STUDY MODEL FOR A $10 BILLION NATIONAL EXPERIMENT

This study is the Economic commentary to explain the 8 slideshows

Saturday April 12, 2005

Starting with a $5 million Research Lab, six potential applications will R&D the prototypes required for each. They will be powered by Electrolysis and Operated by AI. These potential applications are ideas for public discussion and have not yet been submitted to any government agency. What is electrolysis? Electrolysis is the use of electricity to break the bond that holds hydrogen to oxygen in water and releases these gas to run small engines that generate electricity for different applications. In theory this can generate electricity in any amount and efficiently allowing for individual machines that can go anywhere off grid and supply any amount of power needed. Each of the six SMART infrastructure projects shown here have two components: the first is a generation capability and second is a transmission network to get it to where it itis needed. Electrolysis still needs some research to match it to the correct size hydrogen engines for the intended application. To attract funding to a research lab, Electrolysis needs examples of applications it can power. We show six new SMART applications in this document.

This document is about testing these 6 innovative technologies on a large scale to determine their usefulness, performance and financial returns. Each application depends on AI for operations and Electrolysis of water for their fuel to travel and transmission inside the corridors shown in the next page. These technologies are illustrated in slideshows:

* $5 Billion Skyways passenger travel powered by electrolysis
* $1 Billion for automated delivery system at night from 10 pm to 6 am (no slideshow yet)
* $1 Billion for Oasis-Machines Water Infrastructure powered by electrolysis
* $1 Billion for a Smart Grid powered by electrolysis
*$1 Billion for AI Data Centers linked by advanced Fiber Optics powered by electrolysis
*$1 Billion for Carbon Industry powered by electrolysis

Public Private Partnership

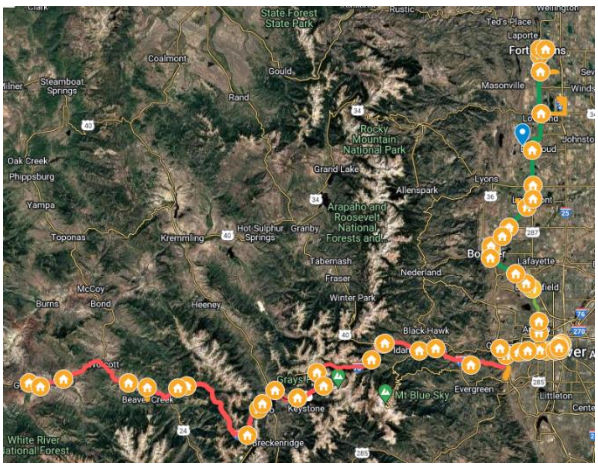
The purpose of this document is to “Explore” a Financial Model for issuing up to $10 Billion in Revenue Bonds for a national test. These Infrastructure ideas have not yet been submitted to the government. A Public Private Partnership will be needed between the builder consortium, the State and Private capital. The Public Private Partnership is envisioned as the most effective way to represent all stakeholders. Currently our model provides 100% of the costs and are a 30-year mortgage on the investments amortized at 3.3% per year. After operating costs including 3% interest and amortization, the parties all split the surplus with Bond holders getting 50%, State 25% and Builder Consortium getting 25%. Our financial model

is a breakeven of 6.3% or $630 million per year for the $10 billion. This can be covered by 315,000 subscribers averaging $200 per month bundled services or by 500,000 subscribers paying a unbundled monthly fee of $100 for unlimited use of all the AI infrastructures. Profits come from pay per User fees on non-subscribers. The State role is to provide the operating authority, the Right-Of-Ways, safety oversight and certifications.

Each of the 6 smart infrastructures are in Climate Tech that helps solve the Climate Crisis. The first allocation is for growing a $1 billion Oasis-Machines generation to be deployed along specific routes. Then$ 5 Billion is invested in building a 210-mile ROW corridor from Ft Collins thru Denver to Eagle County Airport. This corridor stacks these new technologies within the Transport R.O.W. and or guideway for shared use and comingling of revenues. Then $1 Billion for a Fiber Optic infrastructure of 210-miles as an AI Data Center backbone for a Universal Mind. The forth $1 billion investment is for the new PA-Smart Grid that generates electricity merges the electricity with intelligence such as a Persona Assistant (PA) and distributes to private subscribers. The final $1 billion is for Carbon Capture technology spread over the State and generating transporting carbon to processing centers where it can be sold.

