



REPORT 2 OF 3:
TARGET INDUSTRY IDENTIFICATION

PROVO CITY
CITYWIDE ECONOMIC DEVELOPMENT STRATEGIC PLAN



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Introduction

Introduction

The concept of industry clusters was popularized in Dr. Michael E. Porter's 1998 *Harvard Business Review* article "Clusters and the New Economics of Competition." The theory examines economic development in terms of critical masses of activity. Companies converge in geographies that offer a whole pool of benefits - research activities, educational programs, infrastructure, and talent, for example. Their own efficiencies improve when they locate near similar businesses. While they may compete for workers, for example, a larger number of jobs across multiple companies draws talent into a region and keeps wages competitive. Clustering improves productivity, inspires a faster pace of activity, and fuels new business startups.

Clustering also encourages communities to invest in a more targeted approach to economic development. Instead of trying to appeal to every industry, communities now focus on attracting a small handful of clusters. Clusters drive strategy. Economic developers work with public officials, educators, local companies, research institutions and other organizations to invest in assets that support cluster growth. Incentives policies, regulations, and land use planning consider ways to make the community a more competitive location for the targeted clusters. Marketing initiatives specifically focus messaging, tools, and approach to the needs of the clusters.

The theory of industry clustering is at the heart of this second report of Provo City's Economic Development Strategic Plan. This is the middle step in the planning process. It tells Provo City who its target audiences are. It lends focus to Provo's vision. Even if the third report of this planning process, the *Target Industry Strategies*, is not followed, the clusters themselves should help Provo's leaders decide how to invest in the future and how to market the community.

About the Economic Development Strategic Plan

Three reports will comprise Provo City's Citywide Economic Development Strategic Plan:

REPORT 1: Competitive Evaluation

In this phase of the project, the consulting team began a thorough evaluation of the City of Provo, conducting stakeholder input sessions, examining past reports, conducting a mock site selection tour, and preparing the first report, Competitive Evaluation. This report included a detailed economic and demographic analysis of the city and region; a retail market analysis and leakage study; and an executive summary assessing overall competitiveness in a SWOT format.

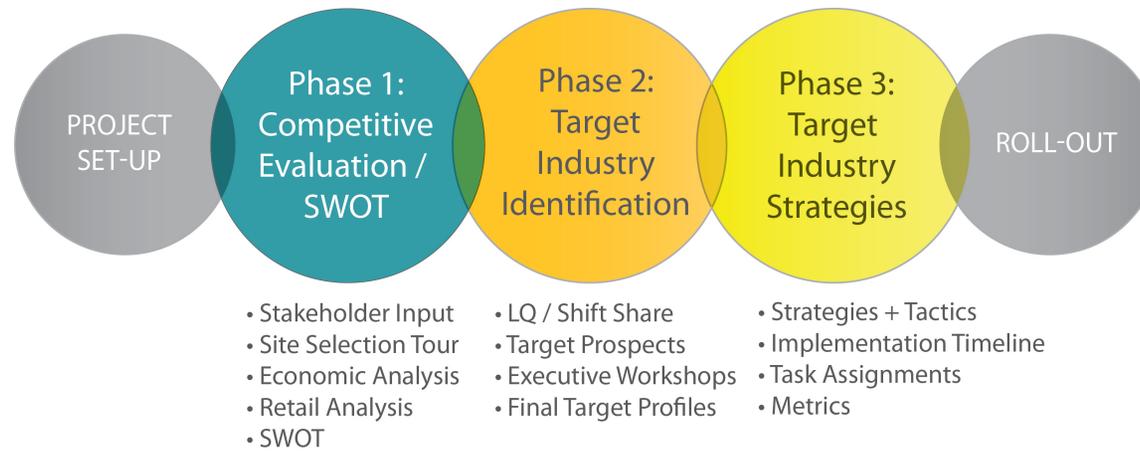
REPORT 2: Target Industry Identification

During Phase 2, the consulting team has identified target industries for future economic development activities in Provo. This phase included a study of state, national, and global industry trends and how they relate to Provo and regional economic assets. A series of analytical tools, such as cluster and shift-share analyses, were utilized to understand opportunities within Provo's industry base as well as emerging sectors that could expand in the future. The consulting team also engaged area businesses in candid discussions about opportunities in their respective clusters. In this resulting report, Report 2, consulting team provides a clear list of industry audiences targeted for growth, including detailed profiles of these industry sectors, highlighting location requirements and local assets that will support their growth. See below for a more detailed description of this report.

REPORT 3: Target Industry Strategies

The final phase will include the creation of a Target Industry Strategies report detailing recommendations for Provo. Recommendations will address three critical elements of Provo's future economic development initiatives: improving the city's assets for expanding and attracting the target industry; engaging in internal and external marketing to unify local voices and communicate Provo's value to target industry executives and site selections; and a tactical implementation plan that contains an implementation schedule, metrics, budget, and recommendations for coordinating with local, regional, and statewide stakeholders.

Provo City: Citywide Economic Development Strategic Planning Process



About This Report

This *Target Industry* report develops a list of recommended target industries that will be the focus of Provo's future economic development efforts. After providing a list of top-level targets and niche sectors within each industry, this report includes detailed profiles of each target industry. The profiles describe the nature of each industry, local and global economic trends, and potential opportunities for development of niche sectors in Provo. These profiles are intended to educate local leaders and residents on Provo's competitive position relative to industry needs, provide marketing content for future economic development activities, and set a course of direction for the final phase of this project, the *Strategic Plan*. Specific components of this report include:

- **Section One: Target Recommendations.** The first section of this report delivers a list of recommended target industries for Provo. The list includes niche sectors within each industry and a general summary of the potential for growth in Provo.
- **Section Two: Target Profiles.** This section of the report contains profiles of each of the recommended target audiences. Profiles describe the dynamics of the industry, trends and needs in niche sectors, and Provo's competitive position. Each profile includes a one-page Opportunity Matrix summarizing Provo's competitive position as it relates to the target industry.
- **Section Three: Target Identification Process.** The final section of this report describes how target industries were selected for Provo. This includes analysis of local and national growth trends for industry and occupation clusters within the region, a summary of Provo's competitive assets, and a review of local stakeholder input.

The target recommendations presented in this report are based on an array of inputs, including extensive quantitative analysis, the consulting team's own experience and knowledge of industry trends, a review of other recent city and state studies, and opinions shared by Provo City's residents and leaders. Qualitative input was collected through personal interviews, focus groups, Steering Committee meetings, and a survey of 300 Provo City residents.

What is Targeting?

In economic development, targeting is the process of focusing an economic development initiative on a handful of specific industries that have the highest likelihood of catalyzing economic growth in the community. Targeting not only affects how a city markets itself externally, but also how it invests in itself at home. In a comprehensive economic development initiative, the needs of target industries are considered when designing new workforce programs, creating new entrepreneurial support systems, investing in quality of life amenities, planning infrastructure, and creating business policies and incentives. Targeting helps ensure that all parties in a community are working in-step together toward a shared goal: Grow our target industries and the city's overall economic prosperity will increase.

Why Target?

Targeting ensures that a community's economic development resources are focused on industry audiences that will generate a high return on investment. Economic development organizations have limited funding and staff time and therefore must prioritize activities. Targeting allows an economic development organization to focus on expanding industries with the greatest local competitive advantage, thus maximizing every dollar spent. Most economic development organizations choose four to six target industries and concentrate on primary employers (those businesses whose goods and services bring new dollars into the local economy, see side bar).

A targeted economic development initiative yields even greater results when educational curricula, workforce development programs, public policy decisions, and infrastructure investments are aligned around the same set of targets. This level of coordination reassures businesses that area leaders are committed to their long-term success, thus making a community a more attractive location.

What is a Primary Employer?

Primary employers are businesses that export goods and services outside of the local economy. These exports inject new dollars into the economy, resulting in increased wages and jobs as revenue earned by the business is spent on employee salaries and goods and services that it purchases from local suppliers. As this funding is earned, it is redistributed throughout the rest of the economy, multiplying in impact. Manufacturing and software companies are examples of primary employers.

What is a Secondary Employer?

Secondary employers serve the local community. A majority of the goods and services created by those organizations are consumed within the community. While these goods and services are important staples of a community, the multiplier effect of spending is less than that by primary employers. Retail and construction are examples of secondary employers.

Naming top-level target industry clusters, such as “Information Technology,” is necessary to communicate a community’s broad inventory of competitive assets. However, economic development efforts are made even more effective when they hone in on specific niches within each target industry cluster. The more narrowly defined a niche sector, the more specific a city can be with its marketing message and approach. Niche sectoring also reduces the number of competitors. For example, many cities can claim that they target the Information Technology industry cluster, but very few can claim that they target digital animation companies. To take the example a step further, knowing that digital animation companies are a niche sector will enlighten community decisions across many realms, such as how it promotes itself, what programming it adopts in local public schools, how it designs a new business park, and how codes are crafted for downtown buildings (just to name a few).

In the context of NAICS codes, a **target industry cluster** may be at a 2-digit coding level while a **niche sector** may be at a 4-, 5-, or 6-digit level.

Finally, targeting a particular industry does not mean that other industries are ignored and will not grow. Conversely, targeting catalyzes overall economic growth. Every sector in a community benefits from the heightened business activity, new income, and new spending that results from investments in a target industry cluster. As the aphorism says, “A rising tide lifts all boats.”

How Are Targets Selected?

Target identification is not a perfect science. Numerous factors and broad market trends inform business location decisions. Therefore, there is no single mathematical formula for selecting targets. Target selection is an iterative process that considers a mix of quantitative and qualitative inputs. Beginning with the universe of all target industry clusters, a series of filters helps eliminate clusters that lack potential or do not suit the community:

First Filter: What are the cluster’s current industry dynamics?

It is important to select target industry clusters that either are growing or are projected to grow in the future. To answer this question, the consulting team examines many different datasets, including industry employment data at the local, state, and national level. Cluster analysis, such as the one provided in *Report 1: Competitive Evaluation*, is also performed to reveal dynamics within the cluster. The consulting team’s experience in other communities and knowledge of national and international business news is also considered.

Second Filter: What community assets are platforms for cluster growth?

Once clusters with low to no growth potential are removed from the prospective target industry cluster list, the community’s assets come into play. How well prepared is the community to support cluster growth? Does the community have assets that differentiate it from competing

communities? Is it missing any assets that are critical to the cluster? The SWOT analysis in the *Competitive Evaluation* was in part developed to serve as this filter.

Third Filter: What do residents and area leaders want in the future?

Finally, while on paper certain industry clusters may appear to be good targets for a community, the final filter eliminates those that do not align with the community’s vision for itself. The interviews, focus groups, Steering Committee meetings, and resident survey were conducted to help the consulting team understand Provo City’s values and vision. These aspirations guided the final target industry cluster recommendations



Details about the filtering process and analysis that was conducted to select target clusters is provided in Section Three of this report.

SECTION ONE:

Target Recommendations

The first section of this report delivers a list of recommended target industries for Provo. The list includes niche sectors within each industry and a general summary of the potential for growth in Provo.

Target Recommendations

Following a full review of industry trends, competitive assets, and community vision, the consulting team recommends the following six target industry clusters and niche sectors for the City of Provo.

Recommended Target Industry Clusters and Niche Sectors

 <p>Advanced Manufacturing</p> <ul style="list-style-type: none">• Aerospace Components• Clean Energy• Energy Equipment & Supplies• Nanotechnology• Metal Working & Products	 <p>Consumer Products</p> <ul style="list-style-type: none">• Nutraceuticals• Outdoor Recreational Goods• Online Consumer Services
 <p>Hospitality & Tourism</p> <ul style="list-style-type: none">• Conventions• Culinary• Downtown Retail• Outdoor Recreation & Sports• Specialty Retail	 <p>Information Technology</p> <ul style="list-style-type: none">• Data Centers• Digital Media & Creative Design• Software & Web Applications
 <p>Life Sciences</p> <ul style="list-style-type: none">• Biotechnology• Diagnostics• Healthcare Services• Medical Device Manufacturing	 <p>Professional Services</p> <ul style="list-style-type: none">• Call Centers• Corporate Headquarters• Engineering Services• Finance & Insurance• Geotechnical Services

Target Industry Summaries

Advanced Manufacturing

Provo has a well established Advanced Manufacturing cluster with particular strengths in complex electronics, aircraft components, and machinery manufacturing. Existing companies, BYU research programs, infrastructure, and skilled workforce all make Provo a competitive location for operations in a range of advanced manufacturing sectors. As the national manufacturing sector continues to shift towards more technologically advanced processes and products, Provo is well-positioned to build the local cluster, particularly in niche sectors such as **Aerospace Components, Clean Energy, Energy Equipment & Supplies, Nanotechnology, and Security Equipment.**

Consumer Products

As the national economy slowly recovers and consumer spending rises, Consumer Products are likely to rebound, particularly in Provo, which has highly concentrated employment in this industry. Provo has existing strengths in the **Nutraceuticals** sector and a slowly emerging **Outdoor Recreational Goods** sector. With many online retailers, professional service operations, internet companies, and software publishers, Provo is also well positioned to support the Consumer Products industry with strong **Online Consumer Services.**

Hospitality & Tourism

Provo may currently be an under-recognized Hospitality & Tourism destination with the State of Utah, but the city features a wide range of attractive visitor amenities and draws. With the historic downtown ripe for revitalization, the Utah Valley Convention Center newly completed, and numerous parks and sports facilities, Provo has many attractions for tourists and business visitors. Through effective marketing and retail development, Provo has high potential for development of niche sectors, including **Conventions, Culinary, Downtown Retail, Outdoor Recreation & Sports, and Specialty Retail.**

Information Technology

Information Technology is one of Provo's most well-established and competitive industries, with over 15,400 employees and rapid recent and forecast growth. BYU and Utah Valley University (UVU) are major assets for the region's IT cluster, awarding a high concentration of Software and Computer Science degrees and training graduates in a range of activities through programs like the Digital Media Program. Workforce, company, and infrastructure strengths make Provo highly competitive for Information Technology niches including **Data Centers, Digital Media & Creative Design, and Software & Web Applications.**

Life Sciences

The Life Sciences industry is one of the largest and fastest growing clusters in the US and in Provo. Provo is already a major **Healthcare Services** provider, with numerous medical centers and doctors offices servicing the broader region. Additionally, research programs and institutes at BYU support continued development of advanced **Biotechnology** applications and operations. The city also continues to develop related capacity for **Medical Device Manufacturing** and **Diagnostics**, two growing and high-demand Life Sciences niches that are supported by Provo's research, workforce, and company strengths.

Professional Services

Professional Services is a broad industry, including a wide range of professional, technical, and business services. Provo is a young, well-educated community with significant strengths across this industry. Provo is already home to a range of **Corporate Headquarters** in multiple industries and a large base of **Call Center** operations. **Engineering Services** and **Geotechnical Services** are also primed to expand with renewed growth in the construction and oil and gas exploration industries. Lastly, many online financial services firms are based in Provo, and with nationally competitive IT strengths, the city is well positioned to continue development of the local **Finance & Insurance** niche sector.

Target Timing and Approach

The upcoming *Strategy* (Report 3) will discuss in detail the approach to growing each target cluster. Provo will increase job creation and investment in the target clusters through three means: providing startup support locally (entrepreneurship), creating an environment that encourages existing business expansion and retention, and recruiting new companies into the community. The balance of entrepreneurship, expansion / retention, and recruitment varies among targets, which means the strategies related to each target will differ. A recruitment target will require an external marketing and business development initiative, for example, while an entrepreneurship target will require improvements to Provo's startup support infrastructure.

