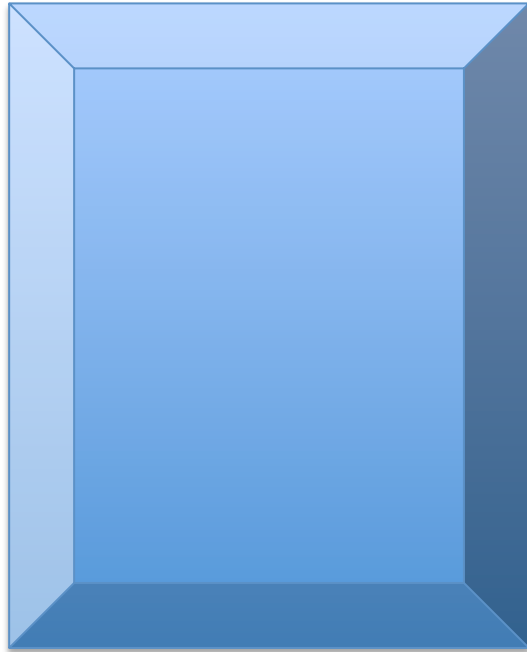


Final Report and Recommendations: OED Data Project, 2016/2017



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Executive Summary¹

This project began with the assumption that better knowledge can translate into better strategy and execution. The particular focus of the project was on the entrepreneurial ecosystem in Santa Fe, specifically the industries and character of local startups.

One goal was to address the problem that, too often in the past, policymakers have focused on encouraging industries that they *wanted* to see in Santa Fe, even if these were not industries in which Santa Fe had critical mass or inherent strength. There is nothing wrong in being aspirational when pursuing a long-term goal of economic transformation, but these efforts must be rooted in reality.

An additional focus of the project was to look at best practices nationally in the areas of outcome measurement, data categorization, goal definition for economic development (ED), and entrepreneurial ecosystem assessment and support.

Key Findings

- Although manufacturing barely registers as a Santa Fe industry in standard statistical sources, it is the primary industry represented by the startups examined here. Science and technology, food and beverage, and artisanal products are key sub-sectors.
- Information and professional/technical service firms are also well represented.
- Even though Santa Fe does not have large numbers of companies that have the capacity and interest to grow rapidly (known as “scaleups”), it does have some, and the City could benefit by better outreach to them.
- The City can use its leverage as a funder of Economic Development Organizations (EDOs) as a way of promoting collaboration for better outcomes.

¹ Shortly after the project started in 2016, the scope of work was expanded to include research, writing, and analysis for the OED’s “Crossroads Strategy Report.” Several preliminary findings from this data project informed the Crossroads report, and several findings from that report informed some of the recommendations made here. This report incorporates past deliverable reports from the overall data project that had been submitted previously although not all sections from the *Report on Key Findings, Additional Tasks, and Follow-on Techniques* are included in this document.

- National research shows that measuring the impact of ED programs is difficult, and it may be as important to track broad measures of economic health and entrepreneurial capacity in addition to (or instead of) traditional metrics such as job creation.
- “Convening” (or bringing together companies, economic development organizations, or other groups) and marketing are two aspects of ED where municipalities are particularly well situated to play a role.
- OED is hampered by not having adequate data management systems.
- There is a growing consensus that communities need to take a broader view of economic development to ensure that economic opportunity is well distributed throughout the community. This emphasis is often characterized as “inclusion,” “equity,” or “diversity.”
- Santa Fe could benefit from learning what peer and regional communities are doing in ED.
- There are philanthropic and government funders who might eventually be approached to support City ED initiatives.

Key Recommendations

(Detailed beginning on Page 17)

This study recommends that OED explore the following initiatives:²

1. Beefing up proactive outreach to companies, initially focused on the “scaleup potential” firms identified in this report.³
2. Expanding its activities in convening companies (currently focused on the Technology sector), starting with the industries that this study identified as being strong in the startup community: manufacturing and professional/technical services.
3. Playing a greater role in bringing together its EDO grantees.
4. Redesigning outcome measurements.
5. Enhancing internal knowledge and data management.
6. Increasing its role in marketing.
7. Examining how inclusion can be incorporated into ED effortd.
8. Pursuing additional insight that can inform overall strategy issues by:
 - a) learning from local companies
 - b) learning from regional and peer communities
9. Keeping abreast of external funding opportunities, particularly those identified in this report, (but waiting until the ED strategy is clearer before pursuing funding).

² These recommendations may need to be fine-tuned or revisited once there is a new ED strategy.

³ A scaleup is a firm that has the interest and capacity to grow rapidly. Research has shown that scaleups have the potential to positively impact local economies by adding jobs or by other economic impacts.

Report on Company Trends

(Originally submitted May 24, 2017, but minor edits and additions made subsequently.)

Key Insights from Company Trend Analysis

The main finding of this study is that the sectors of manufacturing, information, and professional/technical services are the dominant industries of the local startups examined here. This is in stark contrast to federal statistics that suggest that Santa Fe is very weak in these industries compared to national averages. Manufacturing is particularly notable, and this study was able to identify sub-sectors of strength in science/technology-based products; food and beverage manufacturing; and a variety of artisanal products.

All three sectors are important because they have the capacity to provide **economic-base or “traded sector” jobs**.⁴ In general, firms in the traded sector offer above-average wages. Manufacturing companies—even small ones—may also have the ability to provide jobs to medium-skilled workers who have few employment options in Santa Fe. Technology product companies and information companies have been shown to have potentially large impacts on local economies.

This identification of a small but growing number of firms in economically important sectors suggests that Santa Fe has an opportunity: to ensure that these companies have what they need to thrive. But the City also needs to be aware of the potential negative effects of putting up barriers to their growth. Santa Fe can benefit from paying attention to what is happening on the ground and designing programs, services, and policies to meet current needs.

Because national “best practices” research from an earlier part of this project suggested that a subset of growth-oriented companies—known as “scaleups”—can have large positive impacts on the local economy (especially in terms of job growth), this project also started a list of scaleup and scaleup-potential companies and recommends that the City OED focus additional attention on these firms.

There are secondary findings around the origins of companies and the demographics of company founders that have implications for ED program design, entrepreneurial education, marketing, and recruiting.

⁴ Economic-base companies are those that bring in a large proportion of their revenues from outside of the region by means of exporting, Federal contracting, serving tourism, etc. These firms are often a focal point of economic development efforts because they have an outsized impact on the local economy due to the fact that they are, in effect, “importing” dollars into the community. Sometimes these firms collectively are said to be in the “traded sector.” This is not to suggest that the economic base should be the sole focus of ED, just that it is an important sector.

Introduction

This report is based on the assessment of a master list of companies collected as the main effort of this project. The project originally began with an assessment of the companies served by the Economic Development Organizations (EDOs) who are supported by contracts issued by the Office of Economic Development (OED), with the assumption that this would provide a useful window into the nature, type, and character of local startups.⁵ There is a bias towards trying to understand newer firms and startups because young firms tend to be associated with greater job growth and because a major focus for OED is entrepreneurship.

Because of the way federal or state statistical data is collected, these younger firms are often absent from these data sets. That is why this project—with its more granular and up-to-date assessment of conditions on the ground—was considered necessary.