An illustration of a 125-Mile Route . The spreadsheet is old but provides a format.

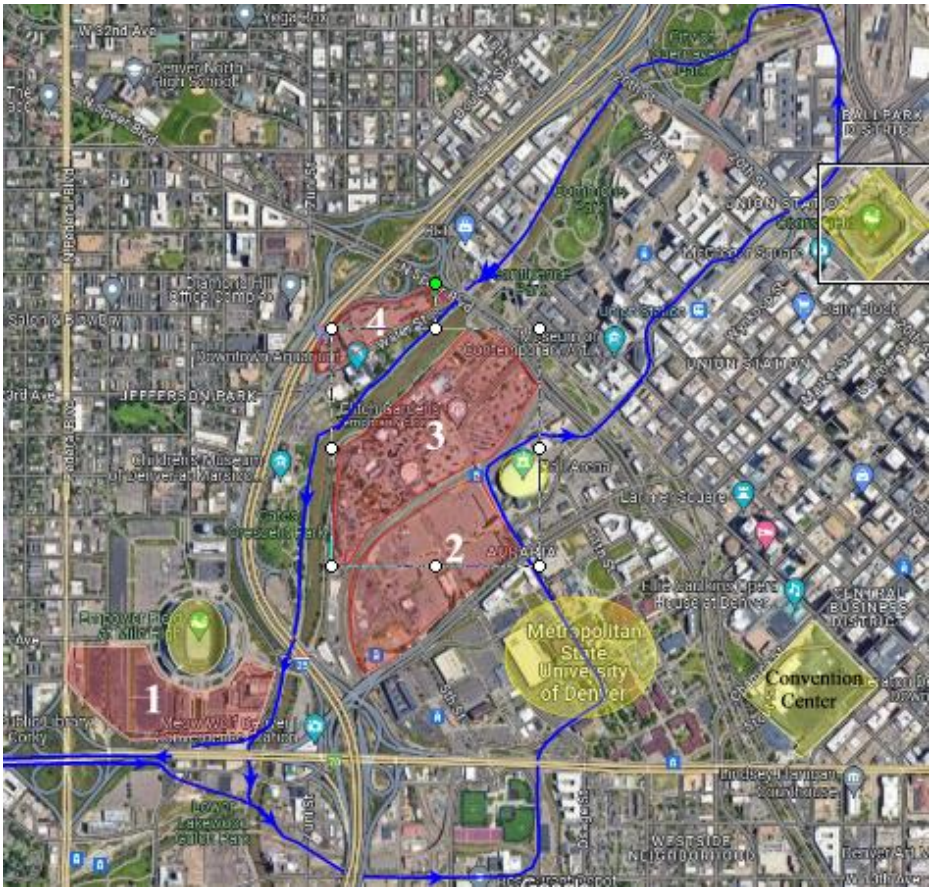
Interstate 70 is served over 10 million skier visits in 2022. The I-70 corridor is already crowded with talk of a $15 per car surcharge. A Skyways transport system could add significant growth to the circled area above while reducing the traffic load on the I-70. Not all this growth will be in the ski areas as hotels and restaurants are the major source of profits more than lift tickets.



From Denver to the ski areas is a congested route moutain route averaging over 70,000 cars per day each way with average 2.5 passengers per car. It is snowy with steep hills and curves but currently mostly 2 lanes per direction. Our

feasibility sketch below shows what ridershipit would take to breakeven at $25 each way trip for tourist and $15 for locals. This is only about 18% of the daily trip capacity of 120,000 ridership per direction for 10 hours per day. And over 30 years prices will probably quadruple instead of the 4% increase per year used in this sketch. Many other revenues were not included such as cargo (mostly a night time use) fiber optic media, and a smart grid. This stacked pay zone concept could genrate a return on investment from 10% to over 20% in the early years. It is far too complex to project all the differntd kinds of trips and revenues at this time, but these limited assumptions show ridership and pricing necessary for a 12% average return is possible early . At the end of 30 years the mortgage is fully amortised and the State will own 100% of all six infrastructures.