Target selection also considers the stage of a sector's development. The economic development initiative will not pursue all target clusters and niche sectors at once. Some clusters will take more time to grow than others. We qualify each target's potential as being immediate, mid-term, or long-term:

- **Immediate Opportunity.** The community has adequate assets and industry presence to immediately begin pursuit of the target. Examples include the expansion of a strong existing sector or ones that could flourish with simple improvements to the region's assets.
- **Mid-Term Opportunity.** These sectors are forecasted for future growth and have roots in the community. However, the community lacks one or more major assets necessary to strongly compete.
- **Long-Term Opportunity.** These sectors are forecasted for strong growth and align with the community's goals, but currently have limited to no presence in the community. The community is either lacking several major elements necessary to compete or the sector is emergent on a national level. The strategy presented in Report 3 will recommend improvements to Provo that will increase the likelihood that these sectors will expand in the future.

The following tables recommend Provo's approach to each niche sector and indicates the timing of the opportunity.

		Timing	Economic Development Approach		
ADVANCED MANUFACTURING			Recruit	Retain	Startup
Aerospace components	Immediate	40%	50%	10%	
Clean energy	Long-term	40%	30%	30%	
Energy equipment and supplies	Immediate	30%	40%	30%	
Nanotechnology	Mid-term	20%	30%	50%	
Metal working and products	Immediate	40%	30%	30%	

CONSUMER PRODUCTS			Recruit	Retain	Startup
Nutraceuticals	Immediate	20%	60%	20%	
Outdoor recreational goods	Long-term	60%	10%	30%	
Online consumer services	Immediate	60%	20%	20%	

HOSPITALITY & TOURISM			Recruit	Retain	Startup
Conventions	Immediate	90%	10%	0%	
Culinary	Immediate	0%	40%	60%	
Downtown retail	Mid-term	20%	40%	40%	
Outdoor recreation and sports	Long-term	80%	10%	10%	
Specialty retail	Mid-term	40%	10%	50%	

INFORMATION TECHNOLOGY					
Data centers	Immediate	50%	50%	0%	
Digital media and creative design	Immediate	30%	30%	60%	
Software and web applications	Immediate	20%	30%	50%	

LIFE SCIENCES			Recruit	Retain	Startup
Biotechnology	Long-term	40%	20%	40%	
Diagnostics	Mid-term	20%	30%	50%	
Healthcare services	Immediate	20%	50%	30%	
Medical device manufacturing	Long-term	80%	0%	20%	

PROFESSIONAL SERVICES			Recruit	Retail	Startup
Call centers	Immediate	50%	40%	10%	
Corporate headquarters	Mid-term	60%	40%	0%	
Engineering services	Immediate	40%	40%	20%	
Finance and insurance	Immediate	30%	50%	20%	
Geotechnical services	Immediate	40%	40%	20%	

In the following section, we provide profiles of each target and their niche sectors. These profiles provide a discussion of industry and niche trends, supporting local assets, and the opportunities for developing these sectors in Provo.

For each target industry, the consulting team will describe organizational efforts required to support recruitment, retention, expansion, and entrepreneurship in the forthcoming third report, *Target Industry Strategies*. This report will prioritize implementation activities for each industry and niche sectors based on their stage of opportunity: immediate, mid-term, or long-term. The final strategy will also include key sales messages for marketing materials in each target industry.

SECTION TWO:

Target Profiles

This section of the report contains profiles of each of the recommended target audiences. Profiles describe the dynamics of the industry, trends and needs in niche sectors, and Provo's competitive position. Each profile includes an "Opportunity Matrix" summarizing Provo's competitive position in the target industry.

Advanced Manufacturing

About the Industry

Manufacturing is a diverse industry, including a range of operations producing components and finished products from basic crafting materials such as metal, plastic, and clay. Advanced Manufacturing is distinguished by the high-tech nature of the manufacturing activities. Less focused on primary operations such as foundries, Advanced Manufacturing includes the production of complex materials, such as those used in aerospace components, new technologies like photovoltaic cells and batteries, circuitry and semiconductors, and other complicated electronics. The common characteristic of different sectors of Advanced Manufacturing is their reliance on cutting edge technology, research and development, and skilled workers.

Across the US, manufacturing employment has been in decline for thirty years. This trend has been driven by many factors. Improved technology and automation of processes have reduced the need for physical workers. Offshoring of operations to lower cost and less regulated international locations has taken account for another portion of job losses. However, despite continued employment losses (particularly in 2008 and 2009) US manufacturing sector sales have been rising steadily in recent years, driven by automobile production, aerospace, electronics, and energy. Declines in the relative value of the dollar and an aggressive federal export program have also helped spur a rapid increase in US manufactured exports.

Manufacturing is still the fourth largest US industry and employs over 11 million nationally. More than half of these jobs are in an advanced manufacturing sector (as opposed to food production, for example, or other primary operations). The State of Utah has nearly 45,000 advanced manufacturing employees, Utah County has nearly 7,000, and the City of Provo has 1,100. Although not traditionally known as a manufacturing hub, Provo has significant employment concentrations in fields such as fabricated metal production, machinery manufacturing, semiconductor manufacturing, aerospace components, and other electronics.

Existing Advanced Manufacturing jobs in the City of Provo have an average annual salary of \$69,100, higher than the average salary for all industries of \$48,400.



Advanced Manufacturing

Aerospace Components
Clean Energy
Energy Equipment & Supplies
Nanotechnology
Metal Working & Products

As manufacturing employment declined rapidly across the nation over the past five years, with Advanced Manufacturing employment dropping at an annual rate of -3%, the industry contracted much more slowly in Provo, declining only -0.9% annually.

Manufacturing facilities are highly sought by most communities because of their significant regional impacts. These operations tend to pay above average salaries and make significant investments in physical infrastructure, which spurs spending and boosts the local tax base. Although employment in the Advanced Manufacturing cluster is predicted to continue declining across the US according to EMSI, industry employment is projected to grow in Provo at an annual rate of 0.1% over the next five years (and 1.3% in Utah County).

Advanced manufacturing sectors tend to be highly specialized, with processes focused on automation and the use of computer-controlled (CNC) machines, computer-aided design (CAD), and computer-aided manufacturing (CAM) equipment. As manufacturing processes become more complex, they also become increasingly reliant on IT and engineering skills in addition to trade skills. Emerging sectors such as Nanotechnology and Clean Energy are also highly reliant on research and development activities, which create new applications and manufacturing processes.

Target niche sectors identified for Provo are:

- Aerospace Components
- Clean Energy
- Energy Equipment & Supplies
- Nanotechnology
- Security Equipment

Why Provo?

When considering the competitive position of Provo, it is important to consider the overall region and not just the City of Provo. Many Advanced Manufacturing operations (6,000 manufacturing jobs) are located in neighboring communities in Utah County. From a site selection perspective, the regional cluster of businesses, talent, and infrastructure will make a stronger impression than just the city. Utah County has an Advanced Manufacturing location quotient (LQ) of 1.0 and nearly 7,000 workers.

The most concentrated Advanced Manufacturing sectors in Provo are Semiconductor & Other Electronic Component Manufacturing (LQ of 6.4); Industrial Machinery Manufacturing (LQ of 2.3); Fabricated Metal Product Manufacturing (LQ of 2.0); and Other Aircraft Parts & Auxiliary Equipment Manufacturing (LQ of 1.9). Utah County has additional employment concentrations in Other Chemical Product & Preparation Manufacturing; Manufacturing & Reproducing Magnetic & Optical Media; Navigational, Measuring, & Control Instruments; and All Other Electrical Equipment & Component Manufacturing.

The Largest employment sectors in Provo are Agricultural, Construction and Mining Machinery Manufacturing (360 jobs); Fabricated Metal Product Manufacturing (270 jobs); and Industrial Machinery Manufacturing (190 jobs).

These advanced manufacturing employment concentrations in combination with workforce, research, and infrastructure reveal competitive strengths across a range of subsectors. In particular, semiconductor, navigational instruments, and other electronic component manufacturing are key pieces of the **Clean Energy** sector. According to EDC Utah, ongoing research in Utah is cultivating new technologies in renewable energy, specifically biomass, geothermal, solar and wind. USTAR (Utah Science, Technology and Research Initiative) is recruiting top researchers and scientists to develop and commercialize technologies in Utah. The Provo region graduates around 750 students each year with Environmental Science, Science, and Engineering degrees, all which can supply the Clean Energy workforce. (In 2009, Brigham Young University (BYU) graduated approximately 600 with these degrees and UVU graduated 150). Companies located in Provo such as Novatek reveal the viability of energy technology innovations in Provo. BYU currently conducts a range of research in energy efficiency, batteries, and fuels.

Provo's high concentrations in industrial machinery and fabricated metal product manufacturing are also supportive of the **Energy Equipment & Supplies** and **Security Equipment** niche sectors. Provo is home to Novatek, Sii Megadiamond, and BYU's Environmental Modeling Research Laboratory. These assets reveal the range within the Energy Equipment & Supplies sector, which includes manufacturing drilling technologies, mining machinery, and remediation technologies. The expansion of oil and gas exploration operations across the US with the development of shale resources presents significant opportunities for growth in this sector. Additional energy research at BYU focuses on more efficient extraction and energy production from fossil fuels, supporting the expanding oil and gas industry, particularly in the rapidly growing shale sector.

Action Target and Vivint / Blackstone Group manufacture and design shooting range, home energy management, and home security systems in Provo. As with Clean Energy, Energy Equipment & Supplies, and Security Equipment operations rely on a combination of skills that are highly concentrated in Provo – manufacturing, IT, and design.

Employment concentration in the **Aerospace Components** sector in Provo is primarily due to the local presence of Monogram Systems, a supplier of cabin systems and equipment headquartered in California, and Wencor, an aircraft parts supplier located in Springville. Large aircraft Original Equipment Manufacturers (OEMs) have performed relatively well recently and remained steady through the recession. Aerospace Components supply OEMs who then assemble the aircrafts. Provo's Aerospace Component sector grew at over ten times the national rate and is predicted to continue to outpace the nation. Provo's relative proximity to major OEM operations in the West, particularly in Washington and California, allow for cost-effective logistical distribution. Additionally, the presence of maintenance and repair operations like Duncan Aviation creates strong connections to the broader air flight industry. Aerospace & Aviation is a target of the State of Utah as well, which helps align marketing and development activities.

Nanotechnology is a very small but rapidly emerging niche sector that entails the development of technologies at an atomic or molecular level. This is a diverse industry and includes the creation of microscopic mechanical devices capable of performing tasks as well as the manipulation of

genes and biological materials. The applications of these technologies span a breadth of industries, including fuel cell development, environmental remediation products, medical treatments, and advanced materials such as Solid Carbon Products' carbon nanotubes. BYU is one of the national leading universities in nanotechnology research. The BYU Cleanroom, an Integrated Microfabrication Lab, is a significant nanotechnology R&D asset. With continued support for these programs and technology transfer initiatives, Provo is a competitive location for private sector nanotechnology research, production, and other operations.

Top Provo Selling Points

- Utah and Juab Counties are home to numerous manufacturing operations, demonstrating the viability of manufacturing operations locally and the presence of trained manufacturing workers.
- Provo's Mountain Vista Business Center has sites available for manufacturing operations up to 200,000 square feet.
- Provo's transportation infrastructure capacity is well suited for manufacturing operations, including interstate highway access, the Provo Airport, rail (both commuter and freight), and a good proximity to Salt Lake City International Airport.
- The area's higher education institutions are economic development assets for all of Provo's target industries. For advanced manufacturing, Provo's pool of talent with trade skills, information technology knowledge, and science backgrounds results in an attractive dynamic that supports an array of operations from fabrication to nanotechnology.
- Provo has a young and well-educated workforce, capable of supporting the increasingly complex operations of Advanced Manufacturing businesses.
- Research and development initiatives at BYU and UVU continue to develop new technologies related to many of the targeted niches, including Nanotechnology, Energy Equipment & Supplies, and Clean Energy. BYU's Cleanroom is a significant asset for nanotechnology research and continued development of fuel and extraction technologies have widespread applications in Energy Equipment & Supplies and Clean Energy.
- Utah's business climate and incentives, particularly its post-performance tax credit, are viewed as being among the most competitive in the country for economic development.

The table on the following page presents Advanced Manufacturing Industry Trends in the Provo region, displaying the location quotients (relative concentration) and employment of the overall industry and each subsector in Provo and Utah County. The table also shows recent and forecast growth trends for Provo, Utah County, and the US. Forecasts focus on these geographies to demonstrate the overall position of the industry in the regional and national economy as well as competitiveness of the City of Provo, which draws from assets throughout the County. (Sectors are defined using NAICS codes selected by the consulting team).

Advanced Manufacturing Industry Trends

Provo, UT

Subsector	2012 LQ	2012 Employment	2012 LQ	Recent Trends, 2007-2012			Forecast Trends, 2012-2017			
				Average Annual Growth			Average Annual Growth			
NAICS	Description	Provo	Utah Cty	Provo	Utah Cty	US	Provo	Utah Cty	US	
2211	Electric Power Gen., Transmission & Distribution	0.0	5	0.3	-	-4.4%	0.0%	-	-3.2%	-0.8%
3251	Basic Chemical Manufacturing	0.1	5	0.3	0.0%	-0.4%	-1.5%	-	-11.5%	-2.3%
3255	Paint, Coating, & Adhesive Manufacturing	-	-	0.1	-	-29.5%	-3.8%	-	-19.7%	-1.4%
3259	Other Chemical Product & Prep. Manufacturing	-	-	1.2	-	-14.7%	-0.3%	-	-1.2%	-0.8%
3261	Plastics Product Manufacturing	-	-	0.0	-	-16.1%	-4.2%	-	0.0%	-1.6%
3262	Rubber Product Manufacturing	0.1	27	0.4	40.1%	0.8%	-4.1%	7.1%	2.5%	-1.0%
331	Primary Metal Manufacturing	0.1	5	0.2	-	-	-4.7%	0.0%	2.4%	-1.8%
332	Fabricated Metal Product Manufacturing	2.0	271	1.5	-7.1%	-5.9%	-4.2%	-3.1%	-0.6%	-1.7%
3331	Ag., Construction, & Mining Machinery Mfg.	0.7	364	1.2	0.0%	-1.6%	-3.5%	-1.0%	0.6%	-0.9%
3332	Industrial Machinery Manufacturing	2.3	187	1.5	7.7%	6.6%	-1.1%	4.0%	2.6%	-0.2%
3333	Commercial & Service Industry Machinery Mfg.	0.1	5	0.1	0.0%	2.7%	-4.7%	0.0%	7.5%	-2.8%
3336	Eng., Turbine, & Power Transmission Equip. Mfg.	-	-	0.0	-	-	-3.8%	-	0.0%	-2.0%
3339	Other General Purpose Machinery Mfg.	-	-	0.1	-	-11.1%	-1.1%	-	3.7%	-0.6%
3341	Computer & Peripheral Equipment Mfg.	0.3	25	0.3	-2.9%	-5.1%	-3.5%	6.3%	7.5%	-0.9%
3342	Communications Equipment Manufacturing	-	-	0.1	-	-7.4%	-3.2%	-	-19.7%	-2.7%
3343	Audio and Video Equipment Manufacturing	-	-	0.8	-	-5.3%	-3.8%	-	2.2%	-1.8%
3344	Semiconductor & Other Electronic Comp. Mfg.	6.4	48	2.3	7.1%	7.1%	-7.5%	3.5%	3.0%	-4.9%
3345	Navig., Measuring, & Control Instruments Mfg.	0.4	60	4.1	-2.5%	6.8%	-3.9%	1.3%	3.7%	-3.0%
3346	Mfg. & Reproducing Magnetic & Optical Media	0.6	5	9.5	-26.9%	-12.6%	-9.0%	-	-11.7%	-2.8%
3351	Electric Lighting Equipment Manufacturing	0.3	5	0.2	0.0%	-18.2%	-6.2%	0.0%	-14.6%	-2.4%
3353	Electrical Equipment Manufacturing	0.1	5	0.2	0.0%	15.6%	-3.4%	0.0%	1.3%	-1.9%
33591	Battery Manufacturing	0.5	5	0.5	0.0%	24.6%	-1.9%	0.0%	-19.7%	-1.8%
33592	Communication & Energy Wire & Cable Mfg.	-	-	-	-	-	-2.6%	-	-	-0.1%
33499	All Other Electrical Equipment & Comp. Mfg.	0.4	5	1.3	0.0%	14.5%	-0.6%	0.0%	6.7%	2.6%
336411	Aircraft Manufacturing	0.1	5	0.0	0.0%	0.0%	0.7%	-	-	-0.3%
336412	Aircraft Engine & Engine Parts Manufacturing	-	-	-	-	-	-2.4%	-	-	-0.8%
336413	Other Aircraft Parts & Aux. Equipment Mfg.	1.9	71	2.4	4.5%	4.4%	0.4%	3.2%	3.1%	1.1%
336414	Guided Missile & Space Vehicle Manufacturing	-	-	-	-	-	0.6%	-	-	0.8%
336415	Missile & Space Veh. Propulsion Unit & Parts Mfg.	-	-	-	-	-	-4.7%	-	-	0.4%
TOTAL		0.6	1,103	1.0	-0.9%	-0.4%	-3.0%	0.1%	1.3%	-1.2%

Source: Avalanche Consulting using U.S. Bureau of Labor Statistics, forecast data from EMSI

LQ = Location Quotient: Per capita concentration of the industry as % of US concentration

ADVANCED MANUFACTURING – PROVO OPPORTUNITY MATRIX

Industry Definition

Advanced Manufacturing is distinguished by its high-tech nature and includes the production of complex materials, new technologies like fuel and PV cells, and other electronics. They share a reliance on cutting edge technology and skilled workers.