The project examined the clients (or applicants) of these programs:⁶

- Santa Fe Business Incubator (OED contractor)
- Venture Acceleration Fund (OED contractor)
- bizMIX (OED contractor)
- SFid (OED contractor)
- Startups met with as part of this data project (OED contractor)
- Creative Startups (*Although CS is not an OED contractor, this project categorized Santa Fe companies who participated in the program, since the information was publicly available.*)
- SF Community College Trades and Advanced Technology Center (*Although SFCC is not an OED contractor, this project categorized the client companies at the TATC.*)

One of the first observations from the local data was that many of the startups were in manufacturing, information, and professional/technical services, even though federal sources tell us that these industry sectors are ones where Santa Fe's employment is well **below** national averages.

After seeing the concentration in these industries, the project then expanded its scope to identify additional local businesses in these sectors, to supplement the rather narrow view of looking only at clients served by the City's contractors. Ultimately the project documented representative companies (both startups and existing firms) in these three sectors that were **not** working with OED contractors. Not every single SF company in these sectors was identified, but enough were to be able to discern sub-categories and additional trends.

⁵ The company list is not comprehensive, but it does reflect what is going on in the community, and probably represents the best list available. Note: After discussion with OED, it was decided that the Contractor would retain the spreadsheet of detailed company information to avoid the need for redaction of company names and other potentially confidential information. OED may request the data at a later date if it desires to use it in an internal database or for some other purpose. Any companies mentioned by name in this report are publicly known via press reports, websites, etc.

⁶ Not all clients of SFBI or applicants to VAF are startups, but those that aren't tend to be newer firms.

The first attempt to broaden the data involved examining reports from the City's business license database to gain more insight; however the outputs from this database were difficult to use, especially since it was not possible to get lists of companies by industry (despite the fact that companies are asked to self-identify by industry in their business license applications). Ultimately, by using local knowledge, the New Mexico Department of Workforce Solutions (NMDWS) LASER database, press reports, and local job postings, a more complete listing of companies was created.⁷

Federal and State Statistical Summary: The 30,000 Foot View

Before looking at the findings from this study, it is useful to see what we can learn from some of the standard governmental statistical sources. These statistics cover a broader range of companies than those looked at in this project and aim to document Santa Fe's business community in aggregate. Both perspectives: the "30,000 foot view" of the statistical sources and the "1000 foot view" provided in this study will collectively provide a good starting point for understanding the current state of Santa Fe's business community.

Some highlights from this statistical data are that:⁸

- For most industries, **Santa Fe's wage levels are well below average**. This is especially true for some of the industries examined in this report: manufacturing, information, and professional/technical services. These industries are also ones in which Santa Fe has fewer jobs than the national average.
- The industries where wages are notably **above** average are in government, leisure/hospitality, and "other services".
- The top ten industries in Santa Fe (measured by employment) are primarily in **non-economic base** industries.
- Current statistics reveal that Manufacturing is especially under-represented in terms of number of jobs compared to national averages.
- The projections of job growth by 2024 suggest that only a few economic-base industries are forecast to show much growth by then. The major sectors forecast for growth are healthcare, social assistance, restaurants, professional/technical services, and specialty trade contractors.
 - One goal of local ED efforts could be to attempt to change these predicted outcomes.

⁷ Note: there was no additional charge for this expansion of the scope of work. Also, throughout this study, the focus has been on companies located in the City of Santa Fe but if a company was located in the area of the County surrounding the City it was included.

⁸ Some of the statistical data referred to here is collected at either the County or Metropolitan Statistical Area (MSA) level (which covers more than just the City of Santa Fe).

Quarterly Census of Employment and Wages - Bureau of Labor Statistics for Santa Fe MSA, First Quarter 2016.

data created via: https://data.bls.gov/cew/apps/data_views/data_views.htm#tab=Tables

Note: yellow indicates where Santa Fe is substantially below national averages, and green where it is substantially above when using the reference value of “1” for the location quotient (LQ).⁹

Industry	Establishment Count	Average Weekly Wage in \$	Employment Location Quotient (LQ) Relative to U.S.	Total Wage Location Quotient (LQ) Relative to U.S.	Workers per establishment	How much employment numbers are above or below national LQ average of 1	How much wage numbers are above or below national LQ average of 1
Total, all industries	5,608	757	1.00	1.00			
Federal Govt	32	1,295	0.79	0.95	29.7	-0.21	-0.05
State Govt	170	982	3.94	5.16	46.1	2.94	4.16
Local Govt	117	726	1.18	1.30	62.5	0.18	0.30
Natural resources	55	1,018	0.40	0.46	5.5	-0.60	-0.54
Construction	529	664	0.94	0.81	4.9	-0.06	-0.19
Manufacturing	141	712	0.16	0.12	5.9	-0.84	-0.88
Trade, transport, utilities	1,011	629	0.88	0.88	10.0	-0.12	-0.12
Information	107	992	0.71	0.47	7.9	-0.29	-0.53
Financial activities	477	1,282	0.71	0.59	5.0	-0.29	-0.41
Professional/business services	1,061	955	0.52	0.49	4.1	-0.48	-0.51
Education /health services	813	800	1.15	1.45	13.1	0.15	0.45
Leisure/hospitality	549	434	1.53	2.26	18.2	0.53	1.26
Other services	546	679	1.32	1.87	4.5	0.32	0.87

⁹ A “location quotient” is a way of quantifying how a particular industry or other factor in a region compares to the nation as a whole. If an employment LQ is equal to 1, then the industry has the same share of its area employment as it does in the reference area. An LQ greater than 1 indicates an industry with a greater share of the local area employment than is the case in the reference area. For example (assuming the U.S. as the reference area), Las Vegas will have an LQ greater than 1 in the Leisure and Hospitality industry because this industry makes up a larger share of the Las Vegas employment total than it does for the country as a whole. See more at: EMSI <http://bit.ly/2s1xkwC> and the Bureau of Labor Statistics: <http://bit.ly/2smhzOh>

Industry Employment Distribution—Top Ten Industries By Number of Employees

The table below shows the preliminary distribution of industries in Santa Fe County, New Mexico for the 3rd quarter, 2016. NMDWS, Quarterly Census of Employment and Wages program, Downloaded: 03/22/2017 10:21 AM

Rank	Industry Sector	Employees	Establishments
1	Accommodation and Food Services	9,694	414
2	Health Care and Social Assistance	9,412	714
3	Public Administration	8,991	186
4	Retail Trade (44 & 45)	8,784	774
5	Education Services	4,027	164
6	Construction	2,976	533
7	Other Services (except Public Admin.)	2,756	542
8	Arts, Entertainment, and Recreation	2,600	152
9	Professional Scientific & Technical Svc	2,454	772
10	Admin. Support, Waste Mgmt, Remediation	2,122	271

Industries by Projected Growth (ranked by percentage increase in jobs)

(Significant job additions are noted in green even if the percentage change is not that notable).

