.

--Second, the increasingly serious condition of the economy suggests that these assessments should be expanded to consider the development and potential of urban mass transit under conditions in which federal funding may be severely decreased -- or greatly increased in the event that unemployment becomes an overriding problem.

To expand on the first point, communities (such as Minneapolis and Las Vegas) are showing increasing interest in new types of fixed guideway systems. Personal rapid transit (PRT) systems are increasingly discussed as alternatives to more conventional rail transit. Implementation of new technologies may be proposed such as magnetically levitated vehicles. The considerable effort underway in other countries to advance the state of the art in fixed guideway systems should be further investigated. The current assessments do address some of these issues. However, if addressed they lie at the boundaries of the ongoing assessments rather than being fully included in the scope of work.

Concerning the second suggestion for expanding the assessments already underway, the economic picture has changed greatly since these assessments were initiated. As you know, a major purpose of a technology assessment is to identify policy alternatives and quantify the probable effects of such alternatives. Certainly, these assessments should address the full range of contingencies affecting policy alternatives and their impacts. Examples of varying economic outlooks that should be considered are as follows:

1. A revived fuel shortage leading to greatly increased (and funds for) mass transit. How much of the additional funds should be spent for fixed guideway transit, including personal rapid transit? How would R and D be affected? Would private industry have the capacity to support increased demands upon it?

2. A severe recession or actual depression. Should major

On the other hand, if funds for major transit projects were severely curtailed, how quickly could communities slow planning or building new transit systems alter their plans? What are the probabilities associated with such a future? Are they sufficiently high that communities should be encouraged to place more emphasis on staging the development of new transit systems so that working subsystems are obtained if development of the entire system is interrupted?

To summarize, we feel the needs of the Committee will be best served by extending the current assessment efforts. These extensions would

--increase the range of technologies under assessment; and,

--permit assessment of the interrelationships between alternate economic futures and a variety of mass transit policy alternatives.

We appreciate your assistance in transmitting this request to the Chairman of the Technology Assessment Board.

Sincerely,

Robert C. Byrd, U.S.S.
Chairman, Transportation Appropriations Subcommittee

Clifford P. Case, U.S.S.
Ranking Minority Member
Transportation Appropriations Subcommittee

SENATE COMMITTEE ON APPROPRIATIONS
SEP 20 1974

The Internet faced similar government monopoly delays in commercialization. Two videos on the Internet illustrate the same current barrier to solar-powered mobility networks:

- 1968: Mother of All Demos demonstrated nearly all aspects of modern computing and the Internet (start at minute 30 if you are pressed for time).
- 1994: The Today Show, "Alison, what is the Internet anyway?" marks the 26-year gap between the technology being available and it scaling to public awareness.

The State of technology in self-driving vehicles is demonstrated by:

- A half-century of the Morgantown Network.
- Kiva/Amazon robots in warehouses.
- A billion miles of self-driving Teslas on streets.

The barrier to cleaner, faster, safer, and more affordable mobility networks is unconstitutional government transportation monopolies, not technology.

3.7. Concept Requirements

Restore free markets by passing the Solar Mobility Act or a specific Franchise Contract and JPods will come with the money and start building (see Goldman Sachs letter in paragraph 2.4.5).

3.8. Costs:

JPods costs must be justified relative to paybacks to investors. Costs without comparison to paybacks are meaningless. As a general reference, our networks cost about $10 million per km while cutting costs per passenger-mile by 90%. Costs in your 2012 study of pod car networks were 3 to 5 times our costs. This reflects the bloated costs of government projects where officials have no personal accountability for achieving excellence, no "skin in the game."

3.9. Business Plan:

3.9.1. To understand our business concept we have a reading list (Recipe). As a general concept, read two books:

- ***Nothing Like It in the World,*** which covers how the Transcontinental Railroads were financed and built. We can build faster than the 3-10 miles per day per crew.
- ***The Fiery Trial*** on how Federal support for slavery was ended. Slavery was a Tyranny of the Majority defect in the same way that Climate Change is. Children (Posterity) is a non-voting defenseless minority that Federal oil-coal-burning infrastructures sacrifice.