Starting in An Embarkation Loop to access the Mountains



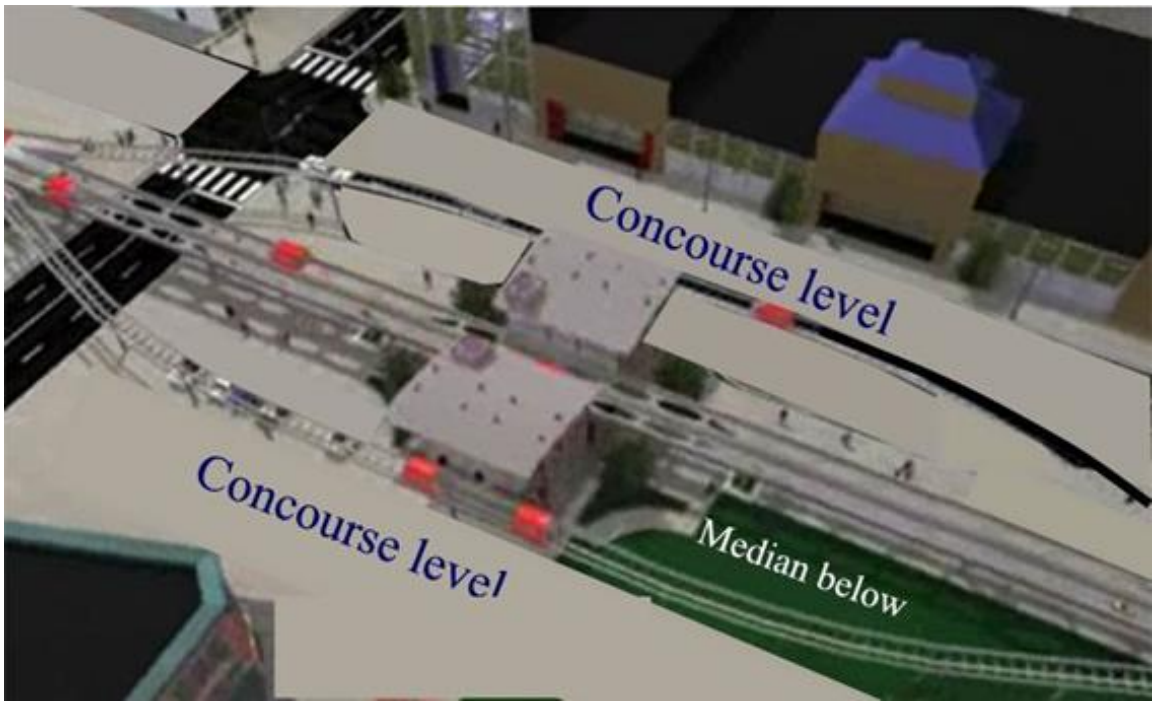
This is an example of a core area system acting as an embarkation area for a Skyways system up I-70 to the 9 ski areas all the way to Eagle County Airport-some 125 miles. This circular 5-mile route linking all the entertainment venues such as football, basketball, baseball into an Intermodal entry point for the downtown area. There are 9 stops spreading the stations through the Platte Valley and the potential for ridership is increased. Downtown has 133, 000 employment bases and over 200,000 daily visitors, nearly 60% arrive by car. Denver Tourism Statistics. Development costs for the 5-miles are estimated at $100 million including for a single lane of guideway. The areas labeled 2 and 3 in the map on page 2, are planned as a new development project for thousands of residential units and a mix of other uses. Across the parkway lies the Auria Campus consisting of the university of Colorado, Metro State University and a Community College. Combined enrollment is currently over 40,000 students and growing.

Kroenke Project The Denver residential market is hot, and current thinking is for 15,000 residents. But another market is much bigger and has national implications for new media. With the universities across the street and this much new space available, a faster market will be developing a mix of uses with some new media that transform America such as: AI, virtual reality, spatial computing, quantum computing, holograms and date centers. There are $100s of billions involved in growing this market. Underneath its guideways there is room for hundreds of Fiber Optic cables to carry these new media to the rest of America. The Auraria Campus can become a leading teaching center for new media and provide the students to participate in research across the parkway at the buildings shown in white. The Auraria campus can help set the agenda for teaching new media across America. In Colorado these cables can connect all our other universities and other research centers, all the local entertainment and become a World Stage for the new media.

Leg 2 The Colfax Route to the Mountains - There are few routes available for the Skyways I-70 corridor to get to/from the mountains. The one with the most revenue potential is Colfax Ave. From downtown it is about 10 miles to the Colorado Mills mall. At $20 million per mile this would be about $200 million, and this price does not include the 4 other infrastructures such as water, Smart-Grid, Fiber Optics and Carbon Capture. To get local participation, the Colfax malls need something that excites everyone and that could be growing 3 separate malls along this route with about 8 to 10 stations. The 16th Street Mall downtown has been a success, and this would give property owners something extra.