The table below shows the top 10 industries with the highest annual percent change in Santa Fe, MSA (no data available for Santa Fe County) for the 2014 - 2024 time period. Source: NMDWS, Employment Projections program

Rank	Industry	2014 Estimated Employment	2024 Projected Employment	Total Employment Change	2014-2024 Annual Percent Change
1	Ambulatory Health Care Services	3,467	4,684	1,217	3.1%
2	Beverage and Tobacco Product Manufacturing	90	115	25	2.5%
3	Wholesale Electronic Markets and Agents and Brokers	53	66	13	2.2%
4	Nonstore Retailers	94	117	23	2.2%
5	Securities, Commodity Contracts, and Other Financial Investments	457	559	102	2.0%
6	Social Assistance	2,373	2,815	442	1.7%
7	Food Services and Drinking Places	5,959	6,825	866	1.4%
8	Sporting Goods, Hobby, Book, and Music Stores	273	311	38	1.3%
9	Professional, Scientific, and Technical Services	2,342	2,635	293	1.2%
10	Specialty Trade Contractors	1,426	1,604	178	1.2%

Project Data: The 1000 Foot View

Looking through the “micro” lens of the data gathered in this project provides more specific insight than what can be seen using the “macro” lens of the statistical data above.

Because there are well over 5,000 companies in Santa Fe, the project data presented here is not intended to be comprehensive but is aimed at providing a **more detailed picture of current conditions on the ground for startups and existing economic-base companies in key industries**, trends that are not adequately accounted for when looking at consolidated data from the U.S. Census, Bureau of Labor Statistics, or the New Mexico Department of Workforce Solutions. In all, the project documented and categorized 245 companies, 148 of which were clients of the OED grantees.¹⁰

Industries

The chart below summarizes data about the industries represented by the 148 companies—primarily startups—served by the OED contractors (and a few additional programs) mentioned in the Introduction. The project used 2-digit NAICS industry codes to assign categories to companies.¹¹ In many cases, a secondary NAICS code was assigned, although this was not possible in some cases due to lack of specific knowledge about what the company did, or because some companies really are only in a single line of business.

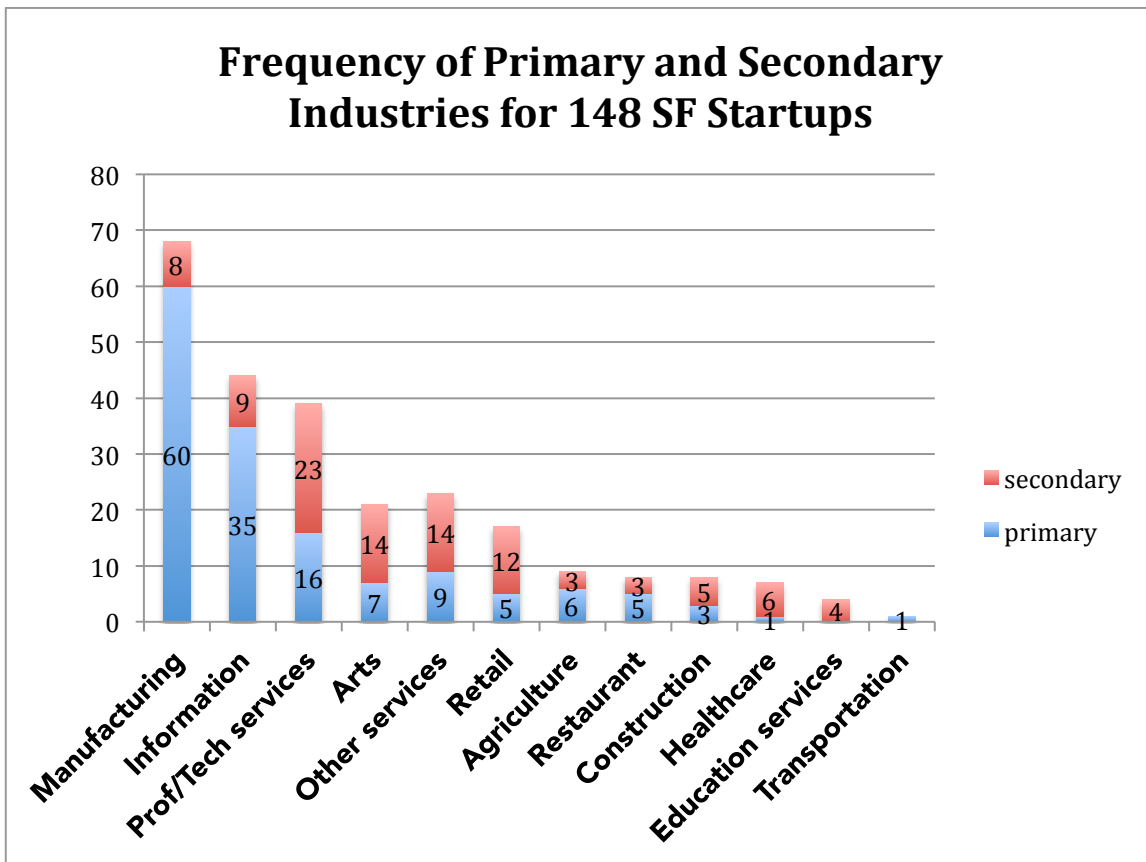
The main observation revealed in the chart on the following page is that manufacturing is extremely well represented among the startups examined here, despite the fact that the sector barely registers in Federal and State statistical data. Two additional sectors—information (which includes software, analytics, and publishing) and professional/technical services (which includes engineering, environmental, business, marketing, and scientific services) are also very well represented.¹²

Many firms within the manufacturing and professional services sector can actually have positive economic impacts in two ways: not only can they play a “traded sector” role—bringing in outside revenue via exporting or Federal contracting, but they can also help the community retain more dollars locally by serving local customers (who then will spend more of their dollars here on everything from financial planning and accounting to beer and chocolate rather than purchasing these goods and services from elsewhere.) See the discussion on Page 29 of this report for more on this concept.

¹⁰ In other words, the expansion of the project’s scope identified an additional 97 companies that illustrated key trends.

¹¹ Note: the second deliverable of this project discussed data categorization, and 2-digit NAICS was recommended as the simplest way of understanding the industries of SF companies. The *Categorization Report* is found in Appendix B, page 36.

¹² It made more sense when charting the data to categorize only the smaller subset of companies that the project originally began with: companies served by OED’s contractors, since this was the best way to assess startups. Once this process identified the major industry trends, further work was done to provide more detailed knowledge about additional companies in the key sectors.



Observed Trends by Industry Based on Project Data¹³

Manufacturing Sector

These are companies that produce an actual product. **However, not all produce their products here in SF** as they may outsource production while running the product development, design, marketing, sales, and/or operational functions here. Others may source most of the component parts from elsewhere but perform final assembly here. Clearly, those that actually produce here play a particularly valuable role in providing employment, especially for medium-skilled workers.

- **Science/Technology**—This is a niche of strength in SF, and can encompass fields such as biomedical, optics, photonics, instrumentation, advanced materials, sensors, etc. Firms in the sector often have long product development horizons and can take years before they make actual product sales, so are often reliant on SBIR, ARPA-E, or other external funding sources. Many rely on a mix of product sales and consulting/contract work for revenue. Some may be acquisition targets.
 - Existing: Avisa, Biodirection, Rio Grande Neuro, Pajarito Scientific, Sigma Labs, Southwest Sciences, Mesa Photonics, Star Cryo, Amenergy/Solar Logic, IR

¹³ In this section, certain companies are mentioned by name; these lists are not meant to be comprehensive, merely to provide a more visceral sense of some of the actual companies in Santa Fe, many of which may not be well-known. Also, many of the companies listed here are in more than one sector.

