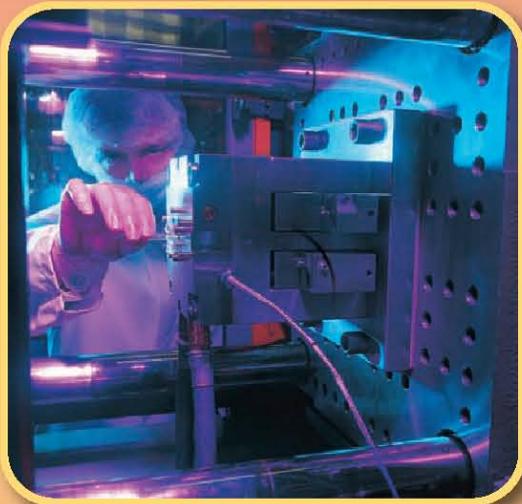


building blocks



DRAFT: July 12, 2007



opportunities



connecting to place



SURPRISE ECONOMIC POSITIONING FRAMEWORK

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INTRODUCTION

The City of Surprise Economic Positioning Framework identifies the economic opportunities that appear to have the greatest potential for growth in Surprise over the long term based on the established economic foundations of the Phoenix region and the unique, place-based assets found in the region and in Surprise in particular. The Framework then capitalizes further on these assets by suggesting the locations within Surprise where these opportunities have a high probability for success. The Framework also includes an implementation strategy with priority actions for advancing these initiatives.

The City of Surprise Economic Positioning Framework identifies the economic opportunities that have the greatest potential for growth in Surprise based on the established economic foundations of the region and the unique, place-based assets found in the region and Surprise.

The driving factors in this Framework and the economic opportunities identified herein are the unique geographic location of the Phoenix region, and the location of Surprise within the region, along with the place-based assets of the region and the City that provide Surprise with a significant edge for growing new businesses associated with emerging “new economies”. The emphasis is on economic opportunities that have potential to be started and “grown” locally, as opposed to more traditional economic development approaches based on “attracting” new businesses. However, both approaches are valid and, together, should form a comprehensive economic development plan for the City. Accordingly, this Regional Economic Positioning Framework is but one part of a larger economic growth strategy and in no way should its recommendations be construed to be at the exclusion of enhancing the existing economic base that currently defines the community, or pursuing existing businesses to expand or locate in Surprise.

building blocks

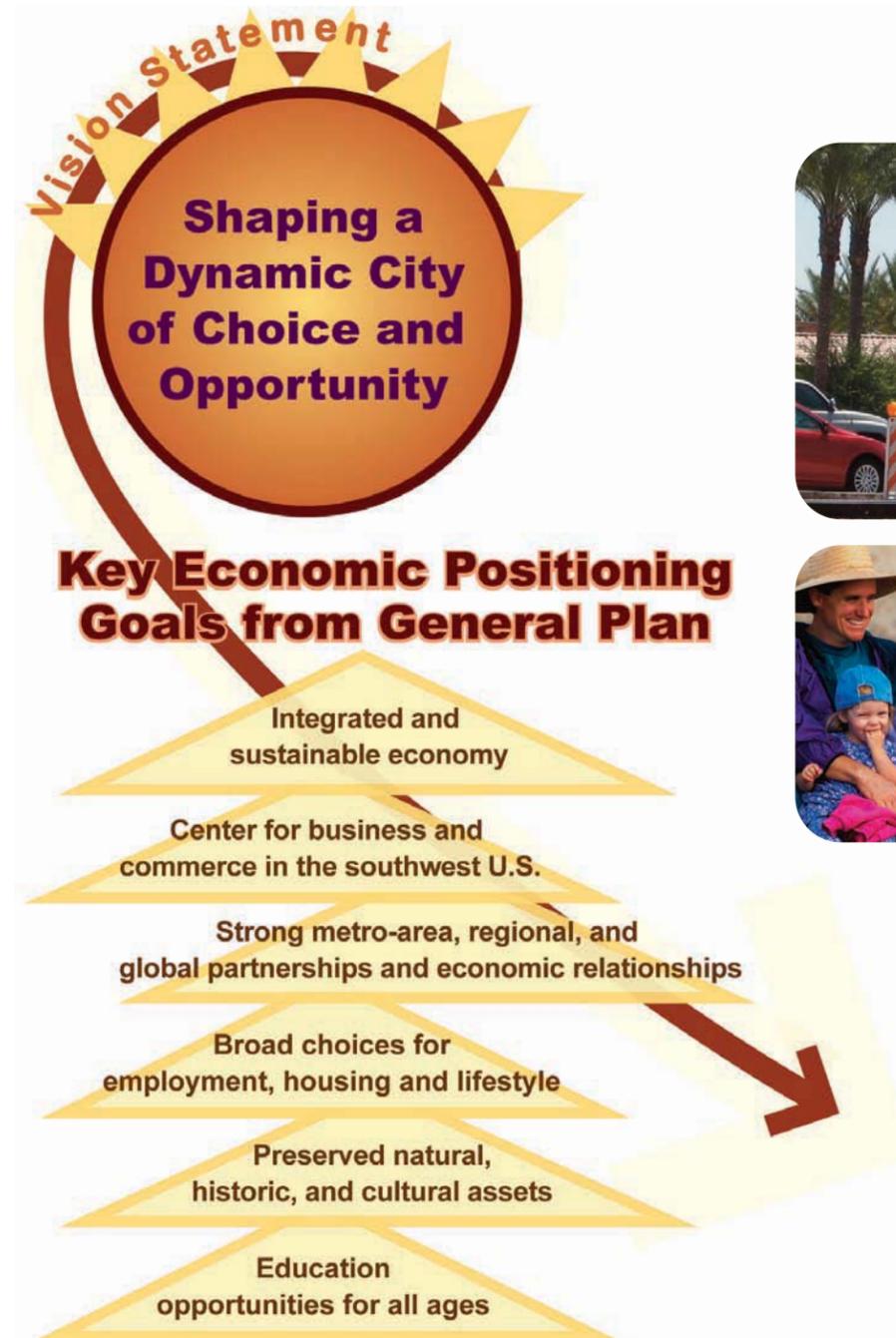
VISION AND GOALS

The Surprise General Plan, currently under revision, provides a comprehensive evaluation of growth and development in the community and establishes goals, objectives and policies needed to ensure a high quality of life in the community as described in the Plan's vision statement:

“Surprise defines vibrant Southwest living; a place of educational excellence where community, family, and traditions are built. Surprise is a collection of distinctive neighborhoods with a small town feel and big city amenities.”

Surprise's growth has been nothing short of phenomenal in the last 10 years and it is directly linked to overall growth of the Phoenix metropolitan region. With an estimated population of 4 million in 2006, the Phoenix region is the 13th largest metro-area in the United States, and Surprise, with a population of 100,000 is the 11th largest city in Arizona.¹ While growth in the region and City have begun to moderate in the last two years, both are expected to continue at rates that surpass nearly all other communities in the country. Accordingly, the importance of planning and direct action by the region and community now cannot be overestimated. By 2030, the region is projected to have a population of 6.3 million, making it larger than the 2006 population of all U.S. metro areas other than New York, Los Angeles, and Chicago.² By 2030, Surprise is expected to reach 400,000, making it the 4th largest city in Arizona.³

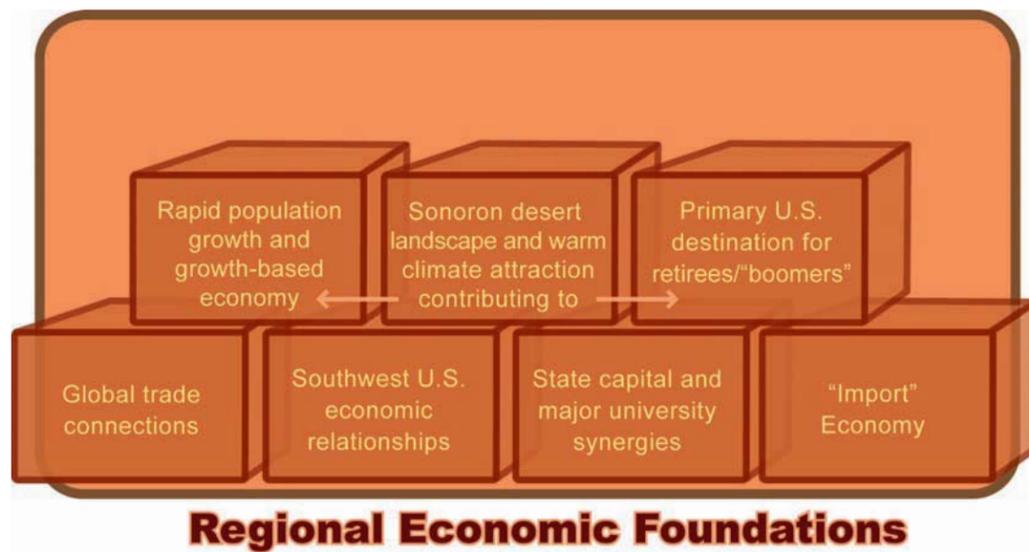
With the City truly in its infancy, residents and their City Council must stick with their bold vision and implement a well-crafted strategy to build Arizona's next great city as full functioning part of America's next great metropolitan region. Accordingly, this Framework starts with the vision statement and set of goals that flow directly from the General Plan and an increased awareness and understanding of interconnected relationship between Surprise and the region.



building blocks

REGIONAL ECONOMIC FOUNDATIONS

The Phoenix Valley's location in the Southwest has become the cornerstone of seven Foundations that shape the region's economic base. These Foundations play a fundamental role in distinguishing the Phoenix area from other regions. These place-based Foundations then set the stage for the growth of existing and future core economic sectors and clusters within the Valley.