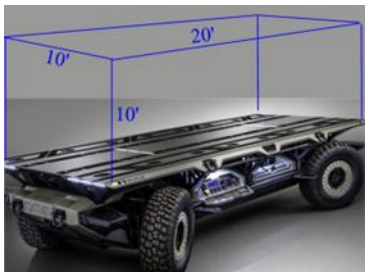
New Colfax Development – There are three Colfax sections between Federal, Sheridan, Wadsworth and Simmins that wil be affected. If concourse are installed at the station access level then Colfax below can continue to be a trafic street. On the concourse level above strip malls can grow over time. They can become malls along Colfax and each select a development theme based on retail, food and attractions. Skyways can either go down the midle or along either side. Each mall can also choose between redidential and comerical adjacent to the malls. For eample an automotive theme (commerical) could include dealerships, repair shops, parts stores, body shops, and used car sales. All parking should be off the mall with garages built to house the residential and employemnt populations. The only streets that cross the mall could be Fedeal, Sheridan, Wadsworth, and Simms. All manner of Residential can be zoned to behind the Malls and connected with Trolleys and other themed vehicles, some of which may be driverless. There are other streets like 13th and 14th Avenues on the south and 16th and 17th aveneues on the north that can replace the some of the traffic for Colfax.

Stations will normally be ½ mile apart. They could be in the middle of each section between the cross streets. If they are located at the end of a section, they can also serve the cross-street traffic. Colfax can continue with traffic and the above concourses will be for stations loading and pedestrians only. This level should be for the access to stores and other buildings while the lower level could be for drive-through traffic, loading docks and parking garage entries.