- Dynamics, iBeam Materials, Vizzia, Knowm, Ecopesticides, Retriever, Acoustic Biosystems
 - New: NTxBio, Solstar
- **Food**—Many firms have the potential for increased employment due to wider distribution (wholesaling, online retailing, etc.); some have links to regional agriculture.
 - Existing: Sage Bakehouse, Santa Fe Ole, Whoo’s Donuts, Señor Murphy Candy, ChocolateSmith
 - New: Cacao Chocolate, Barrio Brinery, SolBee Honey, Tall Foods, OneforNeptune, EcoPONEX
- **Beverage**—Growing, especially beer/spirits; often start as retail and move to wholesale; several are regional leaders. Beer and spirits also help sustain tourism, as many visitors actively seek out new breweries or distilleries as part of their travel plans.¹⁴ Santa Fe appears nowhere near saturation in breweries, as the experience of Bend, Oregon suggests.¹⁵ Events like the Bike & Brew festival link this sector to tourism and outdoor recreation. It is notable that despite the growing strength of this sector, it barely registered as a “cluster” in earlier Economic Development strategies.
 - Existing: SF Brewing, Second Street, Duel Brewing, SF Spirits, NM Hard Cider, Estrella del Norte Winery
 - New: Verde Foods, Patricks’s Fine Foods, Honeymoon Brewery, Aztec Spirits
- **Clothing/Leather/Textile**—Tied to the creative industry. Programs like SFCC’s Fashion Design program and events like SF Fashion Week serve to support the industry. Some export via the internet or catalog sales while others may have economic-base impacts by serving the tourist market. Some manufacture locally, others outsource manufacture but maintain design, sales, marketing, or other operations here.
 - Existing: Sense, DC Knits, Laura Sheppherd, Char’s, Tangoleva, Lily of the West,
 - New: Stalworth Shoe & Boot, italisan, Akin Home
- **Wood Products/Furniture**—Linked primarily to construction/homebuilding but also to the creative sector.
 - Existing: La Puerta, SF Heritage Door, Wood Design, Foxwood, Old Wood
 - New: HoCoFab, Length Width Height
- **Natural products**—Often have links to Santa Fe’s position as a center of healing and health; may have links to local agriculture. Marijuana dispensaries are included here.
 - Existing: Herbs etc., Marty’s Meals, Love+Leche
 - New: Sacred Garden, Fruit of the Earth, Purathrive, Apogee Spirulina

¹⁴ Travelocity recently unveiled a “beer tourism” index that incorporates scores for the number of breweries, ridesharing, air access, and lodging availability in a city. Santa Fe does not make the list for small metros. <http://bit.ly/2efi767> See the list itself here: <http://travelocity.us/2eWe4Xb>

¹⁵ A recent *Infogroup* study found that Bend has an astonishing 1.54 “beer-related businesses” per capita, see: <http://bit.ly/2nSr7QC>

- **Metal working**—Tied to both creative and construction.
 - Existing: Nambe, Dulfermetal, Firefly Lighting, Iron-to-Live-With
 - New: Shihan Fine Knives
- **Jewelry**—A longstanding strength in SF, although many are individual artists not actual companies.
 - Existing: SF Goldworks, Peyote Bird, Reflective Images, Tom Taylor Belt buckles
 - New: Etkie
- **Miscellaneous products**
 - Existing: Symphony Seed Paper, National Water Services, SF Natural Tobacco
 - New: Extraordinary Structures, PERK, Chronicle Cremation, Skratchworks, O’Leary Built Bicycles, Future Fantasy Delight, Mud Hub
- **Industrial Process**
 - Existing: Mesa Steel
 - New: Superior Casting, O’Leary Powder Coating

Information Sector

- **Software/Data analytics**—As in manufacturing, some companies outsource the actual coding or technical development (either internationally or to contractors located out of state), whereas others hire all employees locally.
 - Existing: National Center for Genome Resources, Open Eye Software, Open Make Software, Flow Science, Doxcelerate, Earth Analytic, Jackrabbit Systems, Deep Web, Figaro Systems, Kitware, New Mexico Interactive, Numerix, Prediction Company, Simtable, Descartes Labs
 - New: AttendMe, FidelityEHR, Reverse Engineer Labs, xerb, Upstream.Media
 - New: (in the sharing economy sector): Babierge, Bolt Ride
- **Publishing**—This has long been a sector of strength in SF, and the players are many and varied, but are mostly small, boutique-type firms. Publishing and printing are often tied to the creative industry, and printers are often high-end and/or specialized. There is a statewide trade association (NM Book Association) to serve this sector.
 - Existing: Outside Magazine, Clear Light, Landfall Press, Twin Palms
 - New: Engage Publications

Professional, Scientific, and Technical Services Sector

- Companies classified as professional, technical, and scientific services can include environmental, engineering, scientific, marketing, business, financial, and cultural resource consulting. Companies may have economic-base impacts by working for out-of-state clients or by Federal contracting. Some are locally based, while others are local offices of national or regional firms. Some firms start with consulting and evolve into manufacturing.

- Existing: Glorieta Geosciences, Global Ecotechnics, Biohabitats, Tetra Tech, Keystone Restoration, Intera, Integrated Genetics
- New: Aurora Life Technologies, Fab Lab Hub, Silicon66

Other Services Sector

- **Tourism related:** Because tourism is a large and well-established industry it was not tackled in any detail in this project, but companies embodying newer trends—especially “experiential tourism”—are noted here. These firms often take advantage of local strengths in outdoor recreation, art & creativity, or local foodways.
 - Existing: SF School of Cooking, SF Mountain Adventures
 - New: Meow Wolf, Wander NM, Bike & Brew Festival

Trends Observed in Project Data

Below are some additional trends noted in the “on-the-ground” research. Under each trend, one or more representative firms are listed, but these listings are not meant to be comprehensive, merely to lend some specificity.

Regional Offices of Larger Firms Headquartered Elsewhere

There are many branches of national high technology or consulting firms in Santa Fe. They may have a presence here to support projects for State Government, to take advantage of local talent, facilities, or conditions, or because they are what remains after an acquisition by an out of state firm. It could be useful to see what can we learn from them in order to find out how they got here, how they perceive SF, whether they can expand or not. Some examples:

- | | |
|----------------|-------------------------------------|
| • Numerix | • CERL |
| • Kitware | • Ecosphere Environmental |
| • Biodirection | • Biohabitats |
| • Tetra Tech | • Integrated Genetics |
| • Intera | • NM Interactive, subsidiary of NIC |

Role of facilities as an attractor of new companies

There is some evidence that facilities such as SFBI (especially its wet lab) and the SF Community College’s Trades and Advanced Technology Center can serve to attract companies. There may be ways to capitalize on this.

- Biodirection, Vizzia (SFBI)
- Ecoponex, Rio Grande, NTx Bio (SFCC)

Company growth and transition

Even small local companies can become bigger and transform from “mainstreet” to economic base businesses. For example, Whoo’s Donuts, once a small retail donut store, is now selling to Whole Foods with an eye towards expansion into larger distribution, supported by Job Training Incentive (JTIP) funding from the State of New Mexico. Second Street Brewing was

for many years more of a restaurant but recently added a third location in SF for canning, leading to greater distribution and transforming into a true economic-base company (this is a common path for breweries).

