A NEW MODEL FOR SMALL AIRPORTS:
Cluster Economics and Private Enterprise

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The Airport Setting

This year is the 100th anniversary of flight. The United States proudly celebrates this event, recognizing that aviation has completely and totally changed the entire world, and that it was Yankee "know-how" that made it happen.

Oregon's general aviation airports provide unique opportunities for creating jobs and economic development that traditional commercial and industrial parks do not provide. These opportunities currently remain largely untapped. General aviation airports are often thought of as just places to store an airplane, or get on an airplane. Portland International Airport was thought of this way, until 15 years ago when the Port of Portland created the "Oregon Marketplace" at the airport, and turned it into an economically thriving shopping center. This turned PDX into both a fun place to be, and a new major employment center. The Oregon Marketplace became a model which spread across the country.

General aviation airports are currently thought of as only places to store airplanes, and to get onto them. However, what is not currently recognized is that there is another much larger dimension to what a general aviation airport can be. In particular, these airports are places where aviation-related businesses not only *can* be sited, but if allowed to site there – *will thrive and grow*. As such, they are places that have enormous – though largely untapped – opportunity for job creation and economic development. They contain "shovel ready" sites that are available to build upon.

Aviation Businesses

Businesses which are "aviation related" are best sited at an airport where airplanes are directly accessible for those businesses. What kinds of businesses are these?

Aerospace Research/Development, and flight testing
Aircraft accessories mfg. sales & service
Aero publications
Aero cartography, development, sales, subscriptions
Aircraft fabrication, repair & maintenance
Aero engines, sales, mfg., repairs & maintenance
Rotorcraft repair & maintenance, and manufacture
Aircraft air conditioning mfg., repair & maintenance
Aircraft conversions and modifications
Airframe & Powerplant Equipment, sales and service
Air-Data development, research & marketing
Aero Graphics mfg., sales & service
Aero sock mfg.
Auxiliary power unit mfg., repair & service
Aircraft repair & maintenance, and manufacturing
Glider repair & maintenance and manufacture
Aircraft avionics sales & service
Aero exhaust systems