Niche Targets

- Aerospace Components
- Clean Energy
- Energy Equipment & Supplies
- Nanotechnology
- Metal Working & Products

Key Numbers

- Local Employment: **1,103**
- Concentration (LQ): **0.6**
- Annual Growth, 2007-2012: **-0.9%**
- Forecast Annual Growth, 2012-2017: **0.1%**
- Average Salary: **\$69,100**

Why Provo?

- Existing workforce and company presence
- Mountain Vista Business Center
- Transportation infrastructure
- Research and development initiatives and facilities at BYU
- Young and well-educated workforce
- Competitive business climate

Major Employers

- Sii Megadiamond
- Action Target, Inc.
- McWane, Inc.
- Novatek
- Monogram Systems
- Duncan Aviation
- Solid Carbon Products
- Vivint / Blackstone Group
- Champion Safe Co.

Consumer Products

About the Industry

Consumer Products are another division of the overall manufacturing industry. This includes the manufacture of a wide range of products for general consumer purchase such as clothing, toys, sporting goods, vitamins, and jewelry.

The Consumer Products industry cluster has not performed well in recent years as the recession has cut many American family budgets and sharply reduced consumer spending. The overall Consumer Products cluster saw average annual employment declines of -6% over the last five years in the US. Utah County witnessed smaller contraction, roughly -3% per year over the same period. At the same time, Provo performed extremely well, with the overall industry growing 5.3%, led by strong growth in Jewelry & Silverware Manufacturing and Sporting & Athletic Goods Manufacturing.

As the national economy continues to recover and retail spending jumps, Consumer Products employment is forecasted to decline less rapidly, with US growth projected at an annual rate of -2% over the next five years. Provo, on the other hand, is predicted to experience positive job growth of 5% a year in the cluster over the same time frame. Growth could exceed forecasts if the City adopts this as an economic development target.

Consumer Products operations tend to be smaller scale than Advanced Manufacturing operations. Today, many US-based Consumer Products operations focus on design, sales and marketing, and efficient production of manufactured products. Demand for handcrafted, small-batch, and highly customized products is rising. Entrepreneurship in Consumer Products production is also increasing. The increasing prevalence of online retailers allows many of these operations to succeed without interfacing with physical store retailers.

Existing Consumer Products jobs in the City of Provo have an average annual salary of \$46,200, just below the average salary for all industries of \$48,400.



Consumer Products

Nutraceuticals

Outdoor
Recreational
Goods

Online Consumer
Services

Target niche sectors identified for Provo are:

- Nutraceuticals
- Outdoor Recreational Goods
- Online Consumer Services

Why Provo?

Provo has a very highly concentrated Consumer Products cluster, with an LQ of 2.3. The most concentrated sectors in Provo are Sporting & Athletic Goods Manufacturing (LQ of 13.7); Office Supplies Manufacturing (LQ of 8.2); Jewelry & Silverware Manufacturing (LQ of 5.8); Cut & Sew Apparel Manufacturing (LQ of 1.9); and All Other Miscellaneous Manufacturing (LQ of 1.2). Utah County has additional high concentrations in Medicinal & Botanical Manufacturing; Toilet Preparation Manufacturing (this includes lotions and other personal care products); Doll, Toy, & Game Manufacturing; and Sign Manufacturing. A significant share of jobs in Sporting & Athletic Goods Manufacturing come from Action Target, which the consulting team classifies as a Security Equipment company under the Advanced Manufacturing target.

Nu Skin, a global anti-aging product company, is headquartered in Provo, employing 1,200. Nu Skin has invested \$85 million in its new Innovation Center and downtown campus and continues to be a strong Consumer Products technology, sales, and distribution hub in the region. Nu Skin's operations in Provo are registered with the government as wholesale trade but otherwise would count as a significant presence in the city in Toilet Preparation Manufacturing.

Consumer Products employment concentrations reflect a wide range of assets and major company locations in Provo, representing basic products such as office and sports equipment, design-based custom goods like jewelry, and more complex and scientific products such as lotions and vitamins. Regional strengths in Medicinal and Botanical Manufacturing are largely due to Provo's growing **Nutraceuticals** niche sector, best represented by Morinda, the local nutritional supplement manufacturer. Sales of nutritional supplements have risen in recent years as consumers become more health conscious and researchers develop new understanding of health processes and therapies. Provo's healthy living culture also creates a well-matched environment for these operations. Other Utah County companies include Nature's Sunshine (Lehi), CBS Nutrition Corp. (Lindon), and Twinlab Corporation (American Fork).

Outdoor Recreational Goods is a branch of consumer goods that includes sports and hiking apparel, hunting tools, camping materials, recreational equipment such as kayaks and canoes, sporting goods, and other retail products for general outdoor use. In the Provo, this sector is forecasted to grow 8% a year over then next five years. Provo is currently home to Grim Reaper Broadheads, an arrowhead manufacturing company, and Atomik Climbing Holds, a climbing gear manufacturing firm. These types of operations represent the diverse range of activities

included in this emerging sector. Firms such as Authentic Concepts in the 110-job Cut and Sew Apparel Manufacturing sector also support this niche sector. Utah County hosts a number of other sport uniform and outdoor gear manufacturing firms in other cities.

Outdoor Recreational Goods manufacturing requires strong engineering and design skillsets. BYU and UVU award a high concentration of Engineering and Creative Arts & Design degrees each year, assuring a steady supply of designers and engineers to compliment the existing manufacturing workforce. As with Nutraceuticals, Provo's emphasis on healthy living and outdoor lifestyle creates a strong brand image for these operations and a draw for talent. The State of Utah also targets Outdoor Products, creating opportunities for alignment with state economic development programs.

As many Consumer Products operations sell directly to customers or through third-party online retailers, **Online Consumer Services** has become an important part of this industry. With a large and highly concentrated information technology workforce and numerous online retailers and internet businesses, Provo is well-positioned to host companies servicing the sales and customer needs of these manufacturers.

Top Selling Points

- The concentrated Consumer Products cluster highlights Provo's competitive strengths for companies in this field.
- The popularity of health, fitness, and outdoor sports products continues to increase. Provo has a long history of success inventing and producing those products. The city also has a strong tradition in a range of craft sectors.
- Provo's healthy lifestyle and terrific outdoor amenities support its brand identity as a smart location for many Consumer Products operations, particularly in Nutraceuticals and Outdoor Recreational Goods.
- NuSkin's new corporate office downtown will bolster global awareness of Provo's Consumer Products cluster.
- Provo has a growing and entrepreneurial young professional population who can help fuel the growth of this cluster through new startups.
- The Information Technology industry in Provo supports Online Consumer Services, helping product manufacturers market, sell, and distribute their goods.
- Overall, the LDS population has strong customer service and sales skills gained through church mission work. This is a significant advantage for all businesses, but especially Consumer Products companies.

The table on the following page presents Consumer Products Industry Trends in the Provo region, displaying the location quotients (relative concentration) and employment of the overall industry and each subsector in Provo and Utah County. The table also shows recent and forecast growth trends for Provo, Utah County, and the US. Forecasts focus on these geographies to demonstrate the overall position of the industry in the regional and national economy as well as competitiveness of the City of Provo, which draws from assets throughout the County. (Sectors are defined using NAICS codes selected by the consulting team).

Consumer Products Industry Trends

Provo, UT

Subsector		2012 LQ Provo	2012 Employment Provo	2012 LQ Utah Cty	Recent Trends, 2007-2012 Average Annual Growth			Forecast Trends, 2012-2017 Average Annual Growth		
					Provo	Utah Cty	US	Provo	Utah Cty	US
3152	Cut & Sew Apparel Manufacturing	● 1.9	78	● 0.8	0.0%	0.0%	-7.9%	-5.8%	-4.0%	-7.9%
3159	Apparel Accessories & Other Apparel Mfg.	-	-	-	-	-	-8.7%	-	-	-1.5%
3161	Leather & Hide Tanning and Finishing	● 0.5	5	○ 0.1	-	0.0%	-4.6%	0.0%	0.0%	-3.0%
3162	Footwear Manufacturing	-	-	-	-	-	-4.9%	-	-	-3.2%
3169	Other Leather & Allied Product Manufacturing	● 1.2	5	○ 0.4	-	0.0%	-3.1%	0.0%	0.0%	-1.7%
325411	Medicinal & Botanical Manufacturing	-	-	● 9.1	-	-7.4%	-3.9%	-	-5.7%	-1.5%
32562	Toilet Preparation Manufacturing	-	-	● 3.2	-	-15.7%	-2.1%	-	-4.2%	0.0%
33991	Jewelry & Silverware Manufacturing	● 5.8	59	● 2.5	11.7%	13.9%	-7.3%	6.8%	11.1%	-0.5%
33992	Sporting & Athletic Goods Manufacturing	● 13.7	206	● 5.6	9.3%	9.3%	-5.2%	7.6%	7.5%	-1.1%
33993	Doll, Toy, & Game Manufacturing	-	-	● 2.7	-	48.4%	-9.4%	-	3.6%	-10.9%
33994	Office Supplies (except Paper) Manufacturing	● 8.2	36	● 10.3	0.0%	-0.2%	-10.4%	4.1%	4.2%	-10.4%
33995	Sign Manufacturing	-	-	● 1.2	-	0.4%	-3.7%	-	7.5%	3.8%
33999	All Other Miscellaneous Manufacturing	● 1.2	48	● 0.9	-1.6%	-1.0%	-4.5%	5.3%	5.0%	0.3%
TOTAL		● 2.3	437	● 2.1	5.3%	-2.9%	-5.6%	4.8%	2.6%	-1.8%

Source: Avalanche Consulting using U.S. Bureau of Labor Statistics, forecast data from EMSI

LQ = Location Quotient: Per capita concentration of the industry as % of US concentration

CONSUMER PRODUCTS – PROVO OPPORTUNITY MATRIX

Industry Definition

Consumer Products are another faction of the overall manufacturing industry. This includes the manufacture of a wide range of products for general consumer purchase such as clothing, toys, sporting goods, vitamins, and jewelry.



Niche Targets

- Nutraceuticals
- Outdoor Recreational Goods
- Online Consumer Services

Key Numbers

- Local Employment: **437**
- Concentration (LQ): **2.3**
- Annual Growth, 2007-2012: **5.3%**
- Forecast Annual Growth, 2012-2017: **4.8%**
- Average Salary: **\$46,200**

Why Provo?

- Diverse existing company presence
- Healthy living and outdoor lifestyle of Provo matches branding and culture of industry
- Large IT sector supports Online Consumer Services
- Customer service and sales skillsets

Major Employers

- Morinda, Inc.
- Nu Skin
- Nature's Sunshine Products (Lehi)
- CSB Nutrition Corp. (Lindon)
- Twinlab Corp. (American Fork)
- Neways, Inc. (Salem)
- Atomik Climbing Holds

Hospitality & Tourism

About the Industry

The Hospitality & Tourism industry cluster is highly diverse, ranging from lodging, casinos, cruise lines, convention centers, resorts and restaurants to sporting events, outdoor recreation, and retail stores.

Retail includes national and regional chain stores as well as local and independent retailers selling a broad variety of goods. Individual income levels, consumer confidence, and interest rates drive retail demand. Large chain merchandisers gain economies of scale due to their purchasing power and distribution networks. Smaller retailers can gain a competitive advantage by focusing on unique merchandise, customer service, and adapting to local market demand.

Tourism and retail expenditures declined during the recession as many Americans cut back on discretionary expenditures, but recent trends show both sectors rebounding. As the economy recovers, more Americans are able to travel, purchase luxury goods, and access entertainment. The record-breaking retail spending of the 2012 holiday season indicates that there has been sizable pent-up demand for retail goods. Even though the economy is not at pre-recession levels, confidence has returned and Americans are ready to spend money. Increased economic activity also means more business travel, sales meetings, and conventions, which will further strengthen the Hospitality and Tourism cluster.

According to the US Travel Industry Association, 71% of US adults took at least one leisure trip in the past year. As airline ticket prices increase, day and weekend leisure trips by car are becoming more popular. This is a promising trend for Provo, especially if the Valley is positioned as a destination for residents of Utah and neighboring states.

Target niche sectors identified for Provo are:

- Conventions
- Culinary
- Downtown Retail
- Outdoor Recreation & Sports



Hospitality & Tourism

Conventions

Culinary

Downtown Retail

Outdoor
Recreation &
Sports

Specialty Retail

- Specialty Retail

Why Provo?

Provo is currently an under-recognized Hospitality & Tourism destination within the State of Utah. Provo has a lower than average concentration of employment in Hospitality & Tourism with an LQ of 0.8 and 8,6000 employed in the cluster. Utah County has an additional 26,000 employed in this cluster for an overall county LQ of 1.0. The most concentrated Hospitality & Tourism subsectors in Provo are All Other Amusement & Recreation Industries (LQ of 2.3); Hotels & Motels (LQ of 1.7); Limited-Service Eating Places (LQ of 1.3); Sporting Goods, Hobby, Book, & Music Stores (LQ of 1.2); Museums, Historical Sites, & Similar Institutions (LQ of 1.1); and Clothing & Clothing Accessories Stores (LQ of 1.0). Utah County has additional concentrations in Motor Vehicle & Parts Dealers; Furniture & Home Furnishings Stores; Electronics & Appliance Stores; and General Merchandise Stores. The largest employment sectors in Provo are Limited-Service Eating Places (2,000 jobs); Full-Service Restaurants (1,400 jobs); General Merchandise Stores (780 jobs); and Food & Beverage Stores (690 jobs). Hospitality & Tourism employment is predicted to grow at the same rate as the US over the next five years at an average annual rate of 0.9%.

Building hospitality and tourism amenities in Provo serves a more important purpose than just generating new jobs. It serves a critical role of improving overall quality of life for area residents and visitors. Companies in other target industries desire a location with a great lifestyle that appeals to their employees and helps them recruit new talent. Ultimately, hospitality and tourism assets enhance economic development potential.

In general, retail is more concentrated in Utah County than the City of Provo itself as seen in the table below. However, redevelopment of Provo's downtown opens up opportunities to further enhance **Downtown Retail** and **Specialty Retail**. Provo may have lost some major box retailers during the recession, but by focusing on Downtown and Specialty retail, Provo can build its retail base and meet the needs of residents and visitors. A growing buy-local campaign, a tourism marketing strategy, and drawing more BYU students into downtown Provo will aid in the support of downtown and specialty retail businesses. As discussed in the retail trade section of *Report 1: Competitive Evaluation*, Provo's highest rates of retail leakage are in the Clothing and Clothing Accessories Stores; Other Miscellaneous Store Retailers; and Office Supplies, Stationary, & Gift Stores. In addition, Provo has a low per capita sales concentration of the following: Food & Beverage Stores; Furniture & Home Furnishings Stores; and General Merchandise Stores.