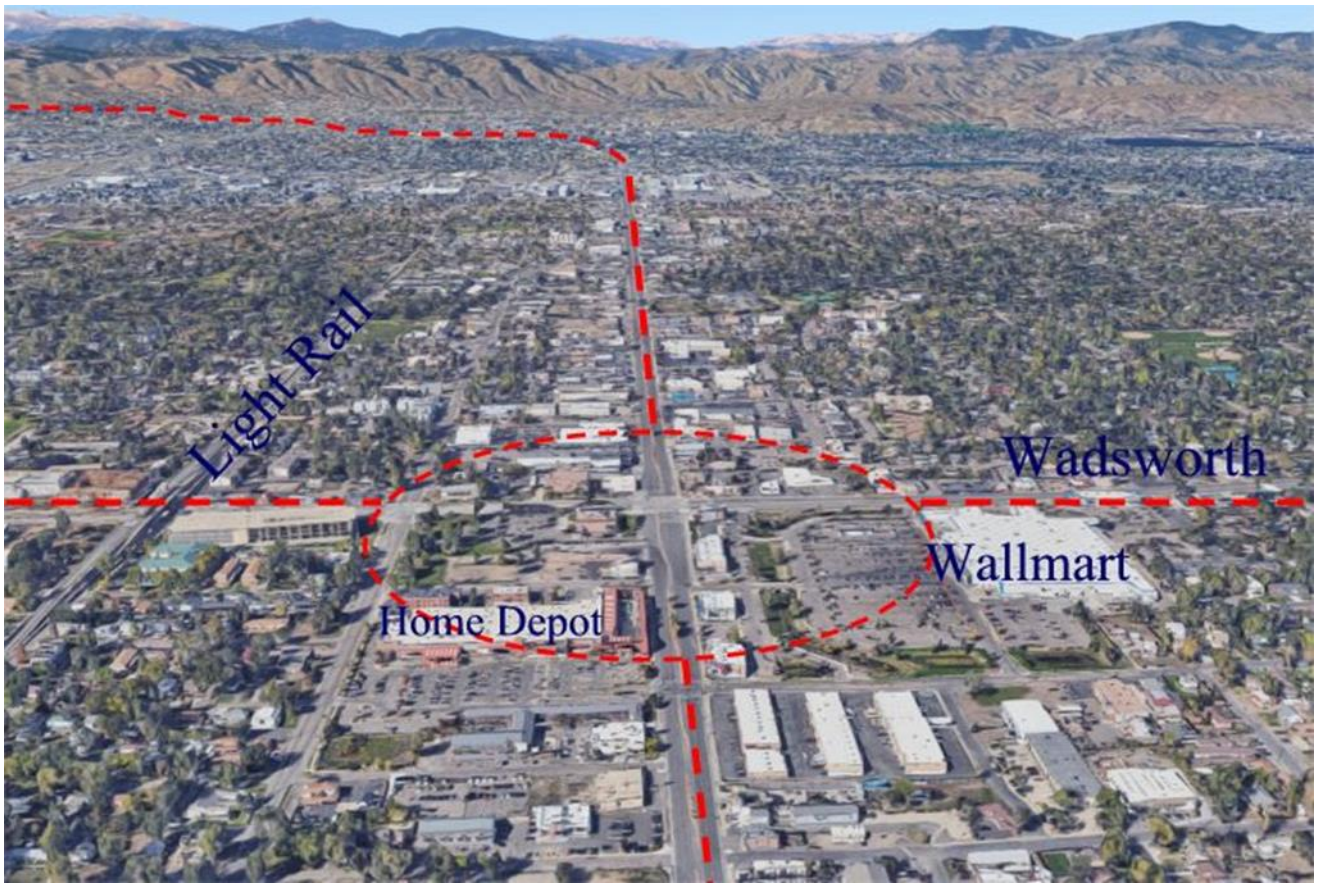


[Station Animation]

Metro Crossroads the Third mall from Wadsworth to Kipling, is 3.6 miles. Wadsworth is also the best north - south street for Skyways to go to Ft Collins. As shown here, it can intercept a western route to the mountains and send traffic either north, south or east. This area has the potential for a Retail Mega Center because there is already a Walmart and Home Depot located there, and it would be the main crossroads of a north/south system in Colorado. There is a light rail station at Wadsworth and 13th Ave with a large parking garage just to the north. The Colfax Concourses connect with the Front Range Corridor here at an Intermodal Crossroads. In Phase 2 the north south alignments would continue down to C-470 somewhere. This is a good spot for the collection and distribution for automated delivery would of course use the Skyways system but mostly a night.



Here is a picture of GMs driverless platform for use as a delivery vehicle and the dimensions that can be placed on top of it for 2,000 cubic feet. This vehicle can serve the 8 to 10 towns going north and the 12 to 15 towns going west into the mountains. In addition, the delivery vans we see on the streets today can be adapted for use on the guideways and for driverless operations on local streets.



Colfax and Wadsworth

Phase 2 will continue beyond Colfax as shown above

Leg 3 Front Range Route Towns along the 70-mile leg are:

* Ft Collins
* Loveland
* Berthoud
* Longmont
* Gunbarrel
* Boulder
* Superior
* Broomfield
* Arvada
* Wheatridge

Slideshow Illustrations of the Six New Infrastructure Technologies

Our research lab will be embarking on an $ 10 Billion National Test to demonstrate the feasibility to fund climate tech innovations through revenue bonds. Over the next few years, we will collaborate with the financial community to develop a Public Private Partnership model that any State can use where ownership would be split 25% with a State, 25% with management and 50% for the capital. The revenue bond should be amortized over 30 years at 3.3% and include a minimum 3% interest rate plus 50% of any surplus.

The estimated development costs start with $5 billion, to fund the construction of new transportation infrastructure including a guideway that would support four other technologies: each allocating $1 Billion to a new source of water, a smart grid for electrical generation, a new fiber optic technology, and carbon capture.

To illustrate the potential of these technologies, let's consider the example of air-to-water generation. With $1 billion in today's market, we could produce 10,000 units that generate 5,000 gallons of water per day. Mass-produced, this would create 50 million gallons of water per day,

which could be used to address severe water stress in cities, industries, and agriculture. Our research suggests that by 2030, over 50% of the world's population will face severe water stress, and this technology could potentially break even at less than ½ cent per gallon. In comparison, many industries are currently paying much higher prices for water

Similarly, electrolysis could be used to create a new smart grid for electrical generation, which could revolutionize the industry. The Data Center industry is also in dire need of new fiber optic infrastructure, with plans to build 3,000 new buildings using AI. This would have a profound impact on various sectors, including business, science, education, government, entertainment, and space exploration, geology and sports.

As a research lab, we are committed to making our research available for free to those who wish to collaborate on how to fund these innovations.

Skyways Corridor at $5 Billion (plus a $1 billion contingency)

You can access our above work where we outline the possibilities in step 5 and break it down into 4 legs with a total of 210-miles from Ft Collins through Denver to Eagle County Airport.