Southwest Regional Economic Relationships

The Phoenix region sits in the heart of the great American Southwest. Flanked by the Sonoran Desert and the Hieroglyphic and Vulture Mountains, the Phoenix valley contains all of the attributes of the Southwest that have drawn tourists, retirees and families for nearly a century—Saguaro cacti, dry washes, dramatic mountain backdrops, rolling foothills, and nearly endless sunshine.

The Phoenix Valley's economy is built on this foundation of quality of life and economic assets coupled with strong economic relationships throughout the Southwest. The Valley enjoys close proximity and outstanding transportation connections to the major southern California seaports, Mexican/South American ports of entry, and centers of economic activity in New Mexico, Texas, Nevada, Utah and Colorado. The Phoenix Valley's strategic location has contributed to its emergence as the 13th largest metropolitan area in the country in terms of population and 13th largest in terms of economic activity (gross metropolitan product) and will continue to be a key factor in the region's, and Surprise's, economic future.⁴

Key connections between the Phoenix metro-area and the Southwest U.S. include:

- Proximity to major centers of culture, capital, and trade including Los Angeles – the ninth largest global megacity, second only in the U.S. to New York and the gateway to trade with Asia
- Proximity to the Pacific coast and its unique economic, natural, and cultural assets
- Major natural features that impact development form and economic foundations, including the Great Drainage Basin, Colorado River, Continental Divide, Mojave and Sonoran Deserts, and Pacific Ocean
- Access to trade connections with South America, Central America, and Mexico
- International airports, connecting the region to the globe
- Transcontinental shipping and passenger rail
- Highway passenger and shipping connections, including the CANAMEX corridor



building

KEY PLACE-BASED ASSETS

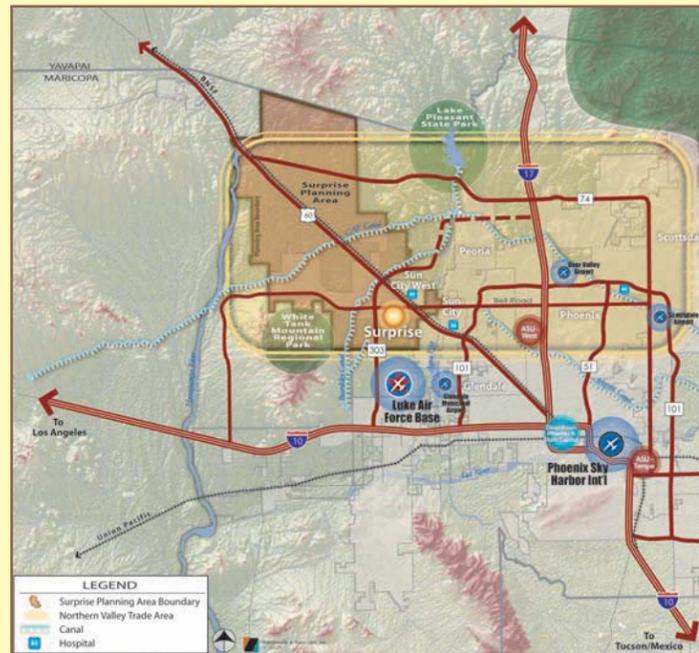
Place-Based Assets are the significant, mostly man-made resources that are essential to supporting both the existing and future economic activities of the region. The Phoenix Metro-area Assets are regional in nature (such as Sky Harbor Airport) in that their economic impact extends throughout the Phoenix metro area – well beyond their specific location. The Surprise Assets, on the other hand, are the fixtures unique to the community that have and will continue to catalyze additional development and economic activity. The Shared Assets, then, are those available within the region as well as Surprise itself.

Key Place-Based Assets



Emerging North Valley Sub-Region

The Phoenix region historically has been thought of in terms of East Valley and West Valley. The rapid growth of Surprise, growth of Peoria, Glendale, North Phoenix, and the growth of Scottsdale into a full-service community with a nationally-recognized identity and economy that is separate and apart from the City of Phoenix, a North Valley sub-region is emerging.



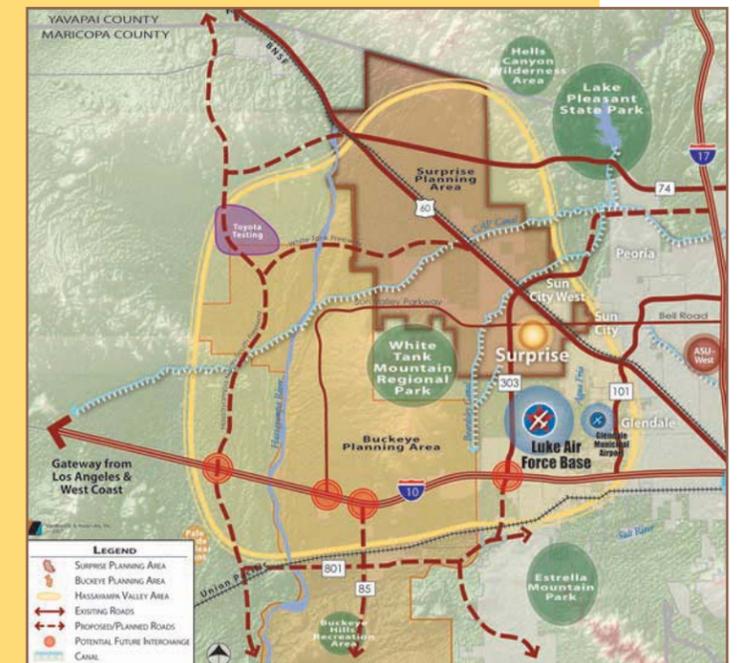
Assets and connections that form the foundation of this emerging sub-region include:

- High concentration of retirees and retirement communities
- Extensive and expanding health care facilities
- Increasing presence of families and educated and skilled workers
- Growing presence of retiring Boomers
- Access to business expertise and available investment capital
- Expanding transportation infrastructure including Highways 303 and 74)
- Increased educational and training offerings at ASU-West campus
- Access to general aviation
- Natural border of outstanding recreational assets including the White Tanks Mountain Regional Park, Tonto National Forest, Lake Pleasant State Park, and Hells Canyon Wilderness Area
- Significant land expansion area and State Trust lands

Hassayampa Valley Relationships

Along with the emergence of a North Valley sub-region, Surprise is an anchor of the West Valley (Hassayampa Valley) sub-regional economic, social and transportation network. Surprise’s neighbor to the west, the Town of Buckeye, has an even larger planning area and larger projected buildout population than Surprise. Ultimately, the two communities will surround the White Tanks Mountain Regional Park with close to 4 million people, resulting in a southwest-style “Central Park” for the Hassayampa Valley. Growth in the greater Phoenix area has steadily shifted to the west, which will continue by the presence of several key assets in the area, including:

- Extensive holdings by the State Land Trust and other large, developable parcels
- Expansive areas of flat land as well as foothills available for development
- A rapidly-expanding range of affordable housing choices
- Continued attraction of families with young children as well as retirees
- Hassayampa Valley serving as the gateway to the Phoenix region from Los Angeles and the west coast via Interstate 10
- Planned intra-regional transportation connections including Highways 85 and 801 to the south and the Hassayampa North-South Freeway and White Tanks Freeway to the north
- Future passenger service on the north by the BNSF and on the south by Union Pacific
- Luke Air Force Base and its associated employment
- The Palo Verde Nuclear Power Plant
- Direct access to outstanding natural recreation areas including the White Tanks Mountain Regional Park, Lake Pleasant State Park, Hell’s Canyon Wilderness Area, Estrella Mountain Park, and Buckeye Hills Recreation Area

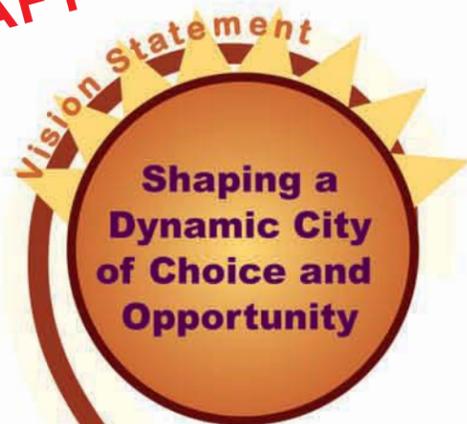


building blocks

ECONOMIC POSITIONING FRAMEWORK

The Surprise Economic Positioning Framework graphic unites the City's Vision and Goals with an understanding of the Economic Foundations, Key Place-Based Assets, and emerging global, national and regional economic trends centered on technology and innovation. Aligned together, these elements of the Framework yield the Place-Based Economic Opportunities that hold the greatest potential for growth in the City Surprise.