Similarly, improvements to Downtown Provo should include further development of the **Culinary** niche. With a current concentration of employment lower than the US average (LQ of 0.8), Provo currently has room to grow Full-Service Restaurants. Increasing the number of independently owned full-service restaurants would draw visitors into Provo and improve the city's quality of life. The burgeoning culinary movement in Provo - including establishments like Communal, Spark, the Old Towne Grill, and Black Sheep Cafe (just to name a few) - has big potential. Establishing a culinary school in downtown will further energize this sector.

Local resident demand will be supplemented by visitor spending. Provo is particularly well positioned to attract more business visitors through **Conventions**. The new Utah Valley Convention Center is a state-of-the-art, LEED certified facility capable of hosting a wide variety of events. Located only 45 minutes south of Salt Lake City and home to BYU, Provo is well positioned to host large business, non-profit, and educational convention events as well as support regional activities, such as weddings.

In addition to retail, restaurants, and business, Provo can market itself as a destination for **Outdoor Recreation and Sports**. Visitors are drawn to Utah for the beautiful scenery and outdoor recreation. Provo itself has a strong outdoor and healthy lifestyle culture and a strong Parks and Recreation department. The Sports Division has numerous facilities and adult and youth sports leagues, and Provo has over 40 city parks and miles of trails, including Provo Canyon. Provo also hosts a wide variety of recreational events, including America's Freedom Festival, WinterFest, Pioneer Day Extravaganza, Movies in the Park, Halloween Carnival, and many more. These quality assets can be a major draw for tourists from across Utah and neighboring states. Additional retail and dining options will round out the city's visitor experience, completing the package of offerings and creating a reason for visitors to spend more time in Provo.

Top Selling Points

- The newly completed Utah Valley Convention Center is a state-of-the-art facility well situated to host a diverse range of conventions drawing from BYU, Salt Lake City, and surrounding communities.
- Provo's historic downtown is poised for revitalization. Historic buildings, proximity to BYU, and access to the interstate, make downtown Provo an ideal location for retail and tourism, particularly specialty retail that reflects the community's character.
- Numerous major tourist events in downtown Provo continue to elevate the city's brand recognition. The completion of the historic temple will draw more visitors each year.
- Numerous parks and sporting facilities offer a strong draw for day visits from throughout the region.
- The convenient Provo Airport offers daily commercial service and potential for increased connectivity in the future.
- Provo is only an hour from Salt Lake City International Airport, which features international flights, 90 non-stop destinations, and is consistently ranked one of the best in the nation by flyers.

The table on the following page presents Hospitality & Tourism Industry Trends in the Provo region, displaying the location quotients (relative concentration) and employment of the overall industry and each subsector in Provo and Utah County. The table also shows recent and forecast growth trends for Provo, Utah County, and the US. Forecasts focus on these geographies to demonstrate the overall position of the industry in the regional and national economy as well as competitiveness of the City of Provo, which draws from assets throughout the County. (Sectors are defined using NAICS codes selected by the consulting team).

Report 2: Target Industry Identification - DRAFT

Hospitality & Tourism Industry Trends

Provo, UT

Subsector		2012 LQ	2012 Employment	2012 LQ	Recent Trends, 2007-2012 Average Annual Growth			Forecast Trends, 2012-2017 Average Annual Growth		
NAICS	Description	Provo	Provo	Utah Cty	Provo	Utah Cty	US	Provo	Utah Cty	US
441	Motor Vehicle & Parts Dealers	0.8	477	1.0	-3.4%	-4.1%	-2.7%	1.7%	1.2%	-0.1%
442	Furniture & Home Furnishings Stores	0.6	103	1.1	-7.7%	-6.2%	-5.3%	-0.6%	0.7%	0.4%
443	Electronics & Appliance Stores	0.7	130	1.2	0.8%	-0.5%	-2.3%	-0.2%	-1.6%	0.6%
444	Building Material & Garden Equip. & Supplies	0.6	284	0.9	-7.0%	-5.7%	-2.4%	0.1%	0.5%	0.9%
445	Food & Beverage Stores	0.6	689	0.9	-0.6%	-1.6%	0.0%	0.4%	0.3%	0.3%
446	Health & Personal Care Stores	0.6	232	0.8	-1.3%	-1.7%	0.1%	1.3%	0.8%	1.3%
447	Gasoline Stations	0.5	168	0.9	-5.5%	-5.4%	-1.1%	-2.9%	-3.1%	-0.5%
448	Clothing & Clothing Accessories Stores	1.0	552	0.9	-3.8%	-4.1%	-0.6%	1.0%	1.0%	0.5%
451	Sporting Goods, Hobby, Book, & Music Stores	1.2	270	1.9	-3.3%	-3.2%	-2.0%	2.7%	2.2%	0.3%
452	General Merchandise Stores	0.7	783	1.4	0.1%	3.1%	0.3%	-1.5%	4.0%	1.2%
453	Miscellaneous Store Retailers	0.8	220	1.1	-2.0%	-0.8%	-2.5%	1.2%	1.8%	-0.3%
561510	Travel Agencies	0.2	5	0.1	0.0%	-19.3%	-6.1%	-	-18.6%	-1.1%
561591	Convention & Visitors Bureaus	1.6	5	0.5	-14.6%	-14.6%	-1.2%	0.0%	0.0%	2.5%
56192	Convention & Trade Show Organizers	0.3	5	0.7	0.0%	-3.0%	-3.5%	0.0%	-1.7%	0.5%
7111	Performing Arts Companies	0.1	5	0.6	0.0%	3.9%	-1.4%	0.0%	7.1%	0.3%
7112	Spectator Sports	-	-	0.3	-	-2.7%	-1.5%	-	2.4%	1.4%
7113	Promoters of Perf. Arts, Sports, & Similar Events	0.1	5	0.2	0.0%	33.2%	2.5%	0.0%	-9.1%	1.8%
7114	Managers for Artists, Athletes, Entertainers	0.6	5	0.2	0.0%	-20.8%	0.9%	0.0%	0.0%	1.3%
7115	Independent Artists, Writers, & Performers	0.3	5	0.5	-16.1%	-12.9%	-1.4%	0.0%	-1.3%	2.5%
7121	Museums, Historical Sites, & Similar Institutions	1.1	54	1.4	-3.9%	-3.8%	1.4%	3.5%	3.6%	1.7%
7131	Amusement Parks & Arcades	0.1	5	0.1	0.0%	33.2%	1.8%	0.0%	8.8%	0.7%
71391	Golf Courses & Country Clubs	0.1	17	0.3	1.2%	0.8%	-0.4%	2.2%	2.9%	1.8%
71394	Fitness & Recreational Sports Centers	0.4	73	0.6	-11.4%	-11.4%	-0.3%	-0.3%	-0.3%	2.5%
71395	Bowling Centers	0.2	5	0.5	0.0%	4.9%	-2.7%	17.1%	2.8%	-0.7%
71399	All Other Amusement & Recreation Industries	2.3	111	1.6	6.8%	6.8%	-0.3%	4.8%	4.8%	0.8%
72111	Hotels (except Casino Hotels) & Motels	1.7	908	0.6	1.6%	1.7%	-0.5%	1.4%	1.4%	0.7%
7212	RV Parks & Recreational Camps	0.3	5	0.2	-17.4%	-32.1%	-0.6%	0.0%	-18.6%	2.0%
7213	Rooming & Boarding Houses	-	-	-	-	-	0.9%	-	-	-0.4%
7221	Full-Service Restaurants	0.8	1,384	0.7	0.5%	0.5%	0.4%	1.3%	1.3%	1.3%
7222	Limited-Service Eating Places	1.3	2,014	1.4	2.8%	2.9%	0.4%	1.2%	1.2%	1.3%
7223	Special Food Services	0.4	84	0.2	-3.0%	-6.0%	0.8%	0.7%	0.1%	0.9%
7224	Drinking Places (Alcoholic Beverages)	0.2	20	0.1	-2.8%	-2.6%	-0.3%	0.0%	0.0%	0.4%
TOTAL		0.8	8,623	1.0	-0.6%	-0.7%	-0.5%	0.9%	1.5%	0.9%

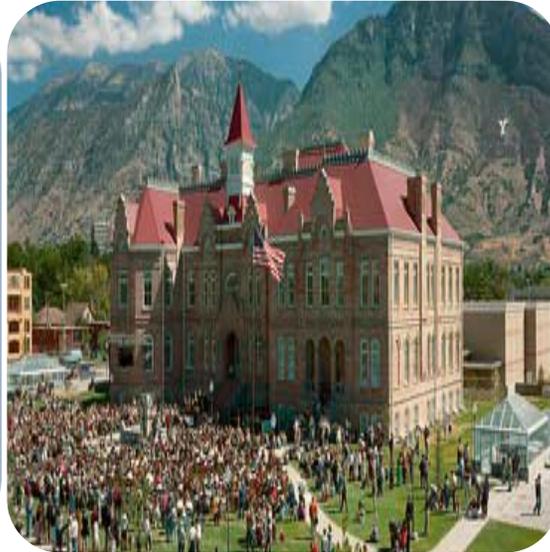
Source: Avalanche Consulting using U.S. Bureau of Labor Statistics, forecast data from EMSI

LQ = Location Quotient: Per capita concentration of the industry as % of US concentration

HOSPITALITY & TOURISM – PROVO OPPORTUNITY MATRIX

Industry Definition

The Hospitality & Tourism industry is highly diverse, ranging from hotels, casinos, convention centers, resorts, and restaurants to sporting events, outdoor recreation, shopping malls, grocery stores, and boutiques.



Niche Targets

- Conventions
- Culinary
- Downtown Retail
- Outdoor Recreation & Sports
- Specialty Retail

Key Numbers

- Local Employment: **6,623**
- Concentration (LQ): **0.8**
- Annual Growth, 2007-2012: **-0.6%**
- Forecast Annual Growth, 2012-2017: **0.9%**
- Average Salary: **\$20,400**

Why Provo?

- The Utah Valley Convention Center is a major asset for attracting visitors
- Provo's downtown is poised for revitalization and development of retail and tourism opportunities
- Parks, sporting facilities, and events are a major draw for visitors from inside and outside the region

Major Employers

- Marriot Hotel & Conference Center
- Utah Valley Convention Center
- Provo Towne Center Mall
- Home Depot
- JCPenny
- Sam's Club

Information Technology

About the Industry

The Information Technology (IT) industry broadly describes operations engaged in software production, Internet services, computer systems design, digital media production and design, data hosting, and technology consulting services.

The IT industry is growing rapidly and constantly evolving, driven by technological innovation and changes in business operations. Through the recession, the computer and software sectors of the IT industry grew nationally while digital media, design, and advertising saw continued job losses. As a whole, the IT industry shrank -1.0% annually in the US while growing 0.7% each year in Provo from 2007 to 2012. IT industry growth in Utah County outpaced the city, with IT employment growing 2.6% annually during the same time period. Much of this local growth was in computers, data centers, and advertising.

Nationally, IT jobs are found within all industries, not just software and other IT-specific companies. Most large companies have dedicated IT departments, with staff developing software applications, managing data storage, and maintaining computer systems. Other companies may outsource their IT needs to third parties, including data center management operations. Because of this, employment data often does not reflect the actual number of IT workers in an economy. It could be far higher than the number of IT jobs shown in standard Bureau of Labor Statistics numbers.

New business opportunities in the IT industry are often driven by new technology. Development of increasingly sophisticated hardware such as smartphones and tablets allows for new ways of doing business, collecting data, and connecting with consumers. These hardware devices serve as advanced platforms for software development, particularly software supporting mobile applications and digital media. Digital media and creative design in particular continue to find new applications as hardware advances, allowing for new media interactions with phones, television, stereos, tablets, cars, and a wide assortment of devices.



Information Technology

Data Centers

Digital Media & Creative Design

Software & Web Applications

The collection, analysis, storage, and application of data has also become a key factor in IT, as mobile functionality allows businesses to collect information about users and move storage to the “cloud.” These developments allow for email, word processing, customer relations, banking, and even human resources to operate in a more mobile and flexible system. These services collect and transmit a significant amount of data, making the IT industry highly dependent on strong broadband Internet infrastructure.

The mobile nature of new IT systems allows data storage to occur remotely, so businesses do not need to host servers on location. This creates a new demand for remote storage in virtual servers and other low-cost data center options. Data processing, hosting, and related services are projected to be one of the fastest growing IT sectors in the US over the next five years. These operations primarily look for locations with strong infrastructure, low-cost electricity, and geographical security (low-risk of service disruption by tornadoes, hurricanes, earthquakes and other natural disasters).

Existing Information Technology jobs in the City of Provo have an average annual salary of \$88,000, significantly above the average salary for all industries of \$48,400. This industry has the highest salaries among Provo’s targets.

Target niche sectors identified for Provo are:

- Data Centers
- Digital Media & Creative Design
- Software & Web Applications

Why Provo?

Information Technology is one of Provo’s strongest industry clusters. With over 4,500 employees working in the cluster, Provo has an IT LQ of 2.8. Another 11,000 IT jobs exist in other parts of Utah County. The Provo IT industry grew through the recession, at an average annual rate of 0.7%. Nearly all IT sectors are highly concentrated in Provo, but some of the most concentrated areas are: Internet Publishing & Web Search Portals (LQ of 15.9); All Other Information Services (LQ of 15.5); Software Publishers (LQ of 11.8); Data Processing, Hosting, & Related Services (LQ of 7.3); and Custom Computer Programming Services (LQ of 2.6). Utah County has additional concentrations in Advertising Agencies; Advertising Material Distribution Services; Printing & Related Support Activities; and Industrial Design Services. Provo also has high employment concentrations in numerous design sectors. The largest employment sectors are Software Publishers (1,200 jobs); Internet Publishing & Web Search Portals (680 jobs); Data Processing, Hosting, & Related Services (680 jobs); and Custom Computer Programming Services (670 jobs).

The IT cluster, which has high projected annual growth of 1.5% nationally over the next five years, is estimated to grow more than twice as quickly in Provo at 3.4% a year, indicating a significant opportunity for target development. The State of Utah targets Software Development & IT, providing numerous resources to support development of this industry in Provo.

As seen in employment concentrations discussed, **Software & Web Applications** are one of Provo's most significant strengths. Provo currently is home to a wide range of web and software operations, including Ancestry.com, Bluehost, Insidesales.com, and many more. Long known as a software tech hub, BYU, UVU, and the young, well-educated population continue to power this niche sector in Provo. BYU and UVU both award a high concentration of Software and Computer Science degrees. Computer occupations are the most concentrated in Provo and continue to grow. IT operations such as software often choose locations based on quality of life, and Provo's appealing community is another selling point.

Similarly, BYU's Digital Media Program, UVU's Gaming & Animation and other Digital Media programs – and between the universities significant numbers of degrees awarded in these fields – contribute to a robust local **Digital Media & Creative Design** niche sector. This sector is focused on creating visual, audio, and other content for a range of industries. Traditional media production such as film, print, and audio CD are still major employers, but they are shrinking in size. Many of the same design skillsets continue to shift towards digital media such as flash animation, graphic design, and audio recording. The state has identified digital media as a target in the Utah Cluster Acceleration Partnership (UCAP) initiative. As part of this initiative, the state has launched a pilot project in digital media convened by UVU to help align educational programs with industry needs. The city and county have strong existing employment concentrations in Graphic Design, Photography, Printing, Advertising, and other content creating industry sectors. Continued development of these sectors in conjunction with the broader software, Internet, and traditional media sectors has strong promise for Provo.

Provo has a highly concentrated **Data Centers** sector that employs 680 in Provo and another 1,800 in Utah County. Geological and atmospheric stability, available sites, proximity to Salt Lake City, and a skilled workforce are major selling points for data center operations in Provo. New innovations in data center design and operations means that buildings are more efficient, require less power, and are not as glued to locations with the cheapest power. Now site locators can assess potential locations on other merits as well. Often colder climates are preferred due to decreased need for cooling, giving Provo an additional competitive edge.