3.9.2. Replace politically driven transportation designs with metrics-based decision making by implementing specific metrics such as:

3.9.2.1. Energy consumed per passenger-mile (graph in 1.7).

3.9.2.2. CO2 produced per passenger-mile (graph in 1.7).

3.9.2.3. Taxpayer subsidy per passenger-mile (graph in 1.7).

3.9.2.4. Taxpayer capital contribution per mile of network.

3.9.2.5. Parasitic Energy Ratio (see attached graphic below)

3.9.2.6. Disposable Energy.

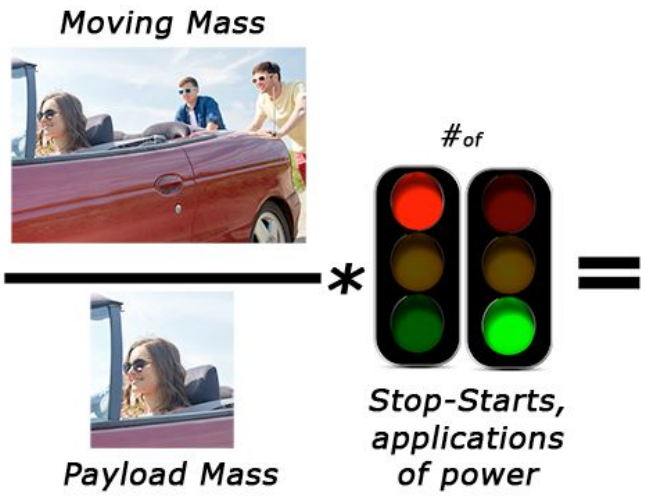
3.9.2.7. Net Energy.

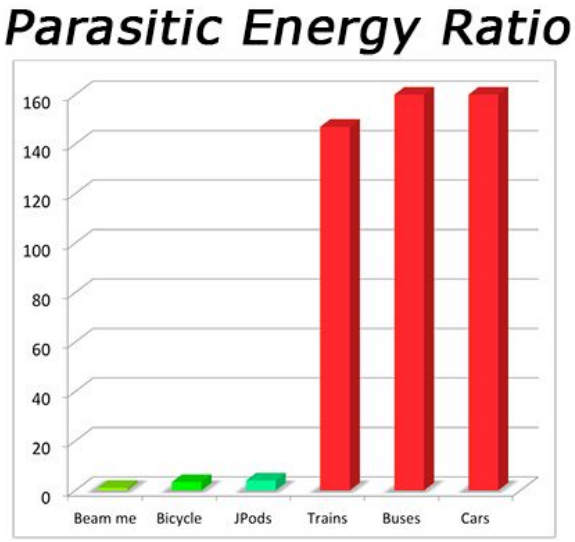
Parasitic Energy Ratio

This is a simplified way to approximate and compare the efficiencies of various modes of transportation.

Multiply the number of start-stops times the moving mass divided by the payload mass.

Moving a two tons to move a person in repetitively start-stop traffic is very expensive, wasteful, and polluting.





A Parasitic Energy Ratio experiment. Steps:

1. Park your car in your driveway empty of gasoline.
2. Put in one gallon into your tank.
3. Get 5 of your strongest friends.
4. Drive until you run out of gas.
5. Push your car home.

It will take you about 2 days, or 12 man-days of effort to perform the work of one gallon of gasoline. Burning a gallon of gas creates 20 pounds of CO2.

3.10. Impacts:

3.10.1. Construction's negative impacts: There will be very few negative impacts during construction. The infrastructure is very light and speed of execution is fast.

3.10.2. Operational negative impacts: Ask the people in Morgantown, Dortmund, and Wuppertal.

3.10.3. Mitigating negative impacts: We will ask the people in Morgantown, Dortmund, and Wuppertal. Then we will mitigate those concerns.

3.10.4. Community Outreach: We would like to give scale models and STEAM programs to schools. We need to start training innovators and workers. We would like to setup SkyRides so that people can experience how little energy is required to power mobility. SkyRide was awarded “Best Cruise Ship Feature of the Year” in 2016 and 2017. JPods contracted with SkyRide to put our robotics on their networks where needed.

Here is a 2013 Garden Girls presentation to Fremont City Council.

Once liberty to innovate and sort innovation in free markets is restored, we will accomplish what Thomas Edison noted as practical in 1910:

"Sunshine is spread out thin and so is electricity. Perhaps they are the same, Sunshine is a form of energy, and the winds and the tides are manifestations of energy.”

“Do we use them? Oh, no! We burn up wood and coal, as renters burn up the front fence for fuel. We live like squatters, not as if we owned the property.

“There must surely come a time when heat and power will be stored in unlimited quantities in every community, all gathered by natural forces. Electricity ought to be as cheap as oxygen...."