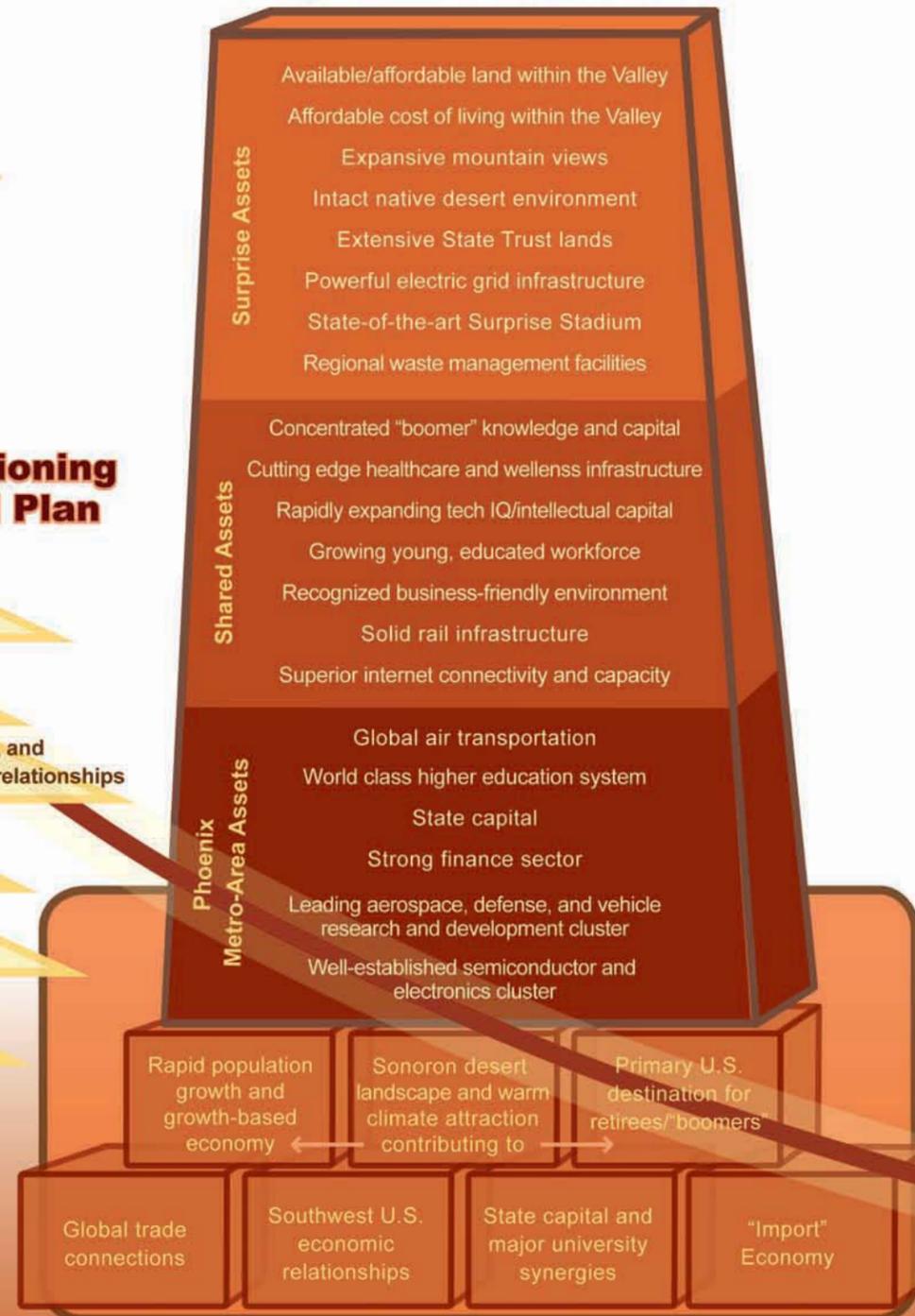
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Key Economic Positioning Goals from General Plan



Key Place-Based Assets



Place-based Economic Opportunities

-1- Grow Emerging Economic Clusters

- Renewable energy and energy conservation technology
- Medical/biomedical research and development
- Sustainable city development and high performance building technology
- Water conservation research and development
- Waste stream utilization technology
- Vehicle/aircraft engine technology research and testing
- Eco- and experienced-based tourism

-2- Build Innovation Capacity

- Boost academic and corporate research
- Become a centerpoint of "open innovation" and technology transfer
- Capitalize on knowledge and resources of the "Boomers"
- Facilitate new business development
- Secure capital and finance

-3- Enhance Economic Climate and Quality of Life

- Getting it right the first time: Proactively plan for and manage development of a dynamic, vibrant city in a unique desert environment
- Strengthen regional connections: Promote passenger rail, plan Grand Avenue, complete key regional highway connections, install communications infrastructure
- Provide choices: Jobs, lifestyle, housing, recreation, health and wellness
- Celebrate the desert environment through education and experiences
- Develop "Smart City" infrastructure - internet connectivity and reliable and clean power
- Foster life-long learning and higher education opportunities

opportunities

PLACE-BASED ECONOMIC OPPORTUNITIES

SUSTAINABLE CITY DEVELOPMENT AND HIGH PERFORMANCE BUILDING TECHNOLOGY



The three Place-Based Economic Opportunities shown in the Framework graphic on the opposite page have the greatest potential to capitalize on the unique geographic location and assets of the region and Surprise to create a diverse and sustainable economic base for the City. These Opportunities are, by nature, sweeping and comprehensive in scope. However, they also are mutually supportive making them eminently achievable as activities and actions focused on one opportunity will automatically result in positive gains for the others.

It is critical to note that these are not the only economic opportunities available to Surprise, nor are they intended to be pursued at the exclusion of others that are more directly tied to the core of the City's existing growth-based economy (such as real estate development, construction, and retail sales). Instead, these opportunities are those that hold significant promise to be catalytic in growing new businesses in Surprise by taking the greatest advantage of the region's and Surprise's unique geography and available assets. Accordingly, these opportunities should be pursued in addition to, and not in lieu of, strategies focused on the expansion and attraction of existing businesses.

-1- Grow Emerging Economic Clusters

Emerging economic clusters are those “new economies” that are just beginning to address the growing needs of a post-industrial society and economy. The rapidly changing nature of the technologies involved and the highly innovative nature of the associated businesses make it somewhat difficult to predict how these clusters will ultimately mature into stable and recognizable industries and economies. However, the needs these clusters address are very real and rapidly growing indicating that both the public and private sectors will direct more and more resources to them to meet unmet economic and societal demands. Accordingly, each of the seven clusters will need further study and evaluation, but the City's unique regional and local assets suggest that Surprise is well-positioned to capitalize on the growth opportunities that each cluster presents.

The Phoenix metro-area's economy is driven by a few key sectors, not the least of which is construction. As one of the fastest growing areas in the nation in the last decade, and the fastest growing county from 2005 – 2006, development is always at the forefront of dialogue within the area as it drives employment, housing, politics, government revenues, wealth, and the shape and character of communities.

Consequently, Surprise has an opportunity to shape the future of its economy by supporting a sustainable development cluster. This cluster will be focused on creating building and development technologies and techniques that help make buildings and their occupants less susceptible to major challenges facing the Valley, and the world., including increasing energy prices, competition for water, threatened air quality, and other economic and environmental constraints.

Because Surprise has just begun to grow substantially in the last decade, and has one of the most expansive future planning areas in the Valley, Surprise should be a model for the Valley, the U.S., and the globe, for building a new sustainable City. Consequently, by concentrating businesses focused on designing tomorrow's future cities and implementing these techniques within the community, Surprise will become a demonstration City and an innovative source of development solutions.