Top Selling Points

- Highly concentrated existing IT industry, with many Internet, software, and computer firms
- Longstanding reputation as an IT hub and center of innovation and entrepreneurship, with numerous homegrown IT headquarters
- Educational and research strengths in BYU, particularly in software and digital media and design, including the Digital Media Lab, ensure a continuing pipeline of new workers and innovative technologies

- Young, well-educated, and entrepreneurial workforce, with many BYU graduates staying in Provo and starting software companies
- Outdoor recreation and fit lifestyle that appeals to IT talent
- High quality of life and relatively low cost of living and doing business in contrast to expensive competitor regions such as California

The table on the following page presents Information Technology Industry Trends in the Provo region, displaying the location quotients (relative concentration) and employment of the overall industry and each subsector in Provo and Utah County. The table also shows recent and forecast growth trends for Provo, Utah County, and the US. Forecasts focus on these geographies to demonstrate the overall position of the industry in the regional and national economy as well as competitiveness of the City of Provo, which draws from assets throughout the County. (Sectors are defined using NAICS codes selected by the consulting team).

Information Technology Industry Trends

Provo, UT

Subsector	2012 LQ	2012 Employment	2012 LQ	Recent Trends, 2007-2012			Forecast Trends, 2012-2017		
				Average Annual Growth			Average Annual Growth		
NAICS Description	Provo	Provo	Utah Cty	Provo	Utah Cty	US	Provo	Utah Cty	US
3231 Printing & Related Support Activities	0.8	137	1.3	-13.1%	-8.1%	-6.6%	-2.9%	-0.1%	-2.2%
5111 Newspaper, Periodical, Book, & Dir. Publishers	1.3	222	1.0	-11.7%	-9.0%	-6.5%	-4.5%	-2.0%	-2.1%
5112 Software Publishers	11.8	1,220	6.8	-3.9%	-3.9%	1.6%	-1.6%	-1.6%	2.5%
5121 Motion Picture & Video Industries	1.3	164	0.9	-4.9%	-5.3%	-0.7%	0.1%	-0.5%	1.2%
5122 Sound Recording Industries	0.9	5	0.8	0.0%	-4.6%	-7.8%	0.0%	-4.4%	-3.6%
5152 Cable & Other Subscription Programming	-	-	0.9	-	1.9%	-2.3%	-	1.0%	1.9%
518 Data Processing, Hosting & Related Services	7.3	675	7.8	20.8%	20.8%	-2.0%	13.1%	13.1%	2.9%
51913 Internet Publishing & Web Search Portals	15.9	681	9.5	-0.1%	-0.1%	9.6%	3.6%	3.6%	2.9%
51919 All Other Information Services	15.5	64	8.4	-7.4%	-7.5%	-1.3%	-6.8%	-6.5%	1.2%
541410 Interior Design Services	0.4	5	0.3	0.0%	-19.3%	-6.4%	0.0%	-17.4%	1.3%
541420 Industrial Design Services	-	-	1.5	-	4.4%	2.9%	-	10.5%	5.1%
541430 Graphic Design Services	1.2	29	3.7	-1.3%	-1.4%	-2.9%	7.7%	7.8%	1.8%
541490 Other Specialized Design Services	-	-	0.3	-	-39.4%	-0.9%	-	0.0%	6.2%
541511 Custom Computer Programming Services	2.6	673	4.1	10.4%	10.4%	2.8%	5.9%	5.9%	3.4%
541512 Computer Systems Design Services	1.4	404	0.8	5.9%	5.9%	3.9%	2.5%	2.5%	3.8%
541513 Computer Facilities Management Services	-	-	0.1	-	-36.6%	-2.1%	-	0.0%	-0.9%
541519 Other Computer Related Services	1.8	77	3.7	7.8%	7.5%	1.1%	1.5%	1.6%	0.5%
541810 Advertising Agencies	0.5	35	1.3	9.7%	9.6%	-1.2%	5.6%	5.8%	0.9%
541820 Public Relations Agencies	1.5	29	0.6	0.7%	0.0%	0.4%	0.0%	0.5%	1.8%
541830 Media Buying Agencies	-	-	0.3	-	0.0%	3.6%	-	0.0%	3.2%
541840 Media Representatives	-	-	0.1	-	0.0%	-3.9%	-	0.0%	-0.4%
541850 Display Advertising	0.4	5	0.1	0.0%	0.0%	-1.8%	0.0%	0.0%	1.7%
541860 Direct Mail Advertising	0.3	5	0.2	0.0%	-16.5%	-6.9%	0.0%	-19.7%	-4.7%
541870 Advertising Material Distribution Services	-	-	1.2	-	35.7%	-3.3%	-	-15.3%	-0.3%
541890 Other Services Related to Advertising	2.3	55	5.2	16.2%	15.9%	-1.3%	6.1%	6.3%	1.6%
541910 Marketing Research & Public Opinion Polling	1.0	38	4.1	-6.1%	-6.2%	-2.2%	-17.0%	-16.5%	-2.4%
541921 Photography Studios, Portrait	1.4	31	1.4	2.8%	2.4%	-3.4%	-1.3%	-1.2%	0.5%
541922 Commercial Photography	1.6	5	1.8	0.0%	-4.6%	-5.8%	0.0%	7.3%	-2.9%
TOTAL	2.8	4,554	2.7	0.7%	2.6%	-1.0%	3.4%	4.3%	1.5%

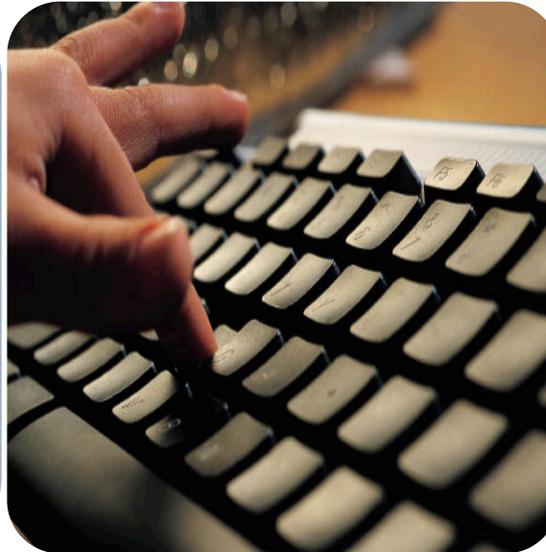
Source: Avalanche Consulting using U.S. Bureau of Labor Statistics, forecast data from EMSI

LQ = Location Quotient: Per capita concentration of the industry as % of US concentration

INFORMATION TECHNOLOGY – PROVO OPPORTUNITY MATRIX

Industry Definition

The Information Technology industry broadly describes operations engaged in software production, Internet services, computer systems design, digital media production and design, data hosting, and technology consulting services.



Niche Targets

- Data Centers
- Digital Media and Creative Design
- Software and Web Applications

Key Numbers

- Local Employment: **4,554**
- Concentration (LQ): **2.8**
- Annual Growth, 2007-2012: **0.7%**
- Forecast Annual Growth, 2012-2017: **3.4%**
- Average Salary: **\$88,000**

Why Provo?

- Highly concentrated existing IT industry
- Reputation as an IT hub, with many home-grown operations headquartered locally
- BYU supplies well-educated workforce pipeline, particularly in software and digital media
- High quality of life appeals to talent
- Affordable business costs

Major Employers

- Ancestry.com, Inc.
- Novell, Inc.
- Bluehost, Inc.
- Adaptive Computer Enterprises
- DHI-PROVO
- Intelliserv, Inc.
- Sirsi Corp.
- Insidesales.com, Inc.

Life Sciences

About the Industry

The Life Sciences industry cluster broadly captures all research, services, and products related to human and environmental health.

Life Sciences is one of the largest clusters in the US, generating over \$2 trillion a year in sales and employing millions. The cluster has grown rapidly due to a growing older population that has increased demand for healthcare services and products. The Life Sciences industry grew at an average annual rate of 2.3% in the US from 2007 to 2012. Life Sciences employment grew even more rapidly (4.5%) in Provo during this period. Growth is projected to continue as the Baby Boomer ages. Overall, the Life Sciences cluster is projected to grow nationally at an average annual rate of 2.1% over the next five years.

Healthcare services include hospitals, outpatient care, dental care, elderly care, and other medical services. Demand for these services is driven by demographics and availability of care. Large healthcare providers have access to research and offer a variety of services through negotiated contracts with health insurance companies. Smaller healthcare providers compete by offering specialty services and serving a more limited geographic area. As healthcare costs rise, many major healthcare providers are adjusting their services to save costs. They often partner with physician networks to provide outpatient services, for example, which is currently the greatest source of patient care revenue.

Developments in biotechnology and medical devices are driven by technology and research. The US leads the world in cutting edge life science research with major hubs in San Diego and Boston. As costs rise in these regions and research opportunities expand elsewhere, smaller biotech hubs are emerging across the nation. Many of these smaller hubs have built their Life Sciences clusters around very specific local strengths, such as food safety, genomics, or prosthetics, to name just a few.

Existing Life Sciences jobs in the City of Provo have an average annual salary of \$53,100, above the average salary for all industries of \$48,400.



Life Sciences

Biotechnology

Diagnostics

Healthcare
Services

Medical Device
Manufacturing

Target niche sectors identified for Provo are:

- Biotechnology
- Diagnostics
- Healthcare Services
- Medical Device Manufacturing

Why Provo?

Life Sciences is one of the largest industry clusters in Provo, employing over 8,100 with an LQ of 1.4, reflective of the relative concentration of doctors and medical centers in the city. Utah County has an additional 12,600 Life Science jobs. The most concentrated Life Sciences sectors in Provo are Dental Laboratories (LQ of 4.2); Residential Mental Health & Substance Abuse Facilities (LQ of 3.4); Research & Development in the Physical, Engineering, & Life Sciences (LQ of 2.8); General Medical & Surgical Hospitals (LQ of 1.8); Offices of Dentists (LQ of 1.7); Offices of Physicians (LQ of 1.6); Psychiatric & Substance Abuse Hospitals (LQ of 1.3); Outpatient Care Centers (LQ of 1.1); and Nursing Care Facilities (LQ of 1.1). Utah County has additional concentrations in Medicinal & Botanical Manufacturing (which primarily represents the Nutraceuticals niche discussed in the Consumer Products profile); Pharmaceutical Preparation Manufacturing; and Other Residential Care Facilities. The State of Utah also targets Life Sciences and provides a range of educational, marketing, and business support programs that help support the industry in Provo.

In general, Provo has high employment concentrations in all forms of **Healthcare Services**, including doctor and dentist offices, clinical services, hospitals, nursing, and residential care. With the Utah Valley Regional Medical Center, Utah State Hospital, and the Central Utah Medical Clinic, Provo hosts numerous large healthcare centers. These operations have all been growing much more quickly than the national and state averages. Medical occupations are also the fastest growing occupations in the city. Provo's steady population and household growth will drive expansion of the Healthcare Services sector. In addition, population growth along the entire Utah Valley both north and south of Provo should boost demand for healthcare in Provo.

Biotechnology is another important Life Sciences niche for Provo. Biotechnology involves the use of microorganisms and biological substances in a range of applications, including manufacturing processes, environmental remediation, pharmaceutical production, food preservation, and many more. This cutting-edge field is highly dependent on research and development, which Provo has in abundance. Research and Development in the Physical, Engineering, & Life Sciences is highly concentrated (LQ of 2.) and growing rapidly (8.9% annually over the past five years compared to 2.3% nationally). These research operations include private companies as well as BYU, which conducts a wide range of related biological research with the Cancer Research Center, DNA Sequencing Center, Human Performance Research Center, and Neuroscience

Center. BYU's new 265,000 square foot Life Sciences Building is additional proof of the university's commitment to Life Sciences instruction and research. These diverse assets and a young, highly educated workforce indicate that the Biotechnology sector has the opportunity to thrive in Provo.

Related to biotechnology, **Medical Device Manufacturing** and **Diagnostics** present competitive opportunities for Provo. The city and county currently have minimal employment in surgical appliance, dental equipment, and diagnostic labs. However, existing biotechnology, research, healthcare, and advanced manufacturing strengths make Provo competitive in these sectors. Medical and diagnostic lab operations continue to develop new analytical procedures related to research and technological improvement. Medical devices similarly continuously develop their technologies through clinical trials and research. With a strong and rapidly growing healthcare system, an educated population, and significant research capacity, Provo is well positioned to develop both these niche sectors.

Top Selling Points

- Rapidly growing healthcare service sector, anchored by major medical centers
- Geographic location capable of servicing a broad regional population
- Major life science-related research centers at BYU including Cancer Research Center, DNA Sequencing Center, Human Performance Research Center, and Neuroscience Center
- Highly concentrated and rapidly growing research cluster
- Strong healthcare and life sciences education programs at UVU in nursing, pre-health, and biology
- Provo College's School of Healthcare offers certificate and associate's degrees in nursing and a variety of other healthcare related careers
- BYU's new 265,000 square foot Life Sciences Building and top-ranked pre-med and dentistry programs shows the university's commitment to teaching and research in the field

The table on the following page presents Life Sciences Industry Trends in the Provo region, displaying the location quotients (relative concentration) and employment of the overall industry and each subsector in Provo and Utah County. The table also shows recent and forecast growth trends for Provo, Utah County, and the US. Forecasts focus on these geographies to demonstrate the overall position of the industry in the regional and national economy as well as competitiveness of the City of Provo, which draws from assets throughout the County. (Sectors are defined using NAICS codes selected by the consulting team).

Life Sciences Industry Trends

Provo, UT

Subsector		2012 LQ	2012 Employment	2012 LQ	Recent Trends, 2007-2012 Average Annual Growth			Forecast Trends, 2012-2017 Average Annual Growth		
NAICS	Description	Provo	Provo	Utah Cty	Provo	Utah Cty	US	Provo	Utah Cty	US
325411	Medicinal & Botanical Manufacturing	-	-	9.1	-	-7.4%	-3.9%	-	-5.7%	-1.5%
325412	Pharmaceutical Preparation Manufacturing	0.4	32	3.6	-1.8%	-1.9%	-1.3%	0.0%	0.0%	0.7%
325413	In-Vitro Diagnostic Substance Manufacturing	-	-	-	-	-	3.6%	-	-	3.5%
325414	Biological Product (except Diagnostic) Mfg.	0.5	5	0.1	-	-	1.9%	-	0.0%	1.5%
339112	Surgical & Medical Instrument Manufacturing	-	-	-	-	-	1.5%	-	-	1.4%
339113	Surgical Appliance & Supplies Manufacturing	-	-	0.2	-	43.1%	0.4%	-	0.0%	0.4%
339114	Dental Equipment & Supplies Manufacturing	0.8	5	0.2	-	-	0.8%	0.0%	0.0%	0.9%
339115	Ophthalmic Goods Manufacturing	-	-	-	-	-	-0.8%	-	-	-0.2%
339116	Dental Laboratories	4.2	71	3.5	3.8%	3.8%	-1.7%	4.1%	4.1%	0.3%
54171	R&D in the Physical, Engineering, & Life Sciences	2.8	621	1.2	8.9%	8.7%	2.3%	3.7%	3.7%	2.0%
6211	Offices of Physicians	1.6	1,509	1.0	3.8%	3.8%	2.4%	4.6%	4.6%	2.7%
6212	Offices of Dentists	1.7	562	1.9	4.5%	4.5%	1.6%	4.5%	4.5%	2.2%
6213	Offices of Other Health Practitioners	0.9	257	1.3	5.0%	4.0%	4.0%	5.0%	4.8%	3.3%
6214	Outpatient Care Centers	1.1	274	0.5	5.9%	4.4%	4.9%	5.9%	5.2%	2.8%
6215	Medical & Diagnostic Laboratories	0.1	5	0.1	0.0%	5.7%	3.2%	0.0%	2.0%	3.1%
6216	Home Health Care Services	0.1	63	0.6	4.7%	4.8%	5.5%	3.0%	2.9%	3.7%
6219	Other Ambulatory Health Care Services	0.5	55	0.3	16.2%	15.4%	3.1%	-4.4%	-2.2%	1.6%
6221	General Medical & Surgical Hospitals	1.8	3,031	0.9	2.7%	2.7%	1.4%	1.4%	1.4%	1.3%
6222	Psychiatric & Substance Abuse Hospitals	1.2	49	0.4	-	-	1.8%	-15.6%	-15.6%	1.3%
6223	Specialty Hospitals	-	-	-	-	-	4.8%	-	-	2.8%
6231	Nursing Care Facilities	1.1	739	0.7	8.7%	8.7%	1.4%	4.1%	4.1%	2.1%
6232	Res. Mental Health & Substance Abuse Facilities	3.4	775	2.1	4.6%	4.0%	2.6%	3.9%	2.4%	1.7%
6233	Community Care Facilities for the Elderly	0.2	52	0.8	-6.0%	5.0%	3.9%	3.9%	1.7%	2.4%
6239	Other Residential Care Facilities	0.5	34	1.5	6.3%	6.3%	-0.1%	3.8%	3.5%	1.7%
TOTAL		1.4	8,139	1.0	4.5%	3.8%	2.3%	3.1%	2.9%	2.1%

Source: Avalanche Consulting using U.S. Bureau of Labor Statistics, forecast data from EMSI

LQ = Location Quotient: Per capita concentration of the industry as % of US concentration

LIFE SCIENCES – PROVO OPPORTUNITY MATRIX

Industry Definition

The Life Sciences industry broadly captures all research, service, and manufacturing sectors related to human and environmental health, including biotechnology, testing labs, medical devices, and healthcare services.