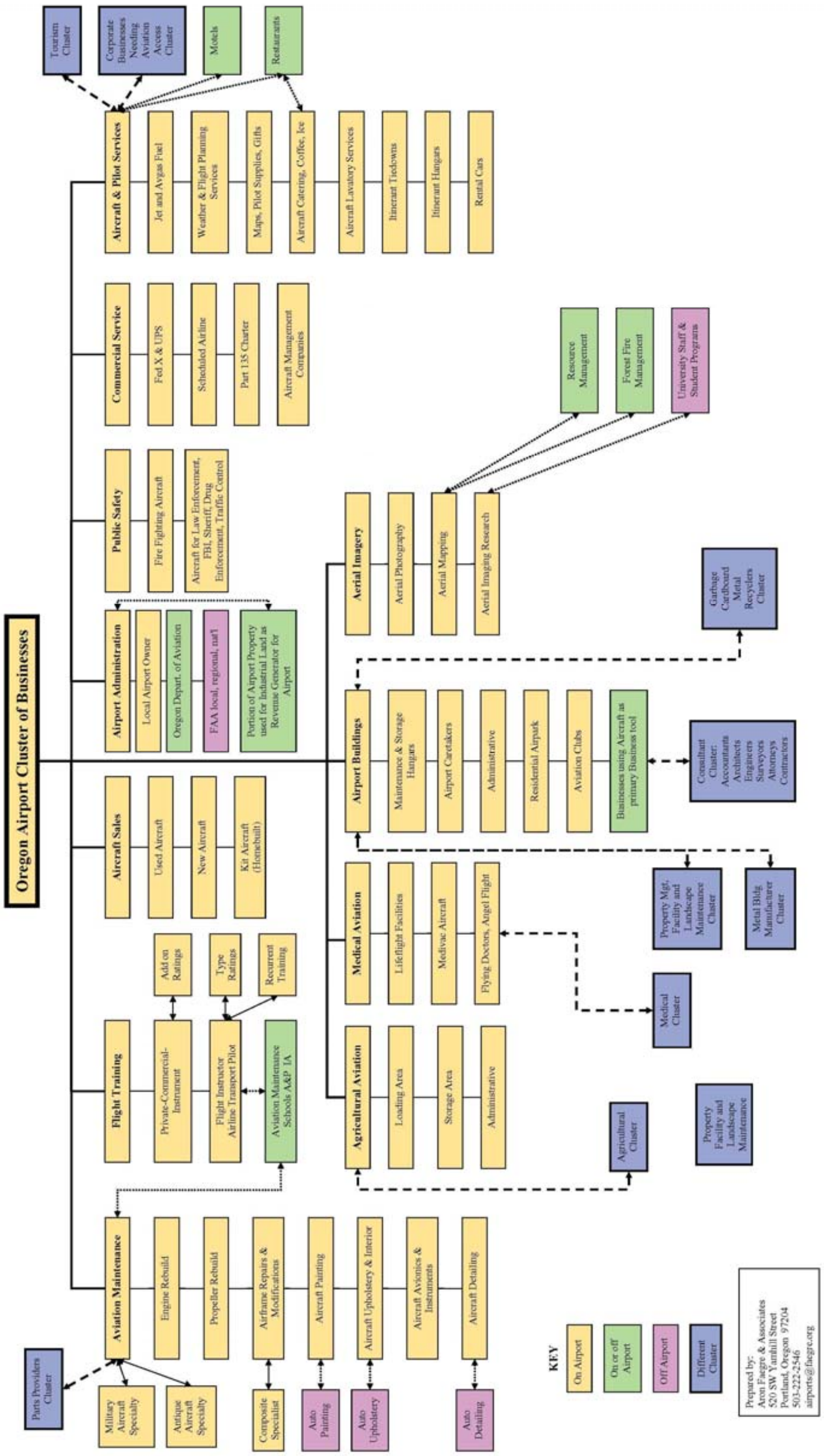
Aircraft sales
Aircraft fuel injection and fuel delivery services
Aircraft parts, sales & service
Aero electronics
Aero flight simulators
Aviation seminar facilities
Aircraft plastics
Aero associations
Aircraft supplies
Aircraft radio mfg., sales & service
Emergency Locater Transmitter (ELT) mfg., sales, repair
Air Medevac & EMT Services
Aircraft fixed based operations
Aircraft interiors, mfg., sales & service
Aero industry management & consulting services
Air photography sales & development
Aircraft fuel cells, mfg., repair, replacement
Aircraft propeller services, mfg., repair, maintenance
Aircraft fluids & filters, sales and service
Aero schools, training & colleges
Aircraft repair stations
Aerodynamic research
Aero tire mfg., sales, service
Aero float mfg., sales, repair
Aircraft kit mfg., sales & service, and research
Air systems mfg., sales, repair, installation
Air charter operations
Aircraft hangars
Aircraft tug mfg., sales & service
Pilot supplies
Aero fasteners sales & supply
Aero mapping systems

Then added to these are the major corporations that have flight departments, or sheriff's departments with flight operations, and even accountants, engineers, developers, contractors, and other highly mobile professionals that specialize in the use of aircraft in their businesses so that they can quickly serve clients throughout the state and throughout the nation. And finally, there is that segment of Oregon citizens who love this barely 100 year old transportation mode with such intensity that they live at an airport, so that a plane is available right in their garage.

Airports as Clusters of Businesses

The idea of studying successful businesses from the standpoint of "clusters" was first set out by Michael Porter in his 1998 Harvard Business Review paper "Clusters and the New Economics of Competition." One might generalize the approach as being almost an "ecological" approach, in the sense that the focus is on the interrelationships between a group of businesses as being more important than any one of the businesses. In this approach, competition is considered a good thing, as it causes the cluster to be innovative and creative in its services, competitive in its price of goods, and focused on how its services and goods can be more competitive. In today's "global" economy, having special or unique services and goods – "decomodifying" your product – is likely to be much more successful than competing head-to-head with the rest of the world to try to produce a similar but less expensive product or service. The "cluster" concept promotes the innovation needed for this kind effort. The concepts are further expanded in Porter's books: On Competition, Competitive Advantage: Creating and Sustaining Superior Performance, Competitive Strategy: Techniques for analyzing Industries and Competitors, and Competitive Advantage of Nations.