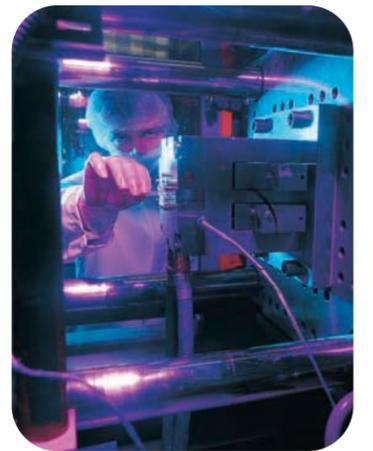
Surprise has already taken major strides toward accomplishing this goal by partnering with ASU on a collaboration referred to as “Sustainable Surprise: Toolkit for Desert Cities Project.” The goal of this partnership is to facilitate the transfer of knowledge and innovation relating to sustainability between ASU and Surprise, focused on urban growth,

education, environment and public health. In turn, the innovations developed as part of this project can be used to inform the sustainable growth of desert cities throughout the country and the world. Surprise was identified as an ideal partner community for this project, as Surprise and ASU are “two of the fastest growing bodies in their respective areas, represent[ing] the ideal collaborative laboratories in which to try to balance the socio-economic, technological, and environmental aspects of urbanization.”⁵ Collaborations with ASU will include both new ASU facilities in Surprise as well as partnerships with several programs within ASU including the Global Institute of Sustainability, the School of Sustainability, the Decision Theatre, the College of Design, the ASU West Campus, and several other programs.

MEDICAL/BIOLOGICAL RESEARCH AND DEVELOPMENT

Surprise has several assets that work together to build a foundation for a medical/biomedical cluster, including:

- Two existing Sun Health hospitals serving Surprise, the Sun Health Research Institute (known for a world-renowned tissue bank and leadership in age-related disorder research including Parkinson's and Alzheimer's diseases and arthritis), and plans by Sun Health to expand in Surprise with additional medical research facilities and health care services including a major expansion in pediatrics services through a partnership with Phoenix Children's Hospital
- A concentrated population in and near Surprise of aging adults with expanding health care needs
- Quality of life amenities attractive to doctors and researchers
- A growing metro-area medical/biomedical cluster with assets including a new University of Arizona Medical school campus as part of the Arizona Biomedical Collaborative, ASU's Arizona Biodesign Institute and Center for Health Care Informatics Research, the Translational Genomics Research Institute, and Mayo Clinic, and several other medical research and provision institutions.



opportunities

A successful medical/biomedical cluster relies on strong partnerships – bringing together cutting edge academic and corporate research, clinical practice and trials, and health care centers of excellence. Biomedical technology - the application of engineering and technology principles to biological systems with a focus on human health and disease applications - involves a vast range of fields such as healthcare innovation, medical devices, bioinformatics, biochemistry, molecular biology; biomedical engineering, and pharmaceuticals. National and global-scale public health concerns will drive advancements in this sector, and regions working to address these concerns will have a competitive advantage.

With the strength of Sun Health's research on age-related disorders and the concentration of aging adults in the Phoenix Valley and around Surprise, the growth of this cluster in Surprise should continue to concentrate on developing medical solutions for people 55 and older. By developing medical technologies and specialized health care centers of excellence targeted to aging adults, Surprise will be positioned to develop health care solutions greatly needed at the national scale and will provide needed services attractive to this rapidly growing demographic.

Additionally, with the growth of young families in Surprise and the recently announced expansion of pediatric services in Surprise through Sun Health's new partnership with the Phoenix Children's Hospital, there is also an opportunity to develop new pediatric research and technologies.

RENEWABLE ENERGY AND ENERGY CONSERVATION TECHNOLOGY



The ever increasing need to reduce our dependence on non-renewable energy supplies has brought the need for renewable energy to the forefront of national and global discussion. In addition to the energy challenges faced by the entire country, the Phoenix area faces its own unique challenges that renewable energy and energy conservation will help address,

including: susceptibility to blackouts; the urban heat island effect (causing temperature increases of up to 11 degrees F); threatened air quality (visible in Phoenix's "brown cloud"); and expanding energy needs to meet the most rapid population growth in the country.

Surprise is well positioned to build an energy technology and production cluster. Unlike built-out portions of the metro-area, Surprise offers

swaths of contiguous land area where energy research and production could be located proximate to major electric transmission lines. In Surprise, energy research and development should be focused on:

- Solar
- Distributed energy
- Energy conservation
- Cogeneration
- Waste-to-energy conversion

As part of the City's Sustainability initiative with ASU, the development of this cluster should include a partnership with ASU's National Center of Excellence: The Next Generation Of Sustainable Materials And Renewable Technologies (SMART) Solutions For Energy And Climate.

WATER USE RESEARCH AND DEVELOPMENT



A branch of Surprise's sustainable development cluster should focus on water research and development. Building from the City's existing initiatives to integrate reclaimed water into the City's water supply infrastructure, Surprise should foster new businesses developing sustainable water use technology.

Water resource access and management has always been an important issue for the Southwest U.S., but wise use of water resources has been elevated recently as the region has been experiencing a drought since 2000.

Water conservation technology development makes sense in Surprise not only as part of a sustainable development technology cluster, but also because of Surprise's access to a variety of natural and man-made water sources which could be used for research and testing purposes, including the CAP and Beardsley canals, the Agua Fria and Hassayampa Rivers, an extensive underground aquifer, and municipal reclaimed water infrastructure.

ECO- AND EXPERIENCE-BASED TOURISM

By developing a community and an economy that are driven by principles of sustainability, Surprise will be able to take best advantage of its natural assets—not only to contribute to the quality of life in Surprise, but also to generate tourism activity in the community. As an "edge" city, Surprise currently offers expansive views and recreational access to the Hieroglyphic and Vulture Mountains to the north and the White Tank Mountains to the southwest. The landscape of Surprise's planning area is dotted by Saguaro cacti and other native desert vegetation—a showcase of the Sonoran desert landscape, the second most diverse ecosystem on earth and the most diverse in America.



opportunities

Surprise can complement its work to preserve distinct mountain views and environmentally sensitive landscapes by promoting Surprise as a destination for ecotourism—defined by the International Ecotourism Society as “responsible travel to natural areas that conserves the environment and improves the well-being of local people.” This tourism cluster could expand to include a desert education center and high-quality residential and lodging development including equestrian, spa, wellness, and golf resorts. A clear focal point for strengthening eco-tourism in Surprise is the White Tank Mountain Regional Park, with an opportunity to cluster resort and lodging developments near a future north park entry. The White Tanks should be well connected with key activity centers in Surprise through multiple transportation modes as well as with other natural assets including the Hassayampa River and Lake Pleasant.

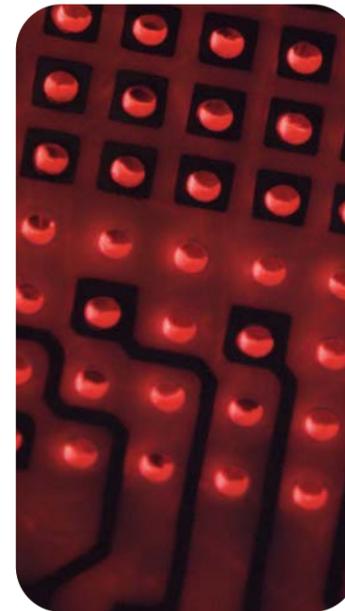
Surprise Center is already a major visitor and tourist destination with its Surprise Stadium and spring training facilities, Heard Museum West, state-of-the-art library, aquatics facility, and the outstanding amenities provided in its public parks and open spaces. In addition, city and county governmental offices are under construction, and a major Innovation and Research Park is being explored that would include world-class medical/bio-medical research as well as “destination” health and wellness centers. Coupled with a Sustainability Demonstration Pavilion that will showcase the research in the other emerging economic clusters, Surprise Center is poised to quickly become one of the most unique tourism destinations in the region.



WASTE STREAM UTILIZATION TECHNOLOGY

Another branch of a sustainable development cluster should focus on technology for maximizing the use of waste streams for energy production and product development. With the rapid growth of the Valley comes a rapidly expanding need for waste disposal. Conventional waste management directs waste to landfills associated with land consumption, transportation costs, and land use conflicts.