Niche Targets

- Biotechnology
- Diagnostics
- Healthcare Services
- Medical Device Manufacturing

Key Numbers

- Local Employment: **8,139**
- Concentration (LQ): **1.4**
- Annual Growth, 2007-2012: **4.5%**
- Forecast Annual Growth, 2012-2017: **3.1%**
- Average Salary: **\$53,100**

Why Provo?

- Rapidly growing healthcare services sector anchored by major medical centers
- Biological research centers at BYU and rapidly growing research cluster
- Strong healthcare training programs at BYU and Utah Valley University

Major Employers

- Utah Valley Regional Medical Center
- Utah State Hospital
- Central Utah Medical Clinic
- Fluke Electronics (American Fork)

Professional Services

About the Industry

The Professional Services industry cluster includes a wide range of professional, technical, and business services. Architecture, legal, financial, consulting, management, business support, engineering, and accounting firms are included in the Professional Services cluster.

Professional Services are generally characterized by high degrees of specialization, with companies and individuals selling their expertise in technical subjects to other companies. These services generally require secondary education at the bachelor's and frequently the master's degree levels. Due to training requirements, high demand, and specialization, professional services occupations tend to pay relatively high salaries and have strong secondary impacts on a community.

Unlike many other industries, Professional Services does not have significant infrastructure location requirements. Businesses are often capable of selling their services to a domestic and international clientele in addition to local populations. Therefore, location decisions are often made based on quality of life, presence of large client bases, business travel options, and proximity to educational institutions with a workforce pipeline.

The Professional Services industry has been relatively stagnant through the recession and recovery, despite generally high growth in recent decades. Professional Services employment contracted at an average annual rate of -0.4% nationally from 2007 to 2012 and at a slightly slower rate of -0.3% in Provo. Employment declined more rapidly in Utah County over this period. Provo job losses occurred in many sectors, particularly financial, but high growth occurred in others, including Legal Services, Accounting, Engineering Services, and Other Scientific and Technical Consulting.

Existing Professional Services jobs in the City of Provo have an average annual salary of \$53,500, above the average salary for all industries of \$48,400.



Professional Services

Call Centers
Corporate HQs
Engineering Services
Finance & Insurance
Geotechnical Services

Target niche sectors identified for Provo are:

- Call Centers
- Corporate Headquarters
- Engineering Services
- Finance and Insurance
- Geotechnical Services

Why Provo?

Provo is a young, well-educated community with significant strengths in niche sectors of the Professional Services industry. Provo currently has nearly 3,600 Professional Services employees, with an overall LQ of 0.7. Although this industry is less concentrated than the national average, Provo has high concentrations in specific sectors. The most concentrated Professional Services sectors in Provo are Telephone Call Centers (LQ of 2.6); Drafting Services (LQ of 1.9); Management Consulting Services (LQ of 1.8); Business Service Centers (LQ of 1.5); Legal Services (LQ of 1.4); and Office Administrative Services (LQ of 1.4). Utah County has additional concentrations in Activities Related to Credit Intermediation and Landscape Architectural Services. Despite recent employment declines in Provo (due to the Financial sector collapse in 2008), the Professional Services cluster is projected to grow twice as fast in Provo than the US over the next five years, at an average annual rate of 2.8%.

Call Centers are already a major niche sector in Provo, with over 430 employees in Provo and another 1,600 in Utah County. These operations primarily require a moderately skilled workforce and affordable real estate. As service support centers for a wide range of industries, call center operations often benefit from locating near major clients in metros such as Salt Lake City and near online retailers, who have a significant presence in Provo. This sector is currently projected to continue employment declines in the near future but can potentially be bolstered with infrastructure support and other strategic planning.

Engineering Services and **Geotechnical Services** are another standout opportunity for Provo. BYU and UVU award a high concentration of Engineering and other technical degrees, ensuring a steady supply of young workers with qualifications for these fields. New opportunities in oil and gas exploration, particularly related to shale production, have led to rapid growth in demand for a variety of engineering, geotechnical, and environmental consulting services. Similarly, as the housing construction begins to slowly revive, a variety of engineering and geotechnical services will continue to be a necessity. Engineering Services in Provo already grew at an annual rate of 4.6% through the recession over the past five years, and Environmental Consulting Services grew 3.8% annually in Utah County.

The recent recession had its roots in turmoil in financial and housing markets, but the **Financial & Insurance** industries were some of the first to recover and are forecast to continue robust growth through the near future, particularly in Provo. Provo is home to a number of financial firms,

primarily online loan providers, such as Goldstar Financial and Flagship Financial, and financial advisors like Prosper, Inc. As a major IT hub, Provo is an attractive location for these types of online financial and insurance service firms, with a well-educated population and a large and growing cluster of related firms. Additionally, Financial Services is a target of the state, ensuring broad support for this sector through a diversity of statewide programs.

Provo also has a significant number of **Corporate Headquarters**, many locally grown companies and some outside relocations. Local headquarters span the breadth of target industries, with many in IT, Consumer Products, and Advanced Manufacturing. Provo is a relatively low-cost city with a high quality of life, well-educated population, and strong economy. Local headquarters include Vivint, Ancestry.com, Novell, Bluehost, Morinda, Nu Skin, Sii Megadiamond, Action Target, and Novatek.

Top Selling Points

- Strong secondary education system producing a numerous technically trained graduates in professional services
- Existing base of call center operations and appropriate infrastructure
- Concentration of corporate headquarters, including many homegrown, successful, and growing companies with national and international recognition
- Connections between IT industry and financial services providing major strengths for online financial and insurance operations
- Well-educated, multi-lingual workforce, with up to 46% of Utah County residents speaking a second language and achieving Level 1 proficiency in 53 different languages according to an April 2012 survey

The table on the following page presents Professional Services Industry Trends in the Provo region, displaying the location quotients (relative concentration) and employment of the overall industry and each subsector in Provo and Utah County. The table also shows recent and forecast growth trends for Provo, Utah County, and the US. Forecasts focus on these geographies to demonstrate the overall position of the industry in the regional and national economy as well as competitiveness of the City of Provo, which draws from assets throughout the County. (Sectors are defined using NAICS codes selected by the consulting team).

Professional Services Industry Trends

Provo, UT

Subsector	2012 LQ	2012 Employment	2012 LQ	Recent Trends, 2007-2012			Forecast Trends, 2012-2017			
				Average Annual Growth			Average Annual Growth			
NAICS	Description	Provo	Utah Cty	Provo	Utah Cty	US	Provo	Utah Cty	US	
5221	Depository Credit Intermediation	0.8	540	0.8	0.0%	0.1%	-0.7%	2.6%	2.5%	0.7%
5222	Nondepository Credit Intermediation	0.4	73	0.5	-7.7%	-7.8%	-6.0%	1.8%	1.8%	-0.5%
5223	Activities Related to Credit Intermediation	0.6	59	1.5	-10.9%	-6.9%	-4.7%	0.0%	2.4%	1.1%
5231	Sec. & Com. Contracts Intermed. & Brokerage	0.2	41	0.1	-9.6%	-6.0%	-2.4%	0.5%	1.5%	0.6%
5239	Other Financial Investment Activities	0.4	49	0.5	1.3%	2.4%	1.1%	-1.3%	-2.3%	1.3%
5241	Insurance Carriers	0.1	36	0.2	-14.3%	-7.2%	-1.7%	-13.9%	-6.9%	-0.1%
5242	Agencies, Brokerages, & Other Ins. Related Acty.	0.5	153	0.6	-0.5%	0.3%	-0.4%	2.1%	2.5%	1.5%
5251	Insurance & Employee Benefit Funds	0.3	5	0.2	-	24.6%	-0.7%	0.0%	-19.7%	1.0%
5259	Other Investment Pools & Funds	0.3	5	0.3	-12.9%	-16.3%	-0.6%	0.0%	1.4%	1.0%
5411	Legal Services	1.4	610	0.8	7.0%	6.3%	-0.8%	5.3%	5.0%	1.3%
5412	Account., Tax Prep., Books., & Payroll Services	0.6	224	0.9	9.1%	8.0%	0.6%	3.5%	3.5%	1.4%
541310	Architectural Services	0.9	54	0.7	-2.4%	-2.3%	-5.8%	5.0%	5.0%	1.3%
541320	Landscape Architectural Services	0.4	5	1.1	-26.3%	-21.4%	-7.6%	0.0%	-16.4%	-0.5%
541330	Engineering Services	0.3	119	0.7	4.6%	4.6%	0.1%	3.5%	3.6%	2.0%
541340	Drafting Services	1.9	5	4.9	0.0%	1.4%	-8.9%	0.0%	1.7%	-5.1%
541350	Building Inspection Services	-	-	0.5	-	17.1%	-0.3%	-	1.8%	2.2%
541360	Geophysical Surveying & Mapping Services	0.8	5	0.2	0.0%	0.0%	-2.2%	0.0%	0.0%	1.4%
541370	Surveying & Mapping (except Geophysical) Svcs.	0.3	5	0.1	0.0%	0.0%	-9.8%	-	0.0%	-4.4%
541380	Testing Laboratories	-	-	0.7	-	2.4%	0.2%	-	1.2%	0.8%
54161	Management Consulting Services	1.8	614	1.2	2.2%	2.1%	3.6%	7.1%	6.8%	4.7%
54162	Environmental Consulting Services	-	-	0.3	-	3.8%	2.1%	-	7.0%	4.3%
54169	Other Scientific & Technical Consulting Services	0.3	24	0.4	14.9%	16.1%	7.7%	8.4%	7.9%	6.9%
5511	Management of Companies & Enterprises	0.2	168	0.4	-7.0%	-6.8%	0.7%	-4.7%	-4.2%	0.6%
5611	Office Administrative Services	1.4	232	0.9	3.9%	3.9%	2.4%	3.5%	3.5%	2.4%
56141	Document Preparation Services	0.3	5	0.5	0.0%	19.7%	-1.0%	17.1%	3.5%	2.9%
56142	Telephone Call Centers	2.6	433	3.5	-6.6%	-6.5%	1.5%	-4.4%	-4.3%	1.1%
56143	Business Service Centers	1.5	47	1.1	-6.0%	-5.5%	-2.6%	-0.9%	0.0%	1.9%
56144	Collection Agencies	0.7	39	0.5	0.0%	0.0%	-0.4%	5.1%	5.4%	3.1%
56145	Credit Bureaus	0.8	5	0.2	0.0%	0.0%	-6.5%	-	0.0%	-4.0%
56149	Other Business Support Services	0.1	5	0.4	0.0%	-9.8%	0.9%	0.0%	2.6%	3.3%
TOTAL		0.7	3,560	0.7	-0.3%	-1.1%	-0.4%	2.8%	1.8%	1.4%

Source: Avalanche Consulting using U.S. Bureau of Labor Statistics, forecast data from EMSI

LQ = Location Quotient: Per capita concentration of the industry as % of US concentration

PROFESSIONAL SERVICES – PROVO OPPORTUNITY MATRIX

Industry Definition

Professional Services is a broad industry category incorporating a wide range of professional, technical, and business services. These services include architecture, legal, financial, management, business support, engineering, and accounting.



Niche Targets

- Call Centers
- Corporate HQs
- Engineering Services
- Finance & Insurance
- Geotechnical Services

Key Numbers

- Local Employment: **3,560**
- Concentration (LQ): **0.7**
- Annual Growth, 2007-2012: **-0.3%**
- Forecast Annual Growth, 2012-2017: **2.8%**
- Average Salary: **\$53,500**

Why Provo?

- Strong secondary education system, with well-educated and technically trained population
- Existing base of call center operations
- Concentration of corporate headquarters
- Strong connections between IT and financial services

Major Employers

- Goldstar Financial
- Property Solutions International
- Flagship Financial, LLC
- Prosper, Inc.

SECTION THREE:

Target Identification Process

The final section of this report describes how target industries were selected for Provo. This includes analysis of local and national growth trends for industry and occupation clusters within the region, a summary of Provo's competitive assets, and a review of local stakeholder input.

Target Identification

As described in the introduction, targeting is not a perfect science. When examining all the possible industries operating in an economy, there are numerous ways to determine their compatibility with a local community. The selection process filters using three primary questions:

- **What are current industry dynamics?** Answering this question involves examining cluster concentrations within Provo, industry growth locally and nationally, and related occupational trends.
- **What assets are platforms for industry growth?** The *Competitive Evaluation* begins this process by examining competitive strengths in Provo through data, interviews, and surveys. This process identifies the local assets that can be leveraged for growth in particular industries.
- **What do residents and area leaders want in the future?** Interviews, focus groups, and a resident survey help the consulting team better understand Provo's image of itself, vision for the future, and the specific goals hoped to be achieved through economic development.

Numerous other questions are asked along the way, which vary depending on the community. For example: Will the industry come to the community naturally without being targeted? Will the industry cluster generate higher wages for residents? Are there adequate economic development resources available to compete for the target?

The following pages address each of the primary questions with regards to Provo, revealing the process used to select the recommended target industries from the wide pool of potential targets.

What are Current Industry Dynamics?

The first step in determining target industries for Provo involves examining existing industries and occupations: how concentrated are they in Provo, which are growing locally and nationally, and which are currently forecast to grow in the future? Industry dynamics are accessed using a variety of tools, including bubble charts and cluster growth forecast.

Industry clusters are concentrations of interrelated businesses, suppliers, and support institutions that locate within close proximity. Companies operating in the same field often cluster together to increase productivity, access a broader base of talent, reduce transportation costs, and share research and knowledge.

Bubble Charts

Location quotients (LQs) give us a quick snapshot of which industries are concentrated in the region. LQs show local industry employment concentration relative to the US average concentration. An LQ of 1.5 indicates that the local industry has 50% more jobs per capita in the US. An LQ of 1.0 indicates the same per capita employment concentration as the US, and an LQ below 1 indicates a below-average concentration.