Company Exits

No one wants to see a successful company leave the area, but to some degree it is a fact of life. When a company is acquired the buyer often feels the need to consolidate operations, or may determine that business or labor conditions are not optimal for keeping the company here. Notable exits include Seamless Medical, Caterpillar, Apjet, and QForma. Although it may be possible to see if the company might be convinced to stay here, in most cases business conditions dictate that the company will leave. One benefit of a more proactive business outreach program (discussed in “Recommendations”) is that it can provide an “early warning” system that a company may be planning to relocate. Again, even if the City cannot offer an inducement to stay, it needs to be aware of potential exits due to their disruption to the local workforce.

The upside of an exit is that the founders may decide to stay here after the firm has been acquired, based on their affinity for Santa Fe, and they may then go on to become investors and advisors, or even to start new companies. When a company leaves the area, its employees may also decide to stay here, enriching the local business ecosystem. The exiting company may also leave behind assets such as improved buildings or facilities. Another plus is that over time, other companies and investors may find that Santa Fe is now “on their radar” based on successful exits or acquisitions.

Company age/owner demographics

There are many older companies here, so the question arises of “what will happen when the owners retire?” Santa Fe is not unique in having older companies, but since many of the older ones are also significant in terms of employment or reputation, it is worth looking at. The City and its partners could explore whether there is interest in training in selling a business, succession planning, or developing employee ownership schemes.¹⁶

Many startups in this assessment were founded by “baby boomers” who either lived here already, retired here and then started their companies, or brought their companies with them when they relocated here. Several companies were also founded by “boomerang Millennials”—people who grew up here (or whose partners had family ties here), moved away, and then returned and brought their company with them or started a company once they were here. One question might be: “how can Santa Fe capitalize on these trends?”

Although there was no hard data on the subject, a superficial assessment suggests that local Hispanics and immigrants are not well represented in the ranks of founders of the companies examined here. This suggests that more attention to diversity and inclusion issues is

¹⁶ As part of this project I talked with SCORE about some training they may do around succession planning; we discussed the need for privacy (this may imply web based training) since many people may not want to alert anyone that they are interested in selling their business.

warranted.

Company Origins

Several companies have either direct or indirect origins in Los Alamos National Laboratory and the Santa Fe Institute. This connection can go beyond just being based on licensed intellectual property (IP) from those institutions (which is often thought of as the standard definition of a lab-associated startup). Some companies, such as DeCartes Labs, do rely on licensed technology, but others were founded by people who once worked at LANL (but don't utilize LANL IP).

Many of the “information mesa” analytics companies of the early 2000's traced their origins to the Santa Fe Institute (which itself has an origin story in LANL) and while many of those original companies are no longer here, some remain.¹⁷ This goes to show the importance of **keystone knowledge institutions**, which is why one of the recommendations in this project is to establish stronger ties with organizations like SFI and NCGR. It also suggests that recruiting think-tanks, graduate schools, or other knowledge-intensive organizations may have payoffs beyond just local spending and talent attraction.

This project also identified companies who either moved here on their own, or were started by people who had recently relocated to Santa Fe. Examples include Chili Interactive, Vizzia, xerb, Upstream Media, Silicon66, Wander New Mexico, and Arts Advantage. In some cases, the founders had grown up in (or lived in) Santa Fe, moved away and moved back (or accompanied a family member who had roots in SF). In other cases, the founders moved here after visiting for many years and then decided to start a company. One recommendation is to find out if there are commonalities, such as where these people are relocating from and why they are choosing Santa Fe. This could inform decisions around establishing a more active marketing campaign to reach others like them, as an alternative (or supplement) to traditional business recruitment activities.

Company Stage—Scaleups

This report identified a number of potential “scaleup” companies—those that may have the interest in and capacity to grow rapidly. Research by the Kauffmann Foundation and the Edward Lowe Foundation has shown that scaleups have outsized impacts on local hiring and tax base, but that their needs are different from those of startups or “mom & pop” (also called “mainstreet”) businesses.¹⁸ This is just a very preliminary list, and not all may be interested or capable of rapid growth. One recommendation is that OED expand its operations to be more proactive in outreach to scaleups; such an effort would help solidify this list.

¹⁷ The “info mesa” was a term coined in an article in *Wired Magazine* from 2000 that touted Santa Fe as a new hub of informatics. See the original article, *Greetings from Info Mesa*, here: <http://bit.ly/2qOoHkn>. There was an interesting follow-up assessment (*Why Santa Fe's Info Mesa Stalled*) from 2015: <http://bit.ly/2s1Ssmn>

¹⁸ This project has not attempted to define “growth” in a quantitative way because what looks like a growth trajectory in a big city may not be relevant for a Santa Fe company. Also, although most experts don't consider a company to be a scaleup until it has a fairly high level of revenue, the list below includes some startups that may have the *potential* to become scaleups.

Table 1: Preliminary List of Scaleup Potential Companies

- Avisa
- Amenergy/
Solar Logic
- AttendMe
- Aztec Spirits
- Babierge
- Biodirection
- BTI
- Descartes Labs
- Doxcelerate
- Duel Brewing
- Ecopesticides
- Ecoponex
- Extraordinary
Structures
- FidelityEHR
- Flow Science
- Fruit of the
Earth
- Herbs etc.
- Honeymoon
Brewery
- iBeam
Materials
- Integrated
Genetics
- IT Connect
- Kitware
- Knowm
- Marty's Meals
- Meow Wolf
- Mesa Steel
- NCGR
- Nambe
- National Water
- New Mexicann
Natural Med.
- NTxBio
- Open Eye
Software
- Open Make
- Pajarito
Scientific
- Peyote Bird
- Positive Energy
- Reverse
Engineer Labs
- Rio Grande
Neuro
- Rowley's
Brewing
- Sacred Garden
- SF Brewing
- SF Spirits
- Second Street
Brewing
- Sigma Labs
- Solstar
- Star Cryo
- Symphony
Seed Paper
- Technology
Solutions NM
- Thornburg
- Ultra Health
- Verde Juice
- Vizzia
- Whoo's Donuts
- Wildflower

Suggestions and Recommendations

The following recommendations are based on both the data collection (prior section) and the best practices review (see *Appendix A, page 26*) components of the project. Some of the recommendations can help provide insight for the new strategic planning exercise. Once the plan has been completed, some of these recommendations may become obsolete (and others rise to the top), based on what emerge as priorities in the new plan.

Because this project did **not** involve an assessment of the OED's structure, budget, skills, and staffing, these recommendations are framed more as "suggestions," as some may not be feasible given the current composition of the department.

1. OED Services—Company Outreach

Even though OED relies heavily on its EDO contractors to provide direct services to companies, there is a benefit to the Department having better direct knowledge of the local business community, even beyond what is gained by meeting with companies as part of the Office of Business Growth program. It may make the most sense to pilot such a program by concentrating on those firms who have the potential to have the largest impact on the local economy.