As space becomes more scarce and materials and goods more costly — particularly for an area such as Phoenix that is so reliant on imports and subject to associated transportation costs — “waste” is being re-envisioned as a resource — an input. Capitalizing on the presence of the Northwest Valley Regional Landfill and multiple wastewater treatment plants as potential demonstration sites for testing new technologies, and with a focus on sustainable development, Surprise is positioned for an emerging waste stream utilization technologies cluster, identifying solutions for “closing the loop” in a product’s life-cycle both through recycling as well as development of new products from waste materials. These technologies would find great applicability in the Valley for a few waste streams in particular, including from the construction, auto testing, and electronics industries. Solutions for electronic waste (“e-waste”) has recently been attracting national attention as e-waste has become “one of the fastest-growing segments of municipal garbage, piling up three times faster than other refuse.”⁶ Accordingly, new state and federal regulations are emerging to promote e-waste recycling.



VEHICLE/AIRCRAFT ENGINE TECHNOLOGY RESEARCH AND TESTING

This emerging economic cluster includes a focus on energy innovation and specifically on engine technologies to improve vehicle/aircraft fuel efficiency. There is an opportunity to grow this cluster in Surprise by building off of an existing vehicle/aircraft economic base both in the region and in Surprise specifically through vehicle proving grounds (including Volvo) and the nearby Luke Air Force Base (LAFB). This cluster is experiencing a shift in focus to new technologies centered on fuel efficiency which, and therefore the growth of this cluster in Surprise would further the City’s work to be a centerpoint of sustainable innovation.

The significant expense in developing hybrid, “plug-in”, hydrogen, and other alternative engine technologies has resulted in the creation of unprecedented research collaborations between otherwise competing manufacturers and an increased use of third party vendors for research assistance. Because Surprise and the immediate surrounding area already have a significant presence of global aircraft and automotive manufacturers, Surprise is ideally suited to house facilities for these collaboratives and specialized third party vendors and suppliers. Additionally, the growth of this cluster is furthered through new regulations on the state and federal levels to reduce greenhouse gas emissions from passenger vehicles.



Build Innovation Capacity

Innovation is crucial to all of the identified emerging economic clusters and thus, building innovation capacity is essential for Surprise's economic future. Because Surprise already boasts several of the key ingredients driving innovation (access within the region to a highly educated workforce and venture capital), it is well-positioned to build a solid innovation capacity capable of supporting a wide variety of emerging economic clusters. The following are five key strategies for building this innovation capacity.



BECOME A CENTERPOINT OF "OPEN INNOVATION" AND TECHNOLOGY TRANSFER

While Surprise does not have a foundation of major corporations within the community to help spin out new technologies and businesses, Surprise does have an opportunity to foster "open innovation" from which to build new businesses. Open

innovation refers to a search for innovation not only from within a corporation, but also from outside, to help drive new technological advancements.⁷ With its attractive housing and quality of life amenities, Surprise should focus on the "outside" half of open innovation – fostering an environment in which researchers,

engineers, and other innovators can develop research in the same City that they live, with the end goal of spinning out successful ideas into start-up businesses or licensing technology to existing corporations. This model should focus specifically (but not exclusively) on retiring baby boomers throughout the North Valley looking for an opportunity to apply the knowledge and expertise developed throughout a career into a new venture. This model is well suited for the Phoenix area due to its large population originally from outside Arizona who bring their experiences and unique knowledge with them.

Success with this strategy will rely both on a developed infrastructure for fostering innovation within Surprise as well as connectivity with other institutions, businesses, and communities throughout the Valley, enabling innovators in Surprise to add to, rather than duplicate, the wealth of public and private innovation occurring in the Valley. Surprise has already begun establishing these connections, notably through its sustainability initiative with ASU, through which entrepreneurs can access expertise in innovation and new product development through the School of Global

Management and Leadership. Connectivity should also extend to transportation and communications infrastructure so that Surprise innovators can easily connect with partners throughout the Valley.

BOOST ACADEMIC AND CORPORATE RESEARCH

Individual entrepreneurs and researchers will be most successful in advancing innovation if they are connected with a network of other researchers and research facilities. Core to this strategy will be establishing and strengthening connections with existing academic institutions, including ASU, as well as building a new network of higher education within Surprise. New research and educational programming fostered in Surprise should center around Surprise's emerging economic clusters including medical/biomedical, sustainable systems, and engine technologies. Building an environment conducive to open innovation will also serve as a major asset for expanding corporate research in Surprise.

CAPITALIZE ON KNOWLEDGE AND RESOURCES OF THE "BOOMERS"

The impending retirement of 76 million "baby boomers" presents an unprecedented economic challenge in the U.S. With only 46 million "Generation-X'ers" to replace the boomers when they begin retiring in the next five years, the U.S. faces an impending employment shortage. However, with greater physical and financial health than their parents' generation, many boomers will be looking for opportunities to reinvent themselves as they enter this new stage of life, presenting a unique opportunity for a growth in innovation and entrepreneurship. In the Phoenix-area, boomers accounted for 27% of the metro-area population as of 2003.⁸ Although Surprise has a growing population of young families, it also includes and is proximate to concentrations of boomers and retirees. To build an infrastructure of innovation, Surprise should capitalize on its access to these boomers, tapping into their expertise and networks to grow new businesses. With a continual influx of new 55+ residents to the Valley from across the country, boomers in this region offer a rich diversity of expertise to capitalize on. In developing a strategy to outreach to boomers, Surprise can take cues from other Valley communities such as Scottsdale, Tempe, Mesa and Chandler which have established "Next Chapter" networks to strengthen opportunities for education, entrepreneurship, and civic engagement for boomers.



FACILITATE NEW BUSINESS DEVELOPMENT

Equally as important as fostering innovation is building a support system for start-up and expanding businesses. Surprise can build on regional strengths in business development as the metro-area's low business costs, attractive climate, and affordable cost of living have greatly promoted new business growth and employee attraction and contributed to Phoenix's top position in *Entrepreneur Magazine's* list of Hot Cities for Entrepreneurs in 2006.



Surprise can foster the development of new businesses that contribute to a sustainable economic base by establishing small business incubators and accelerators connected with centers of research and innovation. Additionally, mechanisms should be established to connect research and engineering professionals with entrepreneurs and corporations. A focus on new business development will help to ensure that innovators of successful new technologies have opportunities to see the development of those technologies come to life in Surprise. This opportunity should be advanced by both the City as well as partner organization(s), such as a community development corporation with a mission of strengthening Surprise's economy, complementing the economic development efforts undertaken by the City.

SECURE CAPITAL AND FINANCE

Access to capital and financial management expertise is critical to advancing emerging economies and fostering innovation. Phoenix's powerful finance sector is one critical source of capital that Surprise should forge connections with. Beyond this source, however, Surprise can capitalize on wealth in the community, as well as in the North Valley, establishing a "venture capital pipeline" to connect angel investors and entrepreneurs of high-growth ventures. The need for better venture capital connections in the Phoenix area was underscored by the president of the Arizona Business Accelerator, Dave Franke: "Phoenix is still very immature from a financial infrastructure perspective...[entrepreneurs] are forced to go through a needle-in-a-haystack exercise wasting valuable time and energy looking for financial investors instead of spending time growing their business."⁹

opportunities

-3- Enhance Economic Climate and Quality of Life

A third key opportunity for the City is to focus on enhancing the City's economic climate and building community assets and infrastructure that contribute to a high quality of life. The remarkable growth of the Phoenix region is due primarily to the outstanding quality of life it offers, attracting families seeking a warm climate, outstanding natural amenities, affordable cost of living, and the many job opportunities available in high growth areas. With the central and eastern portions of the valley are beginning to reach build-out, residential growth in the region is shifting to the west and north, placing Surprise directly in the path of the metro area's future expansion.

Clearly, attracting additional residents to Surprise is not an issue – but keeping them here and providing local opportunities for gainful employment will require forethought and deliberate action by the City. The following strategies should be undertaken to achieve this opportunity.

GETTING IT RIGHT THE FIRST TIME: PROACTIVELY PLAN FOR AND MANAGE DEVELOPMENT OF A DYNAMIC, VIBRANT CITY IN A UNIQUE DESERT ENVIRONMENT

Surprise—a community of over 100,000 people—is by no measure a small or undeveloped city. However, the expansiveness of the undeveloped portion of Surprise's 309 square mile planning area and the projected addition of another 300,000 to 1.5 million people in the next 50 to 100 years (depending on development densities) presents Surprise with two alternatives. The City can either respond and react to development trends or it can proactively create the framework within which the City will grow. To position the City for a diverse and healthy economy and community, Surprise should take every opportunity to be proactive in Shaping a Dynamic City of Choice and Opportunity. Consequently, Surprise should take advantage of a unique opportunity to be a model for the Valley, the nation, and the globe, for building a new sustainable desert City.

Key to Surprise's success in building a sustainable desert City will be ongoing efforts to offer opportunities to residents and tourists to understand, experience, and celebrate the desert environment.