5- mile leg x $25 Mil Platte Valley	= $ 125 Mil	Embarcadero Loop Leg #1
12 -mile leg x $22 Mil per mi	= $ 264 Mil	Colfax Malls Leg #2
68 -mile leg x $22 Mil per mile	= $ 1.5 Bil	Front Range Corridor Leg #3
125-mileleg x $20M Denver to Eagle	= $ 2.5 Bil	Denver to Eagle County Airport, leg #4

Another $4 Billion is allocated for Smart technologies at $1 Billion each. Each of these is a national test of the effectiveness and economics of the technology. Since they all depend on electrolysis and AI, they are all machines of one kind or another. Of the $1 Billion allocated, each technology needs to generate its product for 50% of the $1 Billion and then find ways to get it to the users such as pipelines for the other 50% of the $1 Billion.

Oasis-Machines Slideshow. This is about unlimited water, and it is the big application that will be the most immediate. A research Lab to start can develop this technology first. Supplying water to Data Centers is expected to be allocated about 40% of the Oasis Machines because this market pays the most and has the most urgent need. Farms are another big need but pay the least for water as they are used to only paying about $100 to $200 per acres foot. A residential application is expected to supply at least one acre foot per year of water plus some electricity. Industrial sizes are expected to supply 25 times that. One thousand machines along the river will supply water for a lush environment, but a lot of Data Center water can be sent to farms after an initial two uses. After farmers use the water, it can trickle down to replenish dried up lakes and rivers. About 40% of the water vapor will contain CO2. The Oasis Machines

runs on a hydrogen motor. Hydrogen is supplied by electrolysis of water. It is our contention that a hydrogen motor with only 4 cylinders that one of our team members designed and built could generate 1000 watts per hr. or 24,000 watts per day

The operating power requirements for Skyways is currently estimated at 1000 watts per 75' section or 1KW. We can get the power needed to start the process from 2 solar panels. Testing shows 6 times the output is generated more than the input and the research shows 10 times could be feasible someday. An example would be 6,000 watts generated could be distributed: 1000 watts to run Skyways, 3,000 watts to operate Atmospheric Water Generators (AWG)on top of columns dedicated to the guideways, and something left over for lighting the ground area beneath the guideways. Larger 25,000 gallon per day AWG between each column at 75 per mile is enough water to run 9 food farms of 60 acres each using a pivot sprinkler system. This is one square mile of food production for every mile of a cross-country route. This technology is scalable, both bigger and smaller. You can see why Skyways wants to continue this research and incorporate Oasis Machines into our projects when the technology is ready

AI Linked Data Centers Slideshow also uses electricity generated from Electrolysis of water. Our research indicates the fiber will connect to cell phone transmitters with a longer range, perhaps 30-to-40-miles. The applications we want to put on this fiber network are shown in blue: Spatial Computing, Metaverse , Holoported and virtual reality.

$1 Billion budget used for	210 miles of fiber	-$300 Million
	25 modular Data Centers	-$400 million
	AI Research Lab	- $100 million
	Courseware	-$100 million
	Satellite Distribution	- $100 million

Revenues from fiber media could grow larger than the other technologies and even faster. In addition, this technology will attract new business parks to grow. This is intended to grow a new kind of media that is much more advanced and can carry great amounts of information. Such a network should cause a tech boom all around the fiber route throughout the 210-miles proposed in the 4 legs above. The fiber optics are located beneath the guideway in 3" pipes and could provide up 200,000 data streams someday. They will create an entirely new industry of AI and new media jobs. By broadcasting all activity live and distributing this kind of media over our fiber optics, Skyways will earn additional revenues. It is possible that these revenues will be bigger and may even surpass the ridership revenues. Gradually extensions of Skyways routes in other states could pass by 200 million people living within 50 miles of Skyways routes. With a market of this size, millions of people could learn to publish new media in sports, medical, banking, investments, real estate, education, entertainment, engineering, planning and government approvals. AI and new media will become a huge industry.

Smart Grid Slideshow in its simplest form is software added to moving electricity. If we use the hydrogen motor designed by our senior researcher it is possible to hit a high number like 25KW per machine between each column and there are 72 columns per mile, so that is 2400 KWs per mile. We don't need that much to go cross country. A square mile of farming only needs a tiny fraction of that for pivot sprinklers. Until new communities spring up along the way, we can get by with less than 100 kW per mile. The potential is there wherever there is a use. This project budgets $500 million for electrical generation in 5,000 machines. Plus is allocates $500 million for a distribution system that adds the AI Universal Mind to outlets withing one mile of each side.