- Expand OED's efforts at business outreach to include targets for business visitation with an initial focus on visiting scaleup potential firms. This could complement existing efforts such as "office hours" (where business can come in to seek assistance). Potential goals of such a "business retention and expansion" (BRE) or "business navigation" program could be to:
 - understand the role these companies play in the local economy
 - determine what organizations, programs, or policies can be of assistance in helping address company needs
 - see whether Santa Fe is in danger of losing them to downsizing, acquisition, or relocation
 - determine if there is any potential for growth by bringing their development, manufacturing, or post-production assembly (or any other business aspects) currently located elsewhere to SF
 - find out if there are firms in their supply chains that are currently located elsewhere who might be recruitment targets for SF
 - enlist their support as business mentors for younger companies or in other roles

2. OED Services—Convening Companies

Note: since 2015, OED has worked to bring local technology companies together in the Technology Roundtable.¹⁹

- Expand the “roundtable” or “industry convening” concept to some of the up-and-coming industries; for example, consider holding initial convenings for manufacturing and professional/technical services firms in 2017-2018. Potential outcomes could be greater synergy between firms, identification of common needs and challenges, collaboration, identification of missing elements in the supply chain, etc.
 - This may need to be narrowed down further by sub-sector, as food and beverage companies will have needs that are different than technology product firms.
 - This may also be an opportunity to connect established companies with startups for peer learning, mentorship, collaboration, etc.
 - It might be worth working with the Manufacturing Extension Partnership to design informational sessions of interest to the manufacturing sector.

3. OED Services—Convening EDO Contractors for Collaboration

It has often been observed that Santa Fe’s community of EDOs is silo-ed. The City may not have the power to knit the entire EDO community together, but does have the opportunity to influence the organizations to which it issues contracts.

- One of the best ways of building collaboration among EDOs is to hold regular informal meetings of the contractor-EDOs in order to update each other. In my work on this project I found there were some big gaps in how much organizations knew about what other groups were doing, and many opportunities for collaboration were missed.
- A potentially useful exercise in such a convening might be to ask the EDOs to categorize themselves in terms of the services they provide and the types of clients they support (by industry, stage, and need). This could help identify service gaps and give the organizations a better sense of what their peers specialize in.
- These convenings could also be the best place to start discussing outcome measurement to see whether there is any possibility for shared metrics, or measures of collaboration.
- Some examples of other potential topics include collaboration around expanding on SFBI’s work with Global Entrepreneurship Week, or discussion of joint-funding opportunities.
- The convenings may help identify synergies among the EDOs. Here are just a few examples of potential partnerships: the Tech Roundtable firms or VAF clients working on internships with the workforce and mentoring

¹⁹ Although too “down in the weeds” for this report, this project developed and forwarded to OED a list of 8 potential topics and speakers for the Technology Roundtable.

programs; or discussion about whether an event combining Youthworks! and bizMIX participants might be a way to increase peer learning, connectivity, and inclusion.

- Another initiative that might be investigated in an EDO convening is whether the bizMIX and VAF competitions could collaborate on a joint kickoff event or promotion, since companies are not always sure which program suits them best. A joint initial rollout event might get more traction, even if each program still had its own training and informational sessions.
- An EDO discussion could also reveal whether or not it would make sense to use a common set of categories to track applicants, workshop attendees, or clients in a uniform way.
- If a strategy of regular convening of OED contractor-EDOs seems to be working, consider bringing WESST, the SBDC, Startup SF, and other business support organizations into the mix since they are significant players whose perspective is useful.
 - But make sure not to duplicate existing efforts, such as the SF Chamber of Commerce’s ED working group.

4. OED Metrics

The Best Practices report (see Appendix A on page 26) discussed the difficulties of measuring ED programs. At some point OED will need to determine the staffing and systems needed to track metrics, as unless resources are committed, collecting and reporting of metrics will fall through the cracks. Although a full discussion of metrics will only make sense as part of a larger strategy discussion, it is good to start thinking about the approaches now. This research has tried to identify a few of the levels at which measurements can occur—system, ecosystem, and operational.

- At an overall **system level** Santa Fe could consider an effort to track important indicators of economic and community health over time. Communities often use the process of deciding what is important to track as a way of stimulating a discussion about the larger issue of what they want to achieve.²⁰
 - It might be helpful for OED to devise a trial “dashboard” of categories of economic health measures. This could serve as a “straw man” for the new ED strategy effort, in order to focus a deeper discussion of goals.
 - This discussion might also involve collaborating with the City’s existing efforts to develop a “sustainability dashboard.”

²⁰ See Portland’s community indicators (which include measures of economic progress, safety, watershed health, and inclusion) as well as the progress they have made on each measure, here: <http://bit.ly/1k6FXhp>

- At a level that assesses the overall **health of the entrepreneurial ecosystem** there are quantitative measures, such as the Kauffman measures of density (*discussed in Appendix A, page 26*), but others involve tracking qualitative factors such as the connectedness of entrepreneurs or the opportunities for people to move seamlessly between different companies. These assessments often involve storytelling or anecdotal information as much as anything, but allow for more nuance in understanding what is happening in the community.²¹
- At a more **operational** level, OED may need to re-visit how it tracks and reports on EDO contractor performance and on the outcomes of companies who have received direct City support in the form of incentives. Here are a few observations:
 - Economic development organizations may be required to measure impacts in specific ways to satisfy their Boards or other funders.
 - Tracking the impact of financial support to companies can also be complex because there are both direct and indirect benefits, not all of which can be easily told in a spreadsheet.
 - Final closeout reports—even for projects that don’t survive—could be one way to provide a high-level summary not only of impacts, but also of lessons learned. Learning from “failed” projects will help the OED operate more entrepreneurially by taking calculated risks for enhanced impact.

5. OED Operations—Data Management

Research for this project revealed that there did not seem to be widely shared information systems within OED. Simple questions, such as “what companies have received City support in the form of incentives?” or “what are the trends in industries represented by new business license applicants?” could not be answered easily.

- Conduct an assessment of data flows about companies in the City, both within and external to OED. This could include revisiting the Business License application, the City Business Survey, and any intake forms used when working directly with companies. The OED could get better data if it used the same company categorization in all its recordkeeping.
 - It is probably a good time to take a look at the City’s annual Business Survey in terms of the questions asked, the overall goals of the survey, the methodology, follow-up, dissemination of results, etc.
- Consider adopting the categories proposed in this project (2-digit NAICS with explanatory descriptions) whenever industry categorization is needed.

²¹ A study cited in Appendix A lamented the desire in the ED community to quantify everything, even though quantitative data alone is insufficient to effectively capture the full range of ED impacts. It is important to try to understand qualitative impacts because, as Albert Einstein is said to have observed: “Not everything that can be counted counts, and not everything that counts can be counted.”

This will make it easier to see trends than relying on overly granular 5-digit NAICS codes. Also consider reporting both a primary and a secondary code, since companies rarely fall into just one category.

- Investigate the need for a better, easy to use database system for keeping track of companies. An internal database (especially one linked to or incorporating a contact management system) would help OED:
 - Keep abreast of emerging trends
 - Better track internal activity
 - Track recipients of direct City support
 - Promote transparency by being better prepared to answer questions from press, elected officials, or citizen groups
 - Better communicate internally (so each staffer can see what contacts other staffers had with a given company)
 - Improve knowledge management so data is not lost when staff leave
 - Do a better job of contact management for improved marketing and communication
- It may make sense to talk to a few peer communities to find out what systems they use and how they manage data generally. It would also be a good idea to have a conversation with the Regional Development Corporation about possible shared use of their Executive Pulse data management system.
- It is best not to be overly ambitious about creating a data management system or nobody will use it.
- Defining what exactly needs to be tracked will take some time and effort (although the *Data Collection Template* in Appendix C is a start), but the very act of discussing OED's information needs can help clarify roles and goals as well as identify flawed processes.

6. Marketing

The Kauffman Foundation has noted that marketing is a key area where municipal ED can add value beyond the marketing efforts of any particular EDO.