Surprise's location on the edge of the metro-area, surrounded by the Hieroglyphic and Vulture Mountains to the north and the White Tank Mountains to the southwest, presents a unique opportunity for Surprise to celebrate this landscape and build a tourism economy around these amenities. Additionally, business recruitment efforts should emphasize the community's work to preserve and enhance these natural amenities to help attract employees. One key tool for achieving this goal is the development of an extensive trail network connecting the community to the mountains and the unique water features offered by the canals.

Building a sustainable city relies not only on the physical form of the urban fabric, but on people's interaction with and use of this environment. Consequently, Surprise should promote educational programs and experienced-based learning centers that bring building a new sustainable City in the desert to life for the community.

PROVIDE CHOICES: JOBS, LIFESTYLE, HOUSING, RECREATION, HEALTH AND WELLNESS

Central to a sustainable community and economy is the provision of a range of living and employment choices so that residents can meet most of their everyday needs within the community. An atmosphere of choice will also help Surprise to appeal to a wide range of people that may consider moving their family to or growing their business in Surprise. By fostering an environment that offers amenities appealing to a wide cross-section of people, Surprise will strengthen the quality of life it can offer to new residents and businesses.

STRENGTHEN REGIONAL CONNECTIONS: PROMOTE PASSENGER RAIL, PLAN GRAND AVENUE, COMPLETE KEY REGIONAL HIGHWAY CONNECTIONS, AND INSTALL COMMUNICATIONS INFRASTRUCTURE

In a metro-area such as Phoenix, quality of life within a community is defined not only by what that community can offer, but also by the strength of the community's connections to major activity centers in the metro-area. Consequently, Surprise should actively support regional initiatives that help to strengthen Surprise's connection with these areas including, but not limited to, downtown Phoenix, ASU, North Valley communities, and the Hassayampa Valley. Specific attention should be focused on developing a regional passenger rail system, improving Grand Avenue as a parkway serving as the Northwest Valley's "Great Street," and developing key regional highway connections.

DEVELOP "SMART CITY" INFRASTRUCTURE – INTERNET CONNECTIVITY AND RELIABLE AND CLEAN POWER

Surprise has an incredible opportunity to foster an environment of open innovation by building cutting-edge communications infrastructure



laying the foundation for a growing sustainable city. Being sufficiently "wired" will appeal to residents and also to the employees and businesses that Surprise is working to attract such as skilled medical personnel and researchers. Investment in state-of-the-art communications infrastructure also will help Surprise compete within the metro-area as Phoenix has been

recognized among ten "most wired" cities in the U.S.¹⁰ Clean, reliable, and distributed power infrastructure will also greatly support new business development, particularly for medical facilities and technology companies that have a low tolerance for power interruptions.

FOSTER LIFE-LONG LEARNING AND HIGHER EDUCATION OPPORTUNITIES

The Community Vision developed through the Surprise General Plan envisions the community as a "place of educational excellence." This emphasis on education enables Surprise not only to develop quality of life assets attractive to residents but also contributes to its efforts to establish a sustainable economy. Consequently, education has been highlighted throughout this Framework as a key tool for achieving Surprise's key place-based economic opportunities. Surprise should continue to facilitate partnerships with educational institutions in the region while simultaneously building and strengthening educational infrastructure for all age groups. Educational opportunities should reach beyond K-12 and even beyond higher education to offer opportunities for working adults, boomers, and seniors to continue education either both for career advancement and for enjoyment and enrichment. Additionally, Surprise can help foster cutting-edge educational programming built around its place-based and economic assets including sustainable technologies and medical/biomedical research.

connecting to place

REGIONAL CONNECTIONS

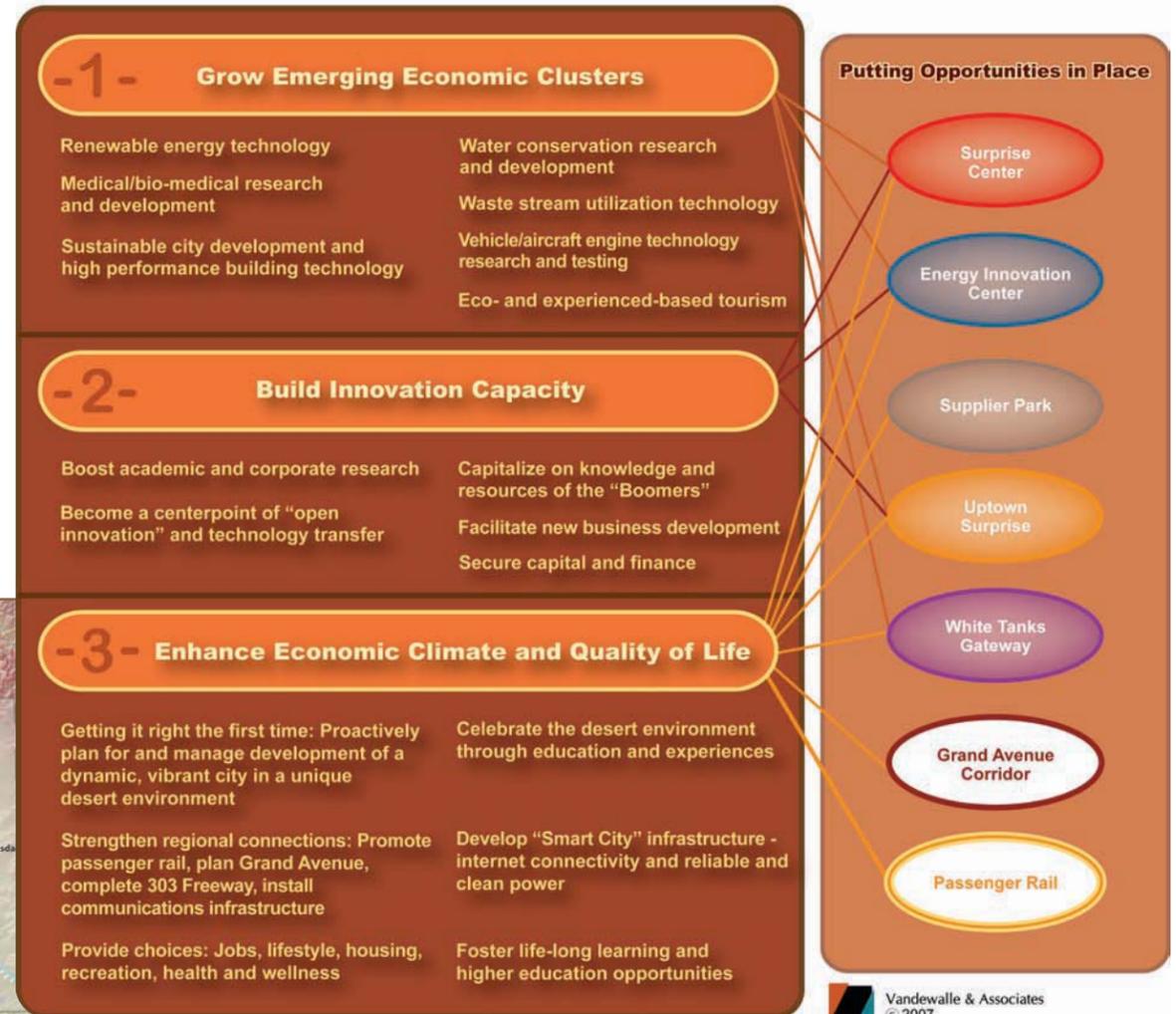
Surprise's location as the northwest core of the metro area offers the community several unique advantages including direct access to the Hieroglyphic and Vulture Mountains and Lake Pleasant to the north, the White Tank Mountains to the southwest, and several desert micro-climates in between. Surprise can capitalize on these assets as it builds a true, twenty-first century city and a global model for sustainable development. Core to Surprise's success as a community, however, will be its physical and economic connectivity to the Valley. As much potential as Surprise has by itself, its greatest asset is being an integral part of a thriving Phoenix region. Accordingly, the City will need to become fully engaged on a wide variety of regional initiatives, not the least of which will be ensuring the efficient movement of people and goods throughout the Northwest Valley.

Three regional initiatives in particular present an opportunity for Surprise to strengthen its position within and connection to the metro-area:

- Promoting implementation of a **passenger rail** system that includes a line extending from Surprise to Phoenix, connecting with major activity centers in Peoria, Glendale, downtown Phoenix, Sky Harbor International Airport, and ASU at Tempe. In addition to providing critical transportation options to residents and businesses in Surprise, this initiative provides opportunities to create dynamic, transit-oriented development at key stops in Surprise, consistent with the goals in the City's General Plan.