Carbon Industry Slideshow –This technology can deliver the CO2 that already exists in the air where 400 billion tons is estimated. This existing carbon is what is causing our current effects from climate change and needs to be removed ASAP. The business plan for Step 1 shows 10 products that can be derived from Carbon, so lots of processing centers will be needed. And so will a pipeline network to get the carbon to the processing center say every ten miles.

Ripple Effects - The US Chamber of Commerce estimates that transportation improvements usually cause ripple effects of 8 to 1. Adding the five other technologies will increase the ripple effect beyond anything that can be forecasted. Using a smaller number like 5 to 1 will bring a $50 billion ripple effect that transforms Colorado into a new type of pedestrian environment in the urban 210-mile corridor. By absorbing most of the growth, this corridor will allow the rest of Colorado to grow more slowly and preserve our rural heritage. This investment in economic development will secure Colorado's future for decades to come with these examples.

* The Colorado's Mountain Playground of some 2 million acres with all the recreational activity

Tourism: A 2-million-acre district shown above contains 9 of Colorado's 12 major ski resorts that can be served by the I-70 Skyways transport. This area served over 10 million skier visits in 2022. The I-70 corridor is already crowded with talk of a $15 per car

surcharge. A Skyways transport system could add significant growth while reducing the car traffic load on the I-70. Not all this growth will be in the ski areas as hotels and restaurants are the major source of profits more than lift tickets. Many other attractions are possible to fill those hotels and restaurants like campgrounds, boating, river fishing, hiking, hayrides, horseback riding, golf courses, Alpine slides, swim pools, tennis, biking, jeep trails, festivals, art shows, concerts, picnics, tree lines, skating, rafting, floating, hot air ballooning, hunting and private baths. Winter offers ice skating, sleigh rides, cross country skiing, and snow mobiles. In short, this area has the potential to become not only Colorado's recreation destination but the entire county's. It just needs the Skyways stimulus. Its development would significantly grow the Skyways traffic into the mountains. And the 5 to 1 ripple effect would be felt all over the State and not just in the mountains.

* Phase 2 will expand routes to DIA airport and expand to Utah, New Mexico, Nebraska

* Oasis Villages- these are towns of about 100 to 150 acres for farming services, climate refugees, mining, senior living, resorts and business parks all accessed by the corridors.

*3D media- these are the new digital growth in AI, computer graphics, holograms and virtual reality and Spatial computing.

*Business parks – most economic activities will still occur in these areas.

*Research- the 21st century will provide 100 times more change than the 20th from AI

*Applications development- Artificial Intelligence will take us into areas we never imagined.

*Gardeners- with the amounts of water we see, the gardening profession will grow huge.

*Computer sciences- who knows where this will go but data has doubled in the last few years.

USA Market: https://pitchbook.com/news/articles/uber-v-waymo-in-28-trillion-battle-for-robo-taxis

These are old studies we still deem useful. These systems are designed for maximum ridership up to 10 to 12,000 per hour depending on car size, speed and spacing. After that level, they begin to get congested. Ridership forecast numbers use reasonable assumptions. These numbers are illustrations of opportunity and not forecasts. It is too early for more

comprehensive evaluations. Pricing compares to existing transport options. The old spreadsheets were based on equity investments. Now we are proposing a new Financial Model that uses revenue bonds for 100 percent of the construction. After a 3% interest and 30-year amortization payments there will be surpluses on all routes. And the surplus grows because of a fixed cost against both price and ridership increase each year for 30 years.

Previous-Studies

Even if these are old studies, they still show a format for why Skyways makes money: one reason is because it has no drivers which is more than 60% of the cost of most transit. Now we are aware of Electrolysis which can provide fuel from water. The biggest reason is because it is a fixed cost installation that grows from increasing ridership and pricing over time. These old studies show reasonable assumptions for the revenues from ridership and pricing in each case. Over 30 years the return on Invested capital can grow to the 30% to 50% per year range. The table below shows examples of ridership and pricing for metro areas, office parks, resorts, parks, downtowns and cross-country routes. These systems start at $100 Million for a neighborhood size and grow to billions for cross-country sizes.