The Oregon Economic and Community Development Department (OECDD) under its new director Marty Brantley is currently using this "cluster" concept as a fundamental approach to all of Oregon's economic development efforts. They suggest that efforts at job creation will most likely be successful when an existing Oregon business cluster can be identified, and then enhanced or reinforced. They are even helping some start-ups who see the potential for creating a new cluster, where a new market may be able to be created. OECDD has even sponsored a study of the "central Oregon aviation business cluster". A brief description of this work can be found at www.bendbulletin.com/news/story.cfm?story_no=11568 .


Oregon Airport Cluster of Businesses
Aviation Maintenance
Engine Rebuild
Propeller Rebuild
Airframe Repairs & Modifications
Aircraft Painting
Aircraft Upholstery & Interior
Aircraft Avionics & Instruments
Aircraft Detailing
Parts Providers Cluster
Military Aircraft Specialty
Antique Aircraft Specialty
Composite Specialist
Auto Painting
Auto Upholstery
Auto Detailing
Flight Training
Private-Commercial-Instrument
Flight Instructor Airline Transport Pilot
Aviation Maintenance Schools A&P IA
Add on Ratings
Type Ratings
Recurrent Training
Aircraft Sales
Used Aircraft
New Aircraft
Kit Aircraft (Homebuilt)
Airport Administration
Local Airport Owner
Oregon Depart. of Aviation
FAA local, regional, nat'l
Portion of Airport Property used for Industrial Land as Revenue Generator for Airport
Public Safety
Fire Fighting Aircraft
Aircraft for Law Enforcement, FBI, Sheriff, Drug Enforcement, Traffic Control
Commercial Service
Fed X & UPS
Scheduled Airline
Part 135 Charter
Aircraft Management Companies
Aircraft & Pilot Services
Jet and Avgas Fuel
Weather & Flight Planning Services
Maps, Pilot Supplies, Gifts
Aircraft Catering, Coffee, Ice
Aircraft Lavatory Services
Itinerant Tiedowns
Itinerant Hangars
Rental Cars
Tourism Cluster
Corporate Businesses Needing Aviation Access Cluster
Motels
Restaurants
Agricultural Aviation
Loading Area
Storage Area
Administrative
Agricultural Cluster
Property Facility and Landscape Maintenance
Medical Aviation
Lifeflight Facilities
Medivac Aircraft
Flying Doctors, Angel Flight
Medical Cluster
Airport Buildings
Maintenance & Storage Hangars
Airport Caretakers
Administrative
Residential Airpark
Aviation Clubs
Businesses using Aircraft as primary Business tool
Property Mgt, Facility and Landscape Maintenance Cluster
Metal Bldg. Manufacturer Cluster
Consultant Cluster: Accountants Architects Engineers Surveyors Attorneys Contractors
Garbage Cardboard Metal Recyclers Cluster
Aerial Imagery
Aerial Photography
Aerial Mapping
Aerial Imaging Research
Resource Management
Forest Fire Management
University Staff & Student Programs
KEY
On Airport
On or off Airport
Off Airport
Different Cluster
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This new way of studying business appears to be much more realistic than older more "linear" models. It recognizes that very often businesses of many differing sizes cooperate and compete in complex ways that help to reinforce success of the whole cluster of businesses. It should be obvious that aviation clusters of businesses exist, and that Oregon's airports as a whole are also a kind of cluster of businesses in their own right, interconnected by the unique airplane transportation mode. This interrelatedness of aviation businesses, and the necessity of allowing strong competition between businesses, is just now being recognized as an important factor for the success of Oregon's airport businesses.