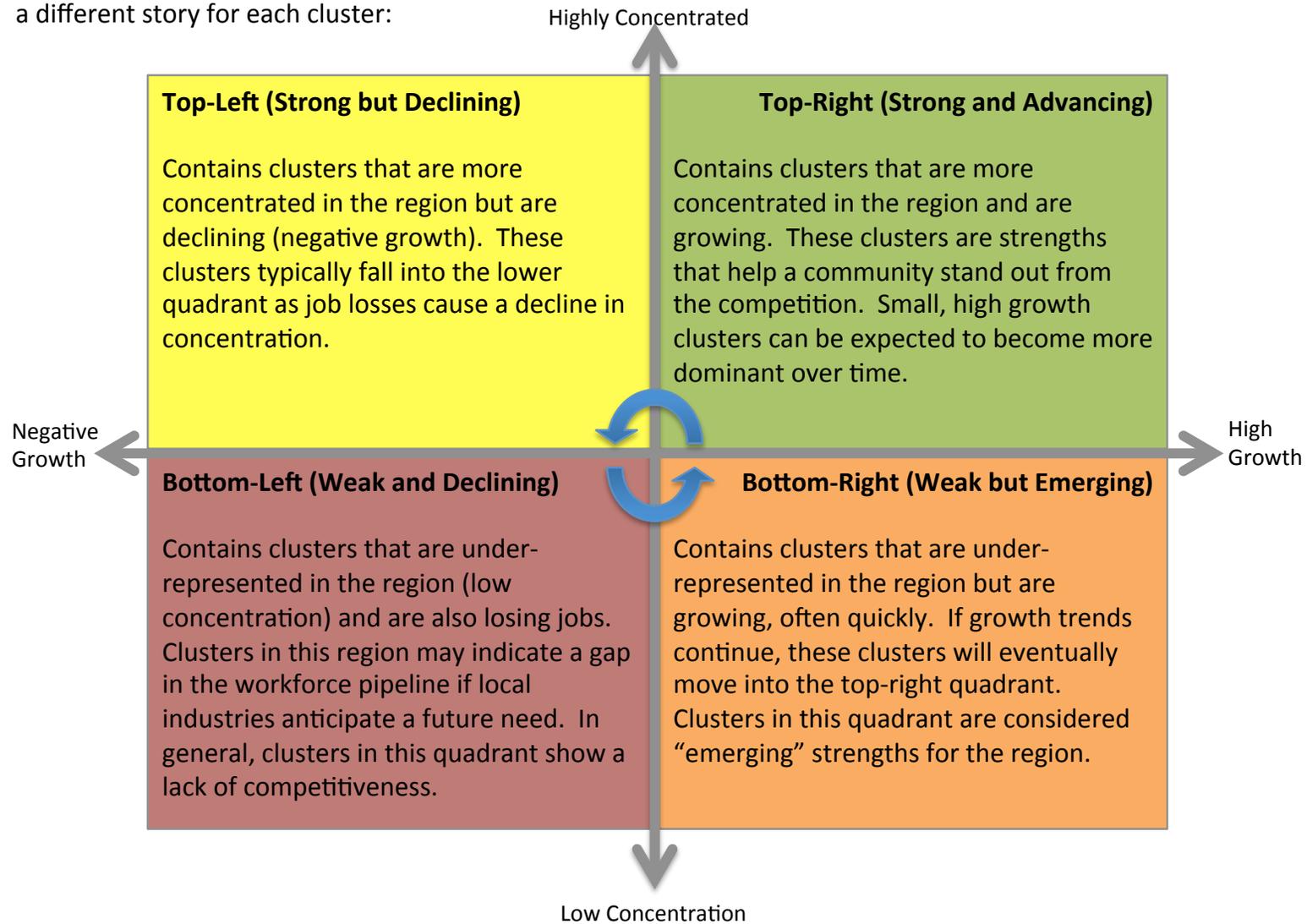
The bubble chart shows three variables for each Provo industry depicted: the LQ (or concentration) on the vertical axis, the 5-year % growth for the industry in Provo on the horizontal axis, and total jobs in the local industry in the size of the bubble.

Occupational bubble charts show the same variables, except the LQ is called a Concentration Quotient, which measures local *occupational* employment concentration relative to the US average concentration. Examining occupational data helps understand local workforce strengths and forecasts, an important factor in identifying target industries. It is important to note that Occupations do not directly correlate to Industries. For example, Logistics / Transportation occupations may be engaged in a variety of industries, including Logistics, Manufacturing, Healthcare, or Hospitality. Nonetheless, strengths in particular occupations can reveal workforce supply for a variety of industry sectors.

The bubble chart's four quadrants each tell a different story for the industry sector. While sectors in the top-right quadrant are viewed as competitive and should be priorities for talent development, sectors to the bottom-right (which are growing, but have below-average concentrations) are emerging sectors for the region. These sectors typically require special attention such as entrepreneurial assistance or new workforce training programs. The quadrant stories are outlined in the graphic on the following page.

Explanation of Cluster Bubble Charts

The graph's four quadrants each tell a different story for each cluster:

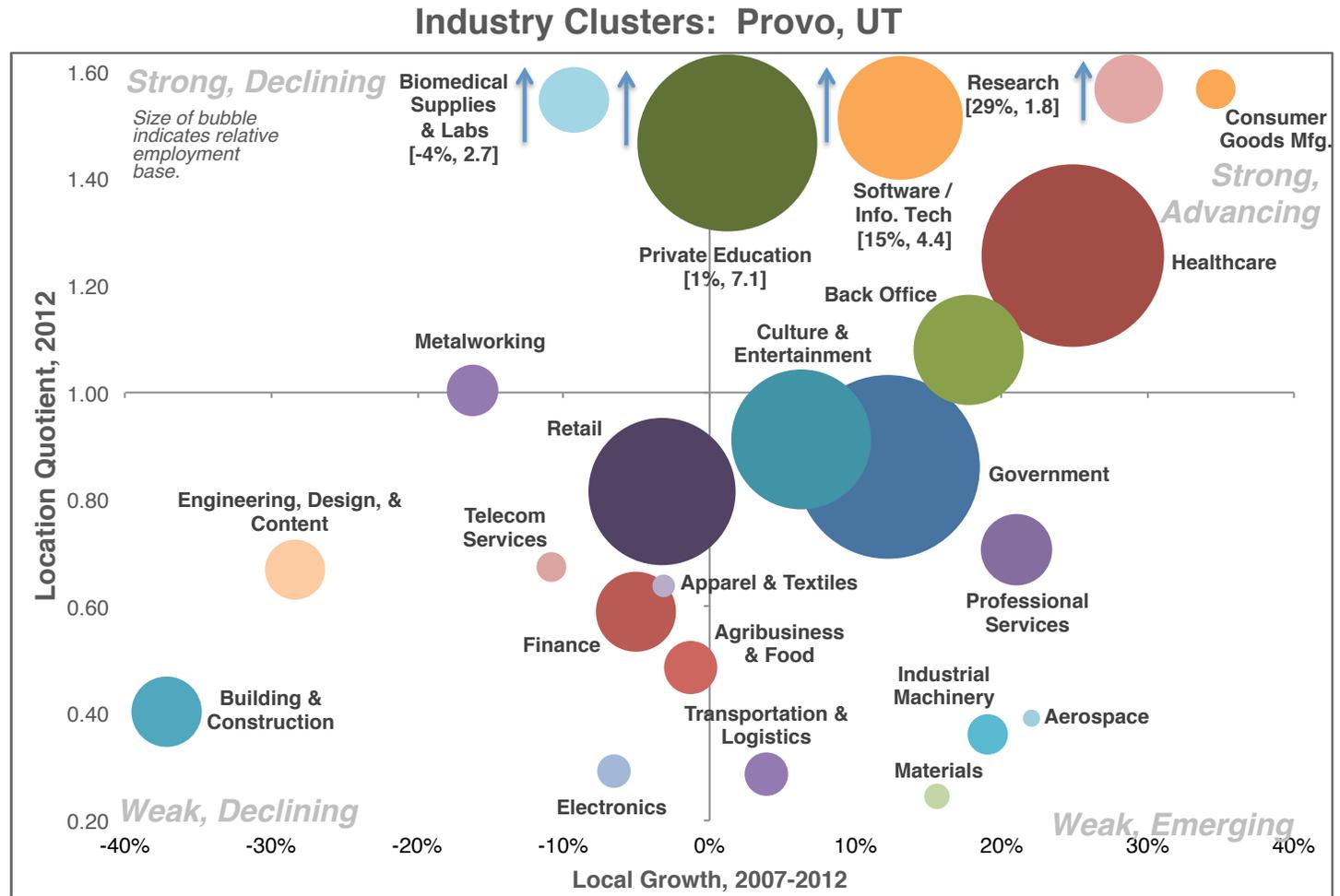


Industry Trends

An examination of major industry clusters in Provo reveals numerous potential target industries.

Provo has numerous industries with high location quotients and growth rates, including **Consumer Goods Manufacturing, Healthcare, Research, Software / Information Technology, Back Office,** and **Biomedical Supplies & Labs** (although this cluster is contracting).

Smaller and Less concentrated industries with high growth rates include **Aerospace, Professional Services, Industrial Machinery, Materials,** and **Culture & Entertainment.**



The bubble chart above examines past growth, but it is also important to look at current expectations for industry clusters. Forecast employment trends are developed by private companies such as Economic Modeling Specialists Incorporated (EMSI). The Avalanche team has taken EMSI employment forecasts and grouped them in the industry clusters used in the bubble charts.

Forecasts developed for smaller communities lose some of the accuracy gained with aggregation of employment numbers in large cities, states, and the nation. As a result, Provo forecast growth rates, while revealing and useful, should not be a cause for alarm or over optimism. Additionally, forecasts are based on current conditions and do not reflect the potential for increased economic development as a result of policies adopted in this strategic plan.

A comparison of cluster forecasts in Provo and the US reinforces some industries identified in the bubble chart and introduces new potential targets:

- **Aerospace**, although a small cluster, it is expected to grow 15% in Provo over the next five years compared to no growth nationally.
- **Back Office, Biomedical Supplies & Labs, Consumer Goods Manufacturing, Healthcare, Industrial Machinery, Materials, and Professional Services** are all forecast to grow more rapidly than their US counterparts and the overall Provo average of 12%.
- **Retail** is forecast to grow 7%, twice as fast as the US forecast.
- **Research and Software / Information Technology** are both forecast to grow significantly in Provo and the US.

Provo, UT Industry Cluster Trends

Industry Cluster	2012 Employment	2012 LQ	Forecast Growth, 2012-2017		
			US	Provo	New Jobs
Aerospace	72	0.39	0.2%	15.3%	11
Agribusiness & Food	682	0.49	1.9%	5.7%	39
Apparel & Textiles	123	0.64	-20.1%	-28.5%	(35)
Automotive	57	0.15	-6.0%	22.8%	13
Back Office	2,929	1.08	8.3%	20.2%	593
Biomedical Supplies & Labs	1,044	2.68	8.0%	20.7%	216
Building & Construction	1,193	0.40	5.3%	2.0%	24
Consumer Goods Mftg	377	1.57	-0.6%	36.6%	138
Culture & Entertainment	4,715	0.91	6.2%	6.9%	324
Private Education	7,052	7.09	13.2%	8.4%	591
Electronics	271	0.29	1.3%	6.3%	17
Energy	67	0.12	-1.5%	-14.9%	(10)
Engineering, Design, & Content	868	0.67	2.0%	1.3%	11
Finance	1,543	0.59	3.2%	10.2%	158
Furniture	29	0.18	-3.5%	-20.7%	(6)
Government	8,135	0.86	4.0%	8.1%	658
Healthcare	8,031	1.26	11.8%	16.7%	1,345
Industrial Machinery	394	0.36	-1.2%	18.8%	74
Logging & Metal/Mineral Mining	5	0.07	-2.2%	0.0%	0
Materials	156	0.25	-7.2%	17.3%	27
Metalworking	640	1.00	-5.1%	-8.6%	(55)
Non-Profits	192	0.38	6.3%	14.1%	27
Professional Services	1,227	0.71	5.5%	16.1%	198
Research	1,269	1.84	21.5%	30.3%	385
Retail	5,221	0.81	3.3%	6.9%	362
Software / Info. Tech.	3,794	4.42	16.5%	23.1%	875
Telecom Services	214	0.67	-2.0%	-25.7%	(55)
Transportation & Logistics	455	0.29	4.6%	5.3%	24
Total	50,688	1.00	5.2%	11.7%	5,951

Source: Avalanche Consulting, EMSI Covered

Occupation Trends

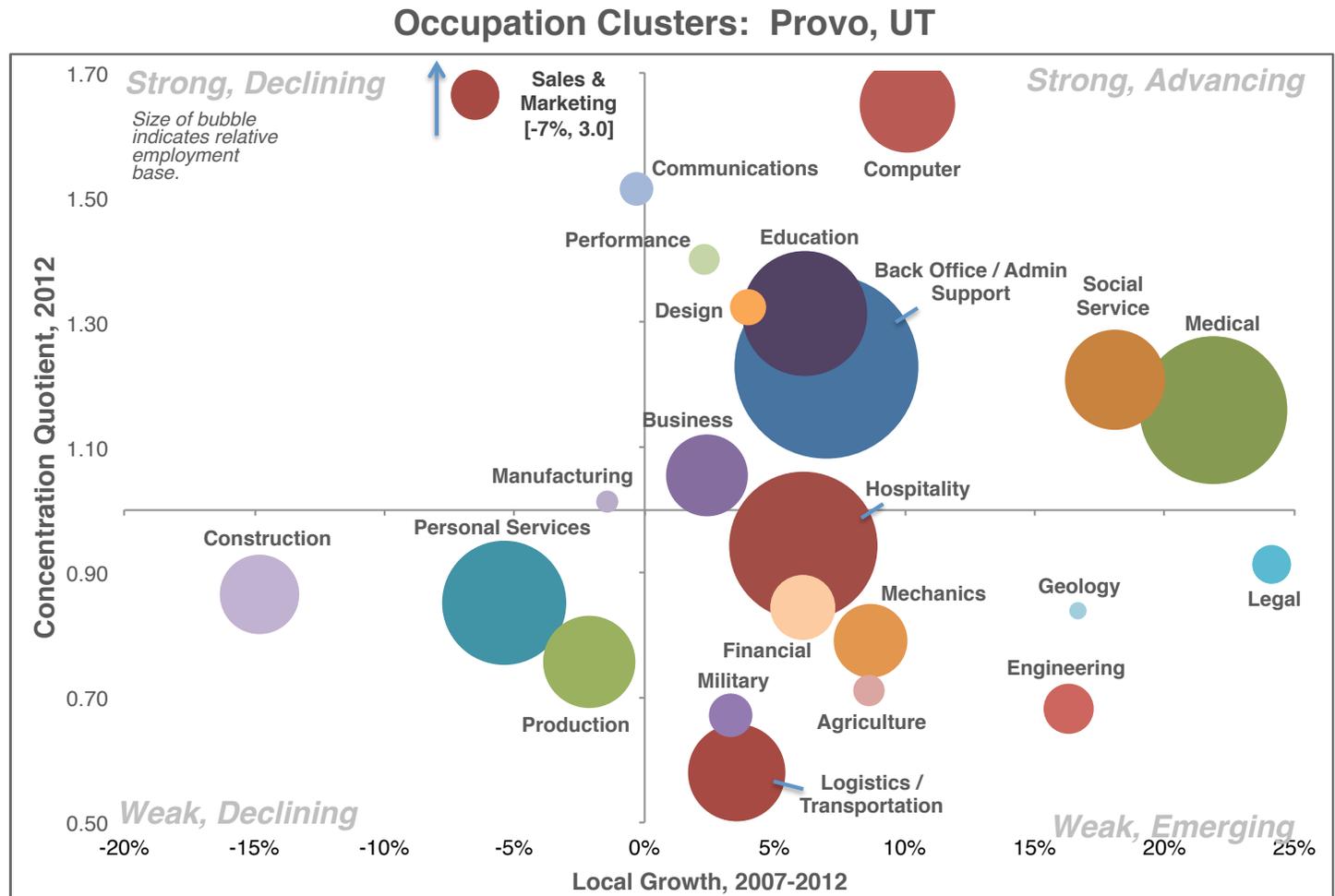
An examination of major occupational cluster trends in Provo reveals workforce strengths supporting numerous industries.

The most concentrated and growing occupations in Provo over the past five years were **Medical, Social Service, Computer, Back Office / Admin Support, Education, Design, and Business.**

Less concentrated but fast growing occupational clusters included **Legal, Engineering, Geology, Mechanics, Hospitality, and Financial.**

These occupational strengths directly support **Life Sciences, Information**

Technology, and Professional and Business Services. Declines in **Production and Manufacturing Operations** occupations reflect national trends in **Manufacturing** sectors and do not necessarily reflect a lack of competitiveness.



Occupational forecasts are generally positive for Provo, with all occupations projected to grow over the next five years except Sales & Marketing occupations. As with industry trends, overall employment is forecast to grow 12%, over double the national rate of 5%.

The occupations forecast to create the largest number of jobs in Provo over the next five years are:

- **Back Office / Admin Support** (1,200 jobs)
- **Medical** (1,100 jobs)
- **Hospitality** (460 jobs)
- **Education** (440 jobs)
- **Social Service** (420 jobs)
- **Personal Services** (380 jobs)
- **Computer** (360 jobs)

**Provo, UT
Occupational Cluster Trends**

Occupational Cluster	2012 Employment	2012 LQ	Forecast Growth, 2012-2017		
			US	Provo	New Jobs
Agriculture	277	0.71	4.3%	10.1%	28
Architecture	60	0.88	4.4%	15.0%	9
Back Office / Admin Support	9,486	1.23	4.1%	12.9%	1,225
Business	1,880	1.06	4.0%	11.5%	216
Communications	318	1.51	7.1%	14.2%	45
Computer	2,560	1.65	7.7%	13.9%	357
Construction	1,771	0.87	5.8%	7.2%	127
Design	366	1.32	4.6%	10.9%	40
Education	4,380	1.31	7.1%	10.1%	442
Engineering	706	0.68	5.5%	13.5%	95
Financial	1,186	0.84	6.8%	15.3%	182
Geology	84	0.84	2.5%	2.4%	2
Hospitality	6,172	0.94	5.7%	7.4%	458
Legal	422	0.91	5.9%	21.6%	91
Logistics / Transportation	2,661	0.58	2.5%	9.6%	256
Math	24	0.56	8.1%	41.7%	10
Mechanics	1,526	0.79	4.0%	15.2%	232
Medical	6,128	1.16	12.2%	17.8%	1,088
Manufacturing	137	1.01	3.3%	8.0%	11
Military	531	0.67	0.8%	0.6%	3
Sales & Marketing	667	2.97	-0.9%	-1.0%	(7)
Performance	268	1.40	8.6%	9.7%	26
Political	35	0.83	8.0%	20.0%	7
Production	2,388	0.76	-1.6%	7.9%	188
Personal Services	4,324	0.85	3.9%	8.9%	384
Social Service	2,813	1.21	7.1%	14.9%	420
Total	50,688	1.00	5.2%	11.7%	5,951

Source: Avalanche Consulting, EMSI Covered

What Assets are Platforms for Industry Growth?

Competitive Summary

The previous report, *Competitive Evaluation* included a Strengths, Weaknesses, Opportunities, and Threats (SWOT) assessment of Provo's competitive strengths in five major economic development categories:

- **Business & Industry**
- **Entrepreneurship & Innovation**
- **Infrastructure**
- **Quality of Life**
- **Workforce & Education**

This evaluation revealed assets in each category capable of supporting growth in a variety of industries. The following section summarizes the findings of the SWOT assessment in terms of competitive assets and target industry identification.

Business & Industry

Provo has been economically successful in recent years, with job growth outpacing Salt Lake City and the US over the past decade. The city has seen significant growth in **Professional and Business Services**. Provo's low cost of doing business, incentive program, and efficient regulations and permits make the city a highly competitive environment for a diverse range of business activities. The city is already home to many **Corporate Headquarters**, many which are successful homegrown startups. Provo has also attracted a large international corporate presence over the years.

Entrepreneurship & Innovation

Provo's young and highly educated population, scenic setting, and friendly culture make the city an attractive setting for entrepreneurial activities. BYU and UVU support innovation through technology and entrepreneurship programs, research and development activities, and education of thousands of qualified graduates each year. Continued development of technology transfer programs at the universities and support of entrepreneurial and research and development programs will have benefits for a wide range of industries, particularly **Energy, Manufacturing, Information Technology, and Life Sciences**. These industries all benefit from continued advances in biology, technology, materials, and software.

Infrastructure

Located on an interstate highway with close proximity to Salt Lake City and SLC International Airport, Provo is logistically well positioned for business travel and distribution of goods, which benefits **Professional and Business Services, Manufacturing**, and numerous other industries. Electricity costs are relatively high, which may raise concerns for some power intensive sectors, but in general utilities are reliable and affordable. Continued development of broadband and other technology infrastructure will be necessary to support the growing **Information Technology** industry. Development of a state-of-the-art research and development park and additional Class A office space would continue to build on the city's competitiveness for **Professional, Research, Information Technology** and other high-tech business operations.

Quality of Life

Provo is known for the naturally scenic environment, outdoor recreation opportunities, proximity to ski resorts, and generally high quality of life. This quality of life includes a welcoming, family-oriented community, large youth population, and emphasis on fitness and wellness. Downtown Provo features numerous iconic buildings that with improvements and marketing can attract visitors in **Hospitality, Tourism, and Retail**. High quality of life is also a major draw for young professionals and support of industries such as **Finance, Professional and Business Services, and Information Technology**.

Workforce & Education

Education is one of Provo's major assets. BYU and UVU provide tremendous resources in the workforce development pipeline as well as research and development opportunities connected to business. **Information Technology** and **Professional and Business Services** in particular draw employment from younger, highly educated pools of workers. Relatively low wages and competition for talented workers in Provo, particularly in technology fields, may create labor shortages. However, with continued communication and alignment between businesses and educators, Provo is well positioned to meet employer needs.

What Do Residents and Area Leaders Want in the Future?

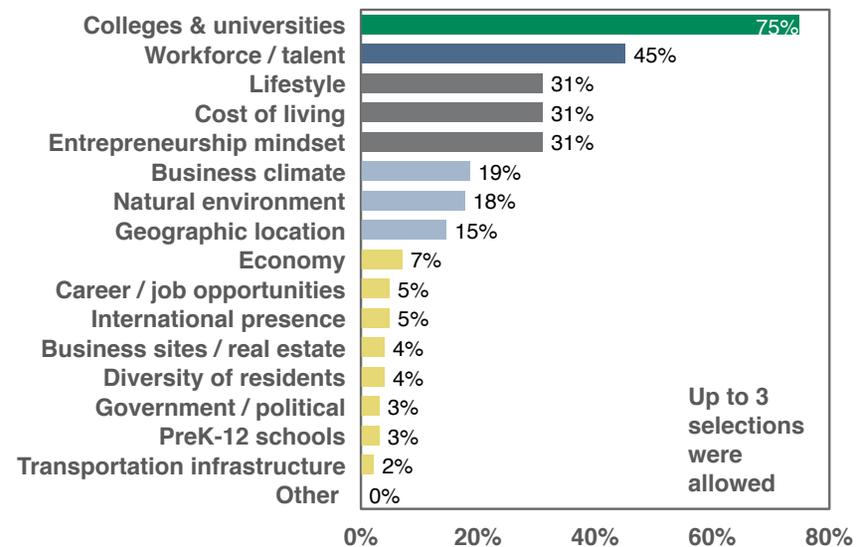
Stakeholder Input

The consulting team conducted numerous interviews and focus groups with businesses, organizations, and individuals throughout Provo. These interviews were used to gather local perspective on the state of the economy, assets and opportunities, strengths and concerns, and potential target industries. Local residents were also polled in an online survey, which had 301 respondents and represented numerous demographics, assuring the survey well canvased the population. The various perspectives offered on Provo through the survey help better understand community strengths and direction. As a whole, survey respondents had positive views on the community, highly rating opportunities in Education, Career, Livability, Infrastructure, and the Economy.

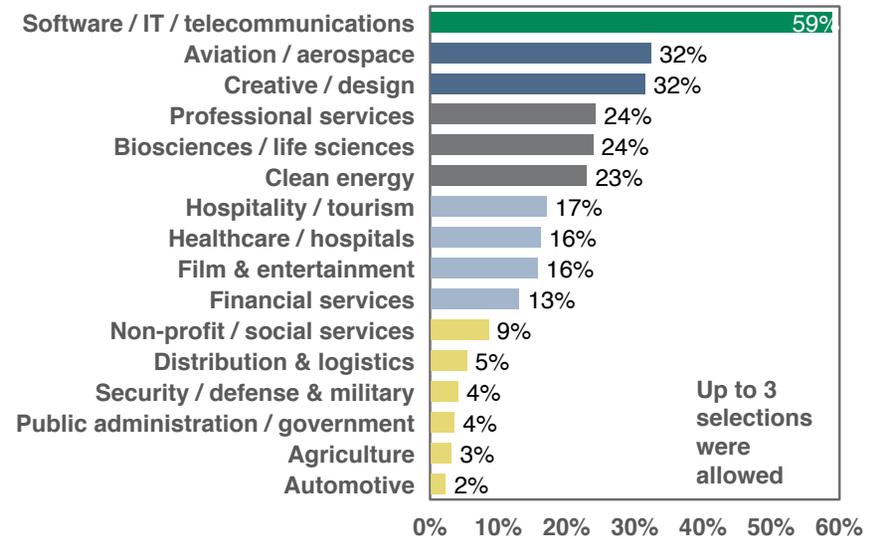
When identifying Provo’s top three competitive strengths, survey respondents overwhelmingly recognized Colleges & Universities (75% of respondents rated this in the top three) and Workforce / Talent. The top 5 competitive strengths identified were:

- **Colleges & Universities**
- **Workforce / Talent**
- **Lifestyle**
- **Cost of Living**
- **Entrepreneurship Mindset**

Rate Provo’s top three competitive strengths



What industry clusters are the most desirable targets for future Provo economic development?



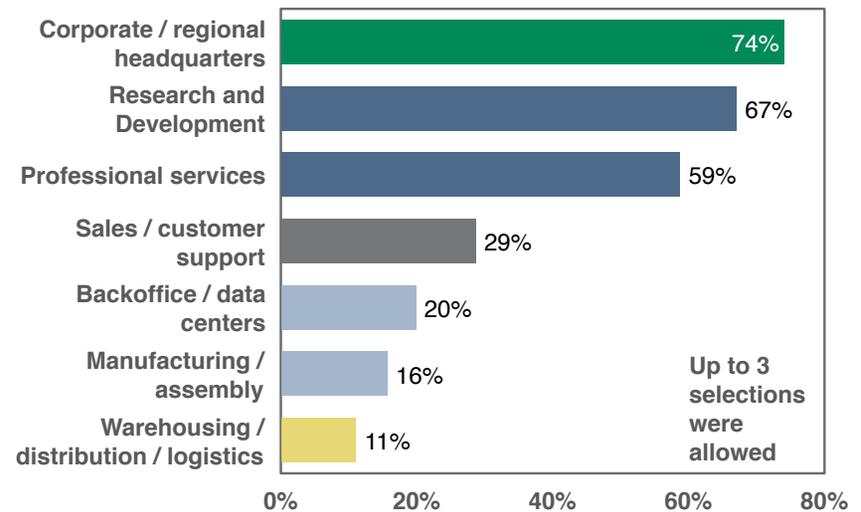
Similarly, when asked to identify the most desirable targets for future economic development in Provo, a majority (59%) of respondents selected Software / IT / Telecommunications. The top industries identified by residents were:

- **Software / IT / Telecommunications**
- **Aviation / Aerospace**
- **Creative / Design**
- **Professional Services**
- **Biosciences / Life Sciences**
- **Clean Energy**
- **Hospitality / Tourism**
- **Healthcare / Hospitals**
- **Film & Entertainment**
- **Financial Services**

Survey respondents were then asked to identify the types of business operations most desirable for Provo. Respondents overwhelmingly identified the following three types of operations:

- **Corporate / Regional Headquarters**
- **Research and Development**
- **Professional Services**

What types of business operations are the most desirable for Provo?



Overall Target Assessment

Through the filtering process, the consulting team identified a range of industries with potential as target industries for Provo. These industries either showed potential due to industry trends, local assets, and/or identification as community goals.

The table to the right summarizes the assessment of high potential industries. As with a traffic light, green indicates a solid “go” for pursuing the industry; yellow indicates an opportunity that can be improved through economic development efforts; and red indicates a concern. Industries rarely achieve green ratings for all three criteria and a yellow rating should not be taken as a deterrent. Instead, yellow highlights areas in which proactive community efforts can build on existing opportunities.

The industries with the strongest target fits (dark green rating) in Provo are: **Biomedical / Life Sciences; Professional Services; Research; and Software / Information Technology.**

Industries with strong match (light green rating) in Provo are: **Aerospace; Back Office; Creative / Design; Energy; and Healthcare.**

Industries with cautionary fits (yellow rating) included **Consumer Goods Manufacturing; Film / Entertainment; Hospitality / Tourism; Industrial Machinery; Materials; and Retail.**

No industries considered raised concerns (orange or red rating). Many cautionary sectors related to broad industry trends. Most manufacturing sectors have seen employment declines nationally, and tourism and retail are dependent on a wide range of general economic factors. Nonetheless, with proper support, the consulting team sees strong potential for all these sectors in Provo.

Potential Target Industries	Industry Dynamics	Community Assets	Community Goals	Target Fit
Aerospace	Green	Yellow	Dark Green	Green Circle
Back Office	Green	Green	Yellow	Green Circle
Biomedical / Life Sciences	Dark Green	Green	Dark Green	Dark Green Circle
Consumer Goods Mftg.	Green	Yellow	Yellow	Yellow Circle
Creative / Design	Yellow	Green	Dark Green	Green Circle
Energy	Orange	Green	Dark Green	Green Circle
Film / Entertainment	Yellow	Orange	Green	Yellow Circle
Healthcare	Dark Green	Green	Green	Green Circle
Hospitality / Tourism	Yellow	Yellow	Green	Yellow Circle
Industrial Machinery	Green	Yellow	Yellow	Yellow Circle
Materials	Green	Yellow	Yellow	Yellow Circle
Professional Services	Green	Dark Green	Dark Green	Dark Green Circle
Research	Dark Green	Dark Green	Green	Dark Green Circle
Retail	Yellow	Yellow	Green	Yellow Circle
Software / Information Tech.	Dark Green	Dark Green	Dark Green	Dark Green Circle

Rating Scale, Low to High

Target Recommendations

Using the results of the target identification process, the consulting team grouped green and yellow fit industries into target industry clusters. The target clusters are designed to serve as more effective targets for economic development purposes than generic and government industry definitions. The consulting team identified specific niche sectors in each target industry based on competitive strengths, assets, and goals in Provo identified through the targeting process. The recommended target industries are presented below.

Recommended Target Industries

 <p>Advanced Manufacturing</p> <ul style="list-style-type: none">• Aerospace Components• Clean Energy• Energy Equipment & Supplies• Nanotechnology• Metal Working & Products	 <p>Consumer Products</p> <ul style="list-style-type: none">• Nutraceuticals• Outdoor Recreational Goods• Online Consumer Services
 <p>Hospitality & Tourism</p> <ul style="list-style-type: none">• Conventions• Culinary• Downtown Retail• Outdoor Recreation & Sports• Specialty Retail	 <p>Information Technology</p> <ul style="list-style-type: none">• Data Centers• Digital Media & Creative Design• Software & Web Applications
 <p>Life Sciences</p> <ul style="list-style-type: none">• Biotechnology• Diagnostics• Healthcare Services• Medical Device Manufacturing	 <p>Professional Services</p> <ul style="list-style-type: none">• Call Centers• Corporate Headquarters• Engineering Services• Finance & Insurance• Geotechnical Services