- Improving **Grand Avenue** as a key arterial parkway serving as the Northwest Valley's "Great Street." Because Grand Avenue serves as a central spine for both Surprise and the Northwest Valley, it should be developed as a multi-modal parkway prominently featuring continuous native landscaping and designed to promote concentrations of mixed-use, multi-modal activity centers at its key nodes.
- Implementation of **key regional highway connections** with functional and attractive interchanges, including completing the 303 Freeway to Interstates 10 and 17, building the Hassayampa North-South Freeway and White Tanks Freeway, and enhancing Highway 74/ Carefree Highway to I-17 and Scottsdale.

Economic Positioning Framework: Connecting to Place



connecting to place

SURPRISE CONNECTIONS

Successful implementation of the Surprise Economic Positioning Framework hinges on identifying strategic areas within the community where the key Place-based Economic Opportunities can develop and grow. Five strategic areas in Surprise emerged with the greatest potential for catalyzing economic growth, helping to Shape a Dynamic City of Choice and Opportunity.

INNOVATION AND RESEARCH PARK AT SURPRISE CENTER

Located amidst Surprise's greatest concentration of activity, Surprise Center has been envisioned as a dynamic mixed-use project incorporating a City Hall campus, medical facilities, an office park, and retail. This planned activity center – in combination with surrounding assets in transportation, cultural resources, recreation, and housing – positions Surprise Center for the development of a dynamic Innovation and Research Park.

As the potential future home of a new Sun Health research center, the Innovation and Research Park would be anchored with medical/biomedical research, technology transfer, business incubation/acceleration, and health and wellness services. Eventually, a new hospital could be added, providing opportunities for clinical research as well. Complementing the medical/biomedical research cluster would be an Innovation Center to foster development of the other emerging economic clusters identified in this Framework including sustainable development, renewable energy, high performance buildings, water conservation, and waste stream utilization technology. In addition to providing incubation space and general support facilities for new business start-ups, the Center would serve as a clearinghouse to match highly knowledgeable and skilled residents and “retirees”, investors and entrepreneurs in creating new business ventures and “open innovation” collaborations.

Beyond promoting research, technology transfer, and business development, the Innovation Center also would include an experienced-based demonstration pavilion aimed at residents and tourists that would showcase these new technologies and how they can be used to build a sustainable desert city. This demonstration pavilion would offer an ideal setting to build ASU's physical presence in Surprise as part of the city's Sustainable Surprise partnership with the ASU Global Institute of Sustainability.

The potential for the Innovation and Research Park is truly regional in its scope and ability to attract businesses and employment. Coupled with the other regional-scale amenities and facilities that are part of the entire Surprise Center development, the regional Passenger Rail Initiative becomes that much more plausible and necessary. Accordingly, the initial focus for implementation of transit stations in Surprise should be at the gateways to Surprise Center – the intersections of the rail line with Bell Road and with Greenway Road – and loop/feeder buses connecting them directly to the activity areas within Surprise Center.

ENERGY INNOVATION CENTER

The Energy Innovation Center capitalizes on several locational assets

located north of the Sun Valley Parkway and west of Grand Avenue – including concentrations of State Trust lands, two proposed waste water treatment plants, major transmission lines, the Northwest Regional Landfill, connections to Grand Avenue, the Luke Air Force Base auxiliary field, and the Volvo Proving Grounds – to establish large research and development facilities focused on solar energy, waste-to-energy conversion, distributed energy, energy conservation, and cogeneration. Taking advantage of Arizona's sunny climate and Surprise's available contiguous land area, solar energy production and solar technology research and development can take root here. Additionally, successful business start-ups in Surprise Center focused on renewable energy technology that need room to grow should be targeted for this area. The landfill also offers a unique opportunity for research and development of waste-to-energy conversion technology. Surprise should partner with the Arizona State Land department to strategically plan for the commercial use of Trust lands to help establish this Innovation Center.

UPTOWN SURPRISE

Surprise's Community Development department has identified the intersection of Grand Avenue and 203rd Avenue as the heart of a future “Uptown Surprise.” As the City builds out to the northwest, Uptown Surprise will offer an outstanding location for shopping, living, and working, and for growing businesses to take root. Businesses that are incubated at the Innovation and Research Center at Surprise Center and positioned for future growth should be targeted for eventual permanent locations in Uptown Surprise.

Given Uptown's central location in the Surprise planning area, the City's General Plan calls for higher density development and a concentration of employment with a full complement of urban amenities and services. Accordingly, Uptown Surprise is a prime candidate for a major rail station and interchange with Grand Avenue, which should be developed in accordance with transit-oriented development (TOD) principles. As part of the Sustainable Surprise initiative, Surprise has partnered with ASU's College of Design to define development patterns for Uptown Surprise that promote TOD and concentrations of activity and density while preserving washes and other natural features throughout the landscape.

WHITE TANKS GATEWAY

The White Tank Mountain Regional Park offers a unique opportunity for Surprise to expand its eco-tourism and resort and executive living offerings. The area surrounding a future Park entrance on the north slope of the mountain– the White Tanks Gateway – should capitalize on the visual, environmental, recreational, and adjacent real estate assets that the Park creates by fostering high-quality residential and lodging development including equestrian, spa, wellness, and golf resorts. Contrasting with the urban emphasis of Surprise Center and Uptown Surprise, the focus of the White Tanks Gateway should be a celebration of this unique desert and foothills environment with a lower density, yet sustainable, development form through the use of open space

preservation and clustering. The White Tanks also offers an opportunity for a desert landscape interpretive center near the park entry in Surprise.

SUPPLIER PARK

The Surprise Supplier Park is a regional rail transshipment hub where goods sent in bulk to the Phoenix-area via the BNSF rail line can be offloaded, broken down, and shipped by local trains and over road to destinations in the Valley. Because most of the essential goods needed in the region are not produced locally, importation from the coasts via rail is vital and will continue to grow as the population continues to grow. Accordingly BNSF is developing a 700-acre site along their line west of 211th Avenue with the intention of consolidating its many smaller transshipment facilities located in the Valley. A facility of this type will create a demand for adjoining operations including large-scale warehousing and distribution terminals, wholesale businesses, and enhance and include “value added” businesses.



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PROPOSED IMPLEMENTATION STRATEGY

Implementation of the recommendations in this Framework will take a coordinated and sustained effort on the part of the City working in partnership with individuals and organizations including: local, state and federal government agencies; institutions of higher education; public and private research and development institutes; non-profit organizations; small businesses; and major corporations. Accordingly, it is imperative the City put in place a structure that can manage and guide multiple and parallel implementation activities involving a high number of diverse participants.

The proposed structure illustrated on the right establishes a Project Management Team as the lead implementation organization that would guide and coordinate the work of several implementation teams focused on specific aspects of the Place-based Economic Opportunities identified in this Framework. The ultimate membership of the PMT will need to be determined by the Community Development department but generally should include one or more Council members, a representative from the Planning Commission and/or other key policy advisory boards, upper level management staff, and key outside partners who are participating in one of the implementation teams. Under this structure, the PMT would serve as the implementation organization, but the City Council would be at the steering wheel, making all of the key policy decisions.

One of the first tasks of the PMT is to assemble the various implementation teams with experts, resources and partners who can directly impact the responsibilities assigned to a particular team. In some cases, the team already exists (such as the City Growth Cabinet and the Surprise Train Team). In others an existing advisory board may serve as the team or contribute several members (such as the Planning Commission serving as the General Plan Update Team). Regardless, the intent of the teams should be to include a diverse group of individuals while maintaining a manageable number of members who can work on an informal, "roll-up-the-sleeves" manner to address the priority steps.

The illustration on the following page identifies the priority next steps for each of proposed initial implementation teams as necessary to move the recommendations of this Framework forward. As implementation efforts progress, these priorities will need to be revised and, potentially, additional implementation teams added to take on new initiatives.