A Reverie on the meaning of "Air Plane"

Freedom is one of our most important and basic American values. Thus it should be no surprise that the first successful powered aviation vehicle was created in *our* country, and that this new mode of transportation has been nurtured, grown, and matured *here*. This is because aviation, at its root, is about freedom. Flying is mans ability to have freedom in the third – vertical – dimension. After 10,000 years of mankind's wandering to and fro over the horizontal plane, American inventors Orville and Wilbur Wright, created the first successful "air-plane", that allowed us to begin exploring the freedom of this vertical plane – this "air-plane."

And this airplane, using the term here to mean a machine, not a place, has revolutionized our world. For travel, no one would consider heading out on a 2000 mile hike to visit grandma. Yet people fly 2000 miles every day to go visit grandma. So it has allowed us to connect with people – more people – on shorter notice and with more regularity.

Thinking back to the origins of our country, when Benjamin Franklin and John Adams and Thomas Jefferson were in France trying to drum up support and cash to fund an American revolution against England, they would be making solicitations, but were never sure whether a war had already been won or lost. It would often take a year or more to even find out whether they were negotiating the right treaty. With cell phones and the internet, the speed of the airplane has become the norm for all of our communications, personal and business.

In spite of the slow communication of the old days, the Revolutionary War was won – John Adams did get the Dutch to loan America more money and the ragtag American army won freedom from the Monarchy that was England. The origins of our nation rest on this kind of creative, entrepreneurial spirit.

A Reverie on the future of "Air Ports"

Two hundred twenty seven years after the Revolution, one hundred years after the invention of the airplane, we have a country with 5,300 public use airports and 14,000 private use airports sprinkled from sea to sea, and 240,000 airplanes available to travel this 3-D freedom between airports. And we have a system of government – first the CAA, then the FAA – that has worked hard to promote and develop this great aviation system.

But now – under that paradigm – the number of airports and aircraft has for the moment reached its peak. The number of airports, in fact, has been declining slightly year to year. Our aviation system appears to have reached a phase of initial maturity. It is an open and friendly system. Pretty much anyone over the age of 17, who is reasonably healthy, can train and become a pilot.

A small two place aircraft can be rented at most airports for about the hourly rate that a union carpenter, plumber, or electrician gets paid. The number of airports is sufficient, and their spacing such, that even a small two place aircraft can wend its way to anywhere in the country, and can count on finding plenty of places with fuel and services. Our American aviation system is accessible, functional, and usable by all of the public. In this sense, it is quite a success.

Do we rest on our laurels and congratulate ourselves on a "job well done?" Or do we ask "Who are the people who are attracted to the air-plane?" and "How can we grow this great invention to an even higher level of accomplishment?" In this essay, we argue for the latter.

Who are these people of the air-plane? They tend to be people who are attracted to this dream of flying – this freedom in the third dimension. They tend to be people who think creatively – inventors who are searching for new ways to accomplish things. They tend to be people who are strong individuals with leadership skills. When piloting, one must have a good plan of action filled with contingencies. When things get tough it is not possible to just pull over to the side of the road and stop. The pilot must creatively imagine ahead the multiple varieties of pathways that a 3-D flight might entail, including ones in unexpected winds, around flocks of birds, under thunderheads, or even curves to avoid hail.

This brings up the fact that there are people who do not like this air-plane idea. There are some who are so opposed, by nature, that they are terrified to even sit in a monstrous Boeing 747 or an Airbus. My mother-in-law is one of these. To her it seems unnatural that anything man-made should be up in the air. And human nature being what it is, she doesn't trust that the captain and crew are necessarily sober and sane. Given the September 11th use of aircraft as a kind of terrorist bomb, this mistrust of aviation certainly can be understood. For those of us in the other camp, September 11th represented, rather, an almost unbelievable nightmare. How could this wonderful freedom be so cruelly misused?

Many non-air-plane people are less extreme in their concerns, like my wife. She just thinks that these air-planes are noisy, smelly machines that at best should be put up with on occasion. But they are not things to be celebrated. If man had been meant to fly, he would have wings. But she would admit, begrudgingly, that airplanes sure are handy, when you want to go to Ireland for two weeks of hiking in the countryside.