Where	type	miles	Cost	Cash Flow	% Pop	1st-ROI	30th ROI
Albuquerque	metro	15	$250 M	$21.4 M	1%	4.3%	21.4%
Univ of New Mexico	Campus	5.5	66 M	$1.4 M	80%	2.1%	18.6%
Branson	resort	6.6	$150 M	$4.4 M	30%	3.9%	34.5%
Denver Tech Center	Office Park	5.5	$100 M	$-2.0 M	27%	-16%	49.6%
Denver	CBD core	5	$100 M	$4.4 M	35%	4.4%	40.4%
Colorado I-70	mountain	130	$2,500 M	$237 M	1%	5.9%	28.9%

Driverless Economics	year1	year2	year3	year4	year5	year6	year7	year8	year9	year10
Fair Grounds	28,966	31,008	33,122	35,310	37,537	39,922	42,352	44,870	47,478	50,181
ABQ Metro		21,389	22,900	24,352	25,847	27,888	28,977	30,617	32,312	34,064
University NM			1,411	1,611	1,868	2,139	2,423	2,721	3,034	3,362
Denver				4,445	4,985	5,643	6,328	7,043	7,789	8,566
Branson					11,687	13,042	14,458	15,969	17,549	19,214
I-70						237,061	255,636	273,060	294,738	315,306
Cash Flow over 10 years	28,966	52,397	57,433	65,718	81,924	325,695	350,174	374,280	402,900	430,693
Capital Invested in Mil	250000	500000	566000	666000	816000	3,316,000	3,316,000	3,316,000	3,316,000	3,316,000
Funders 50% of Surplus	**$14,483**	**$26,199**	**$28,717**	**$32,859**	**$40,962**	**$162,848**	**$175,087**	**$187,140**	**$201,450**	**$215,347**
Funders 3% Interest	**7,500**	**$15,000**	**$16,980**	**$19,980**	**$24,480**	**$99,480**	**$99,480**	**$99,480**	**$99,480**	**$99,480**
Funders Total	**21,983**	**41,199**	**45,697**	**52,839**	**65,442**	**262,328**	**274,567**	**286,620**	**300,930**	**314,827**
Funders ROI	8.8%	8.2%	8.1%	7.9%	8.0%	7.9%	8.3%	8.6%	9.1%	9.5%

* Breakeven is less than 25% capacity yielding no surplus but paying the interest + amortizing.
* Expected over the first 10 years is using 40% capacity + yielding a 10% or better return
* Attainable someday is 66% capacity yielding a 30% or better return in crowded markets
* Inflation factor is 3.5% compounded over 30 years
* This is all very complicated and needs much more analysis to determine future profits
* Automated delivery using the 9pm to 6am hours should boast the ROI by 20% to 30%

The issue is not if, but when these milestones arrive. The higher returns could come within 10 years in crowded markets or not until the end of 30 years in small markets. The ridership can be priced to attract the capacities needed in the early years and then gradually raise prices to control congestion capacity. None of these calculations include the “Stacked Pay Zones “Concept because the research on cargo, fiber and energy has not been completed yet. And the cost for these functions have not been included in the estimates. However, it appears feasible that including these three revenue streams could double the returns.

Economic Impacts

Transportation is known to have a stimulating effect on jobs, the neighborhoods around the stations and the new tax base created. In America the US Chamber of Commerce, says “for every dollar spent on transportation, it ripples throughout the community eight times in new local resident spending”. There is also less money spent on car ownership, making more money available for rents and home purchasing. It will also change the urban landscape with less parking and increased city density. Cities will become more walkable. In urban areas stations are ½ mile apart. So, a ¼ mile radius around stations contain contains millions of s.f. of land equivalent to urban densities of 5400 condos with 1,000 s.f. Stacking them in 5-story buildings approximately with 12 units per floor would result in acceptable pedestrian densities with parking on the outer limits and lots of open space for a pedestrian campus. The urban stations would be only 10 minutes away at most and could be available by driverless trams.

Conclusions

Such changes as proposed in the study will require a public vote. Transportation affects everyone. Even if they are not riders, they are dropping off and picking up the riders. The local traffic is affected by the transit traffic. At the very least people will have to look at the guideways in their view planes. These studies illustrate that this technology is a money maker with many sources of revenue. It also stimulates economic development. They can be funded by the Crypto industry, Pension funds, Venture Capital or Wall Street, bringing them a new form of investment with good revenues. These are ideas that appear feasible and this documents shows how.