Proposed Implementation Structure

Implementation Management

Project Management Team

Members

- City Council member
- Planning Commission or other Advisory Board member
- Assistant City Manager
- Community Development Director
- Economic Development Director
- Key Outside Partners

Primary Responsibilities

- Recommend implementation priorities for the Economic Positioning Framework to the City Manager and City Council
- Provide overall management of all Framework implementation activities
- Coordinate activities between all implementation teams
- Review and comment on all implementation team recommendations prior to presentation to the City Manager and City Council
- Periodically review the Framework and recommend revisions and updates to the City Manager and City Council



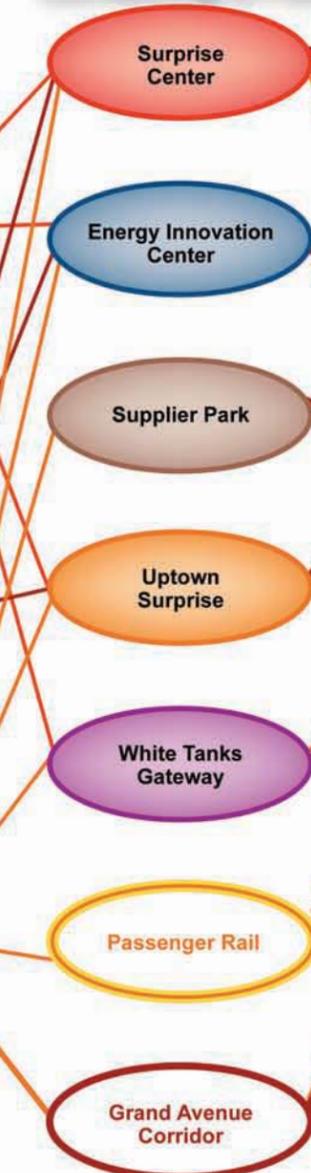
Opportunities

-1- Grow Emerging Economic Clusters

-2- Build Innovation Capacity

-3- Enhance Economic Climate Quality of Life

Connecting to Place



Implementation Teams



Surprise Economic Positioning Framework: Priority Next Steps

Implementation Teams

<p>Medical/Biomedical Team</p>	<ul style="list-style-type: none"> • Refine the plan for the Innovation and Research Park at Surprise Center • Determine the feasibility of and a building program for a speculative medical-related research facility with wetlabs and incubation space as the initial lead building in the Park • Seek partnerships with universities and other research institutions in attracting additional users to the initial facility and the Park 	<ul style="list-style-type: none"> • Determine infrastructure needs, including telecommunications, for the Park and other key research and health care locations and forward those to the City Growth Cabinet • Determine needs of potential research and health care staff (such as housing and other lifestyle requirements) and forward those to the General Plan Update Team • Recruit potential tenants to the initial facility, the Park and Surprise in general
<p>Sustainability Innovation Team</p>	<ul style="list-style-type: none"> • Undertake implementation of the Sustainable Surprise initiative in partnership with the ASU Global Institute of Sustainability; identify opportunities for implementing sustainability demonstration projects in Surprise and strengthening educational connections with ASU • Establish partnerships with key research, non-profit and private corporations involved in the development of sustainable building materials and infrastructure systems • Determine the feasibility of and a building program for an Innovation Center and Sustainability Demonstration Pavilion within the Innovation and Research Park at Surprise Center and work with the Medical/Biomedical Team to identify a location for same 	<ul style="list-style-type: none"> • Develop a program to identify and recruit: retired and active researchers, engineers and similar highly skilled and educated individuals; potential venture capitalists, investors and other new business finance providers; and entrepreneurs and small businesses interested in sustainable development • Work with the General Plan Update Team to determine appropriate standards in the General Plan and zoning code for the area identified as the Energy Innovation Center • As the Sustainable Surprise initiative is advanced, establish Sustainability sub-groups to focus on particular issues, such as energy, water, urban design and buildings, and education
<p>City Growth Cabinet</p>	<ul style="list-style-type: none"> • Determine key telecommunications infrastructure needs for the City and establish a technology sub-group, bringing in others with technology expertise, to oversee preparation of a feasibility study and a funding and implementation plan for providing broadband and other needed telecommunications services throughout Surprise • Determine infrastructure needs and prepare a funding and implementation plan to support the place-based opportunities described in the Economic Positioning Framework • Coordinate planned infrastructure extensions and expansions with the other Framework implementation teams to ensure a maximum return on investment 	<ul style="list-style-type: none"> • Complete the ongoing Surprise Transit Plan and coordinate recommendations with the other Framework implementation teams • Work with the General Plan Update Team to determine the infrastructure needed to support the level of development intensity/density proposed for Uptown Surprise, the Energy Innovation Center, and the Supplier Park • Work with the General Plan Update Team to determine the extent of urban services to be provided to the White Tanks Gateway area and alternatives for the use of environmentally sensitive, on-site systems.
<p>General Plan Update Team</p>	<ul style="list-style-type: none"> • Coordinate with the Surprise Train Team to develop standards in the General Plan and zoning code for transit-oriented development for application in Uptown Surprise, the area adjoining the Grand Avenue & Bell Road intersection, and other key rail stops • Coordinate with the Surprise Train Team to develop standards in the General Plan and zoning code for park & ride facilities along the proposed rail route • Coordinate with the Sustainability Innovation Team to develop standards in the General Plan and zoning code for large, energy innovation and production facilities (such solar arrays, engine testing, waste-to-energy, etc.) in the area identified for the Energy Innovation Center 	<ul style="list-style-type: none"> • Develop standards in the General Plan and Zoning code the rail Supplier Park and the large land area users and buildings that would locate around it (such as transfer terminals, warehousing, outdoor storage, and wholesale operations) • Develop standards in the General Plan and zoning code for resort and tourist development in the White Tanks Gateways that focus on environmental protection, open space and view preservation, off-street trails, outdoor recreation, and sustainability) • Coordinate with the other Framework implementation teams to have the General Plan Update and zoning code address their other needs and goals
<p>Surprise Train Team</p>	<ul style="list-style-type: none"> • Continue the ongoing pursuit of state and regional funding for passenger rail service along the BNSF main line from Surprise to Phoenix • Refine locations and concepts for transit-oriented development and park & ride facilities within Surprise and coordinate those with the Growth Plan Update Team 	<ul style="list-style-type: none"> • Prepare a feasibility study and a funding and implementation plan for a loop/circulator bus system the connecting major activity centers in Surprise with the key rail stops • Coordinate rail-served industry for freight service along with passenger service
<p>Grand Avenue Parkway Team</p>	<ul style="list-style-type: none"> • Prepare a corridor redevelopment study for the entire length of Grand Avenue from Highway 74 to West Van Buren Street identifying general redevelopment opportunities, key sites and intersections, multi-modal options within the corridor, and concept corridor cross-sections and interchange/intersection designs • Based on the outcome of the study, obtain regional agreement through MAG on the general function and design of Grand Avenue throughout the metro area and develop a funding and implementation plan 	<ul style="list-style-type: none"> • Coordinate with the Growth Plan Update Team to develop appropriate standards in the General Plan and zoning code for key intersections/locations along Grand Avenue for higher levels of density/intensity (such as the intersection at Grand and Bell Road, the intersection at Grand and Greenway Road, the interchange at Grand and 303, Uptown Surprise, etc.)



Endnotes

1 Population statistics from the following sources, listed in order presented:
 – U.S. Census Bureau, *Annual Estimates of the Population of Metropolitan and Micropolitan Statistical Areas: April 1, 2000 to July 1, 2006*, U.S. Census, <http://www.census.gov/population/www/estimates/CBSA-est2006-annual.html>.
 – U.S. Census Bureau, *Annual Estimates of the Population of Metropolitan and Micropolitan Statistical Areas*.
 – City of Surprise, Arizona, *Surprise General Plan 2020 – Draft revision*, December 14, 2006.
 – State of Arizona Department of Commerce, *Arizona Economic Profile*, State of Arizona, http://www.azcommerce.com/doclib/prop/state_economic_profile.pdf

2 Population statistics from the following sources, listed in order presented:
 – Maricopa Association of Governments, *Regional Report: A Resource for Policy Makers in the Maricopa Region*, January 2005.
 – U.S. Census Bureau, *Annual Estimates of the Population of Metropolitan and Micropolitan Statistical Areas*.

3 Population statistics from the following sources, listed in order presented:
 – City of Surprise, Arizona, *Surprise General Plan 2020*.
 – Maricopa Association of Governments, *Regional Report*.

4 Statistics from the following sources, listed in order presented:
 – U.S. Census Bureau, *Annual Estimates of the Population of Metropolitan and Micropolitan Statistical Areas*.
 – U.S. Conference of Mayors, *US Metro Economies*, October 2004, U.S. Conference of Mayors, http://www.usmayors.org/metroeconomies/1004/metroeconomies_1004.pdf

5 Arizona State University and City of Surprise, *Sustainable Surprise: A Collaborative Vision of Arizona State University and Surprise, Arizona, 2007*.

6 Velasquez-Manoff, Moises, How do you make electronics easier to recycle? *Christian Science Monitor*, March 8, 2007.

7 "Open innovation" was coined by Henry Chesbrough, the Executive Director of the University of California-Berkeley Haas School of Business' Center of Open Innovation and author of several books on Open Innovation including *Open Innovation: The New Imperative for Creating and Profiting from Technology* (Cambridge: Harvard Business School Press, 2003).

8 Arizona State University, *Greater Phoenix Regional Atlas: A Preview of the Region's 50-Year Future*, 2003. Available: www.gp2100.org.

9 Young, Ty, "Entrepreneurs seek school funds," *Phoenix Business Journal*, March 2, 2007.

10 Area Development "Well Connected Locations." April/May 2007.