Airports as Creative Free Enterprise Centers: A new model for governance?

We have considered that airplanes and airports are new to human life. They allow a new freedom that some of us have longed for, and they have sped up our lives, and made our world smaller. But more importantly, they are attractors for the kind of people who love freedom, who think creatively, and are to some extent natural leaders. And it is in this regard that as a society and culture, we might do well to look at airports with a new eye.

Air-ports are the places where people who love the air-plane go to hang out. Of course "port" means door, so the air-port is the doorway to the vertical dimension – the air – and as such, a doorway to an exciting sense of freedom. Airports are places that can serve as much more than just a place to put an airplane. They should be looked at as places where creativity can be nurtured. They should be looked at as places where leadership skills can be learned and tested. They can be places where the old fashioned American "Yankee Spirit" can exist and thrive.

The traditional FAA model of governing airports has been to have them 100% owned by the government, and all activities controlled, to ensure that when a plane needs to take off there is fuel available. When repair work is needed, a mechanic is available. Originally, the governments owned the fuel tanks and the staffed the service station, to ensure that the system worked. Bit by bit, through the years, we now more often than not have service stations (fixed base operators – FBO's) that are privately owned. In Oregon we've progressed to allowing private enterprise card-lock self-serve fueling by the pilots themselves.

In fact, private enterprise is now in control of these basics of aviation. The days of government controlled and/or funded scheduled airlines are gone. The private sector has taken over. At international airports today, no significant facility decision is made without the written approval of the major airlines serving that airport – i.e. the private sector. And in true American fashion, competition has worked wonders. If you plan ahead a little, you can visit grandma 2000 miles away for half the cost of driving there, and get there ten times as fast. The same is true for smaller aircraft and smaller airports. There is no longer a reason to protect or subsidize FBO's, training schools, or repair stations. The number of airports and available services is great and well established. There is no longer the slightest concern that a pilot could travel cross country and be hindered by lack of services. The private sector is in control. Private enterprise is working.

So what model of government is needed for airports today? Obviously, the runways and taxiways, the lights and navigation systems are used by all pilots, and thus are needed to be in public ownership and control. We are a nation that believes in the "rule of law." Control towers are good. They create order and safety. Standard airport traffic patterns and procedures are good. They create order and safety. But the supply of services, of hangars, and facilities – this can be left to private enterprise. The competitive spirit of business and private enterprise will invent the best ways that these can be accomplished.

Airport Private-Public Partnerships

There are many added benefits of allowing private enterprise to become the standard provider of airport facilities and services. First, the private ownership of surrounding land and buildings, by businesses or persons, is a basic element of our normal American system. The traditional model for development is that banks finance facilities only when the land is also owned, and the bank is in first place should a default occur. And this is because the bank wants to be able to immediately find a new owner who can use the facility, and get it up and running again. Otherwise the bank is losing money. When a governmental agency owns the land, and a facility goes into default, there is no built-in need to get the facility up and running again, beyond a kind of communal goodness. Another piece of this puzzle is that when a person or company owns the

land and facilities outright, they have a vested interest in making sure it keeps working. A person who owns a house and a garage either: lives in it, and puts a car in the garage, or rents it out to someone who lives in it and has a car to put in the garage. Private ownership of facilities on an airport functions with the same mentality, because it is in the self-interest of a private owner to do it that way.

Surprisingly, it is in the public interest to do it this way as well! When private development occurs, it is taxed in order to fund the basic police, fire, and other essential services that are needed by all. When government development occurs, those same police, fire, and other essential services must be provided, but without the benefit of added tax revenues. Thus, the other private development – homeowners and businesses – must shoulder the burden of the governmental development. This is fine, as long as it is essential development that the private sector cannot provide. But where it is development that the private sector can provide, it would be fairer to use the standard model.