- Consider issuing an RFP to establish an overall OED **marketing strategy**. Even if a full marketing strategy may need to await the new ED strategy there are most likely other tasks in promoting what OED is doing currently that can be started relatively soon.
- One goal of OED marketing might be communicating locally the value of business and entrepreneurs in creating a vibrant community and highlighting the good things already being done around improving the economy in SF.
 - a. This might ultimately be expanded to telling the Santa Fe business story to wider audiences as part of an entrepreneur-recruitment strategy.
- Investigate the Kauffman Foundation idea of adopting a neutral social media hashtag (such as #SantaFeBiz) so the City, EDOs, and others can

- better publicize events and trainings aimed at the business community.
- Explore getting more involved in Global Entrepreneurship Week as a way of telling the story of Santa Fe's entrepreneurial success, perhaps partnering with SFBI's GEW efforts. In 2017, GEW will be November 13-19.
- Look into the potential of the common marketing of facilities such as SFBI's wet lab, SFCC's Trades and Advanced Technology Center, the Stagecoach Foundation, etc.

7. Inclusion

Based on the findings here and in the Crossroads ED report, it is important to understand whether youth, minorities, immigrants, women, low-income residents, non-English speakers, and other populations are adequately served by current ED efforts. However, only a new ED Strategy will reveal to what extent this is a community priority, where the focus should be, and what organizations will be involved.

- A fairly "low-hanging fruit" project if there were sufficient funding and staff time to oversee the project would be to issue an RFP for entrepreneurial/business training in Spanish and/or translation of key City business information into Spanish.

8a. OED Knowledge—Additional Things to Learn Locally

The research into existing companies suggested the following ideas for potential follow-on research. Most of these are designed to provide information that can impact ecosystem support, convening, marketing, recruiting, and other ED functions.

- Environmental, scientific, and other specialized consulting fields are niches where Santa Fe has some strength. Spend a little time trying to figure out how to support and leverage this niche. Consider conducting some visits or interviews, or hold industry-specific convenings, to find out what they need and to develop ideas for leveraging the industry. Possibilities could include asking the firms to provide internships, or to bring their conferences or user group meetings here.
- Determine what can be learned from people who moved here and started businesses. Try to find out where, specifically, they come from and why they chose Santa Fe. This could inform a marketing effort similar to Albuquerque's in which rather than recruiting companies, the City is marketed to individuals (often in tandem with tourism marketing) as a place to start or grow a business.
- Explore the distribution industry by interviewing key players like BTI (and identifying others) to find out whether or not there is the potential for growing this industry here.
- Interview some of the big knowledge organizations like NCGR and the SF

Institute about how they contribute to the local economy and how they might play a greater role in ED via insight from their research, commercialization, talent attraction, providing connections to their corporate partners, etc.

- Find out if national companies with outposts here (e.g. Biohabitats, Intera, Kitware) are here mainly to serve big clients, because they rely on local labor skills, or for some other reason.
- Because Santa Fe has many small single-vertical software firms, some effort should be devoted to seeing what can be learned from them about why they are here, whether they have potential for growth, merger, etc.
- Explore the potential for targeted marketing (or strategic recruiting) based on what is learned from industry specific convenings, visits with scaleup firms, and companies with outposts here (e.g. why they are here, etc.).
- Consider an effort to document solo workers, and businesses in the “green,” financial services, media/film, alternative health, and other sectors that may have strength but for which we just don't have enough data yet (and which were outside the scope of this project).

8b. OED Knowledge—Best Practices Elsewhere

- Talk to ED groups in other places about their approach to data and metrics, building connectivity among entrepreneurs, inclusion, etc. Big cities might not be the best comparators so look into smaller communities that have been successful in their ED efforts, such as Boulder, Bend, and Asheville. Regionally talk to Las Cruces and Albuquerque.
- Look at economic dashboards from other regions to get a feel for how Santa Fe might approach such a project, and whether it would be worthwhile. (Portland, OR and Minneapolis might be useful to start with).
- Boulder has become a hub of natural food and products manufacture; it could be useful to talk to their trade association, Naturally Boulder, about what they have learned in their evolution as this may shed light into how industry convenings (not just those for food) might be structured.
- Albuquerque would also be useful to talk to specifically about:
 - How their “Living Cities Integration Initiative” uses a data driven shared accountability method (as this may have implications for EDO collaboration here)
 - Whether there are any lessons to be learned from ABQ's “Navigator” program that might inform a business outreach effort here; ABQ has 4 people doing this. See: <http://bit.ly/2qOleRF>
 - How their efforts to market the region as a place for entrepreneurs and businesses to relocate are working out.
- Look at what Grants, NM is doing in solo work, funded by the NM Jobs Council. Here's a link with more information: <http://bit.ly/2qK2KHT>

9. Funding Mechanisms for ED Projects

The issue of whether the Santa Fe has the capacity (or is even eligible) to pursue philanthropic or grant funding is an open issue; the City probably needs to make a little more headway on defining priorities before a grant-seeking strategy is enacted. This will help alleviate the problem of going after dollars just because they are available even if the funding doesn't advance priorities and ends up being a distraction. The goal of this section is merely to provide a quick introduction to some potential funders to raise the possibility of a future funding effort.

The **McCune Foundation** has an interest in economic inclusion; it may be worth investigating what they have funded in ABQ to see if they may a target for funding an inclusion project here. Details here: <http://bit.ly/2rNKBsS>

The **Santa Fe Community Foundation** has an interest in workforce development and in supporting public policy, civic engagement, community organizing, and public information to improve economic opportunity. They have both a Spring and a Fall grant cycle. It is unclear whether the City is eligible to apply (not being a nonprofit organization), but there still could be collective projects that OED has an interest in that would be eligible if run through a nonprofit. <http://bit.ly/1S44wcW>

New Mexico Economic Development FUNDIT Program

FUNDIT was created to assist communities in accessing financing from a group of agencies simultaneously. In order to bring a project before FUNDIT the project should be listed as a priority on the local Infrastructure Capital Improvement Plan (ICIP), Economic Development Plan, and/or Comprehensive Master Plan. Since one of the things they fund is feasibility studies, it may be worth inquiring whether the City could apply for funds to help fund the new ED Strategic Plan. Current application deadline is June 16, 2017. More information at: <http://bit.ly/2smu4tf>

The **Kauffman Foundation** is not known for having extensive grantmaking, but they do have cycles every now and again. For instance, in 2017 they announced the “Inclusion Open.” If inclusion turns out to be an aspect of ED that is identified in the new strategic plan, it could be worthwhile to see if Kauffman will continue this grantmaking in 2018.²²

Today we launch the 2017 Inclusion Open, a grant program to help organizations clear the path for diverse makers, doers and dreamers to pursue their ambitions. We are looking for nonprofit and for-profit organizations with uncommon solutions to level the playing field for entrepreneurs who have been excluded due to barriers related to their gender, race, age, geography, disability or sexual orientation, or their status as veterans or displaced workers. Qualified grant candidates may offer direct support, such as access to training, mentoring and capital; or they may address the root causes of barriers, such as bias,

²² Kauffman Foundation press release, April 18, 2017.

poverty, declining infrastructure, social isolation and demographic shifts.

Since OED has an existing relationship with Kauffman, it could also be worth seeing if they had any interest in funding an entrepreneurship summit (possibly in Santa Fe?) for smaller communities as an adjunct to their Metro Summit. (This would not directly benefit Santa Fe in terms of funding but could be a way of enhancing visibility and engaging in best practices with peer communities.)

The U.S. Department of Commerce, **Economic Development Administration (EDA)**. Both SFBI and the Regional Development Corporation have had success getting funding from EDA. Time will tell whether EDA will fall victim to Federal budget cutting, but as long as EDA funding exists, OED may want to keep abreast of EDA's interests to see if there is anything worth applying for. Some caveats are the difficulty of actually preparing an application, finding a suitable project, the complexity of grant reporting, etc. A more likely scenario may be having a local EDO serve as the lead organization with the City playing a partnering role. Since EDA often rewards regional collaboration, the best role for OED might be in bringing together regional players to come up with a strategy for seeking EDA funding that might flow to a variety of organizations.

Note: After the prior paragraph was written, EDA announced the availability of a total of \$17 million in funding under their Regional Innovation Strategies program. See: <http://bit.ly/2rsRIUO>

W.K. Kellogg Foundation. <http://bit.ly/2smzODd>

Although Kellogg seems primarily interested in urban projects, the fact that it has a commitment to New Mexico makes it an interesting prospect. They are particularly interested in issues of economic inclusion²³:

We also focus our work on helping industries and technical education programs align so there are clear pathways to employment for diverse populations. We support families in developing a base of financial security that will enable them to support and engage in the education of their children and to save for the future.

The **NM Gas Company/Emera** has established a \$5 million economic development fund to support projects in New Mexico communities and gave \$500,000 to Albuquerque for its efforts to create Innovate ABQ, so it may be worth investigating this path further. See <http://bit.ly/2rVqWqq>

The **NUSENDA Foundation** has focused primarily on Albuquerque but because they also have a presence in SF it may be worth talking with them. They are particularly interested in supporting novel funding mechanisms for businesses: <http://bit.ly/2smJRIn>

Nusenda Credit Union has also piloted innovative programs, such as the Co-Op Capital program, where associations can create and collateralize loan programs that benefit both the member association and local entrepreneurs.

Appendix A

Report on Best Practices on Measuring Economic Development Efforts

Originally submitted November 9, 2016

Goals

The goal of the overall project is to better characterize the actual situation on the ground regarding entrepreneurs and entrepreneurship in Santa Fe. A primary focus is a better understanding of the entrepreneurs served by economic development organizations (EDOs) funded by the City Office of Economic Development (OED): who are they, what sorts of businesses are they starting, what paths brought them here, what EDO services are they using, etc. The findings will serve as a baseline, with the ultimate goal of assisting the Office of Economic Development (OED) to:

- inform overall ED strategy
- identify local trends
- fill gaps in services to entrepreneurs and improve partnership among local EDOs
- shed light into how success and progress might be measured for EDOs and the City OED efforts overall
- provide information to help set priorities for marketing the region for economic development purposes
- position itself for possible grant funding from national foundations

Limitations. This project emphasized the somewhat narrow universe of entrepreneurs and their support and did not address larger economic development issues such as infrastructure, recruitment, economic/tax analysis, industry cluster analysis, workforce, regulatory policy, land use, housing, neighborhood development, tourism, access to capital, etc.

Best Practices Overview. The project began with this review of some of the recent literature from thought leaders in the area of entrepreneurial support and economic development metrics. The findings will influence the overall approach and also the specific data points that are gathered in the entrepreneur/startup categorization (the second task of the project). The findings will also contribute to final recommendations made at the conclusion of the project.

Right after this project began, a project to re-visit the City's overall Economic Development Strategy was initiated. Even though the examination of "best practices" in this report was focused narrowly on the areas of characterization of entrepreneurial ecosystems and economic development metrics, there were many instances where it seemed worth pointing out that final decisions (about

issues such as measurement, new initiatives, etc.) can only be made when a strategy is finalized.

High-Level Summary on Overall Economic Development Metrics

Because the Santa Fe OED is interested in better understanding how it (and the EDOs it supports) can report impacts of economic development efforts in general (beyond just those relating to entrepreneurial ecosystems), the project is providing this overview of current research into ED metrics.

Activity (“input”) Measures. EDOs have tended to rely on a few types of metrics when assessing their economic development impacts. Generally “activity” measures look at things that can be easily counted, even if these measures don’t really say anything about impact, outcomes, or effectiveness. Examples of this would be tracking how many clients have been served, how many attendees at workshops, etc. There is nothing inherently wrong with this type of measure, but policymakers need to be aware of their limitations.

Outcomes. The second set of commonly used ED measures is aimed more at tracking “outcomes” of ED. This includes things like tracking results at the level of the firms that have been assisted, such as follow-on investment, and the most common metric: “job creation” (or its variants of “jobs retained” or “jobs attracted”). Because “job creation” is the most commonly used metric, it is worth detailing some of the many limitations of the measure. Here are a few:

- The degree to which job creation can be directly attributed to any sort of support (be it financing, advice, etc.) is suspect: companies create jobs, EDOs provide support around the margins
- It is also difficult to determine whether the job creation would have happened anyway, even if EDO support had not been provided
- Job creation may follow a year or more after the support is given, making the direct connection even more tenuous
- If companies are tracked over time, what time period is appropriate, and are job losses ever accounted for or only gains?
- Unless a survey is administered by a neutral third-party, companies may feel under an obligation to “tell the EDO what it wants to hear” in order to maintain good relations or position itself for further support
- For an organization like the City that may want to track aggregate job creation by its EDO contractors there is also the issue of duplication: if companies aren’t tracked and reported by name there is a great potential for double-counting if several EDOs serve the same client

Satisfaction. A third set of measures can be grouped under the general rubric of “customer satisfaction.” These often come in the form of surveys that ask companies about satisfaction with services received, the general utility of the ED services received, or qualitative impacts. As one study has noted, “the more

useful surveys, however, ask specific questions about how the assistance provided to the firm has affected its behavior."²⁴

These traditional metrics have increasingly come under fire, and yet they persist.²⁵

Performance measurement is more complex and difficult in economic development than in many other fields. While economic developers play critical roles in the health of their communities' economies, the results of their efforts often are not immediate or may appear disconnected from their efforts. Much of their high-value work involves building relationships and making connections, and this work may not pay off for months or even years. In addition, much of their impact is influenced by market, demographic, and other forces outside of their control. These are some reasons for continued use of old economic development metrics.

Economic Modeling. A more detailed process is to delve into overall municipal or regional economic impacts that follow ED efforts by using economic modeling.²⁶

To calculate fiscal and employment benefits of local economic development policies requires an economic model that takes the initial effects of the policies on local business activity, and calculates the impacts on the overall local economy, including multiplier effects on suppliers and retailers, and effects on local population growth. A variety of such regional models are commonly used by economic development agencies in the United States, most prominently the REMI model and the IMPLAN model. Once the overall impacts on all local business activity and population growth are determined, these impacts need to be translated into impacts on state and local government budgets, and local employment benefits.

²⁴ W.E Upjohn Institute for Employment Research, *Evaluating the Impacts of Local Economic Development Policies On Local Economic Outcomes: What Has Been Done and What is Doable?* 2002. <http://bit.ly/2oDvwEB>

²⁵ Economic Development Research Partners, *Making it Count: Metrics for High Performing EDOs*, February 2013. <http://bit