There is an even stronger reason to go to a more deliberate private-public partnership at airports than the common sense "developer-minded" ones, or the advantages to the public in increased taxes. Airports have reached their limit in growth as basic "hangar" sites. The number of aircraft has more or less leveled off. The number of airports is starting to decline. So it is time for a revolution in use, at airports.

Airports have always been centers of creative activity. It is now time to free them up to function in this way to a much higher extent. Airports must be freed up to become centers of creative enterprise. Where an airport has available surrounding lands that are compatible with airplanes, they can be used as an expansion area to allow for the basic airport to become a center for creative enterprise, including expanded employment and job creation.

Aviation as a Green Business Cluster

Aviation is still a new field. Though often considered as environmentally unfriendly due to the noise, aircraft are essential in our current efforts at environmental protection and enhancement. The use of aircraft as platforms for high-tech sensors to map and understand our earth is opening up whole new fields of business and research to promote the protection of our environment. Aircraft allow us to finally "see" the whole of our land. New business and research is also opening up on the designing of new kinds of aircraft, new ways of manufacturing parts, new materials for construction, new kinds of propulsion systems, quieting technology, special security systems, weather and climate analysis equipment, advanced integrated electronic flight systems … the list of new areas of work in the air-plane (place not machine) is staggering. And it will only grow with time.

Airports were historically sited outside of cities, or at their edge. This allowed plenty of open space for the approaches and departures of aircraft, during which they are low to the ground. Having airports outside of a city also promotes noise compatibility and safety, as it can keep the low flying aircraft more generally away from people. Adjacent areas typically considered compatible include farm or forest lands, industrial lands (since people don't sleep there), and open water bodies. Yet, when we look at the kinds of businesses, jobs, and research that airports

can foster, we see that the airport itself should be considered a kind of miniature city in its own right.
In Oregon we try to keep cities and rural areas distinctly separated, in order to protect our natural resource areas. We have laws that require that urban uses stay in cities, and only be allowed in rural areas by special permission. To allow airports to develop as we are considering, our land use laws must be changed to automatically consider airports as special exceptions to this overall goal. Airports should be given an "employment" type zone that outright allows it to have this wide variety of commercial and industrial uses. And as there are a certain class of people who use their aircraft the same way that others use their cars, airport residential areas (for which a house has a hangar attached) should also be allowed outright.

Oregon Airports: A New Model

Airports should be thought of as a kind of "mixed use" zone, which are similar to those of an urban area, except that there is one governing proviso: any use must be "airport related" or "airport dependent." This concept would be formed similarly to how "water related" or "water dependent" rules were created to allow development along rivers and lakes, while preventing development which is not related or dependent. Oregon has the beginning of a rule like this called the "airport protection act," but to function as we are proposing, it must be enacted into law (there is no time limit for making it apply at any particular airport), and it must be amended to include an exception to State Goals 14 and 11 (urban uses and services), so that it becomes usable as a practical matter when the airport is located outside of the city limits.

Most airports are still being governed under an old model that views them as places that must be highly regulated and controlled, not just for safety, but for ensuring the providing of services. This kind of governance is obsolete. It misses out on the power and strength of the private sector, and the essential need for freedom inherent in creative enterprises. It often results in a reverse resultant – a dampening of the providing of public facilities or services, since governments are generally fiscally weak. Across the nation, for many years, there has been a tax revolt of sorts, and most airports under governmental ownership just don't have any funds to build facilities. They barely have adequate funds to manage the airport, and the manager is often overworked to the point that they barely have time to even help the private sector initiate projects.

Under this new model, aviation development will create new facilities and jobs, and these will in turn create additional property, income, and sales taxes. It will allow airports to be more capable of becoming self sufficient, as it will diversify the kinds of income resulting from the airport. A totally government controlled operation has no easy way to become self sufficient in this way.

Aviation is a field that by its fundamental nature needs freedom, to be able to continue to grow. Airports are already becoming desired places for setting up new creative business enterprises, in spite of the difficulties of the old model of governance. When we look at the airports that are showing the strongest growth and development, it is those that have found ways to develop strong private-public partnerships. Let's not look at this as an anomaly, but rather as the new economic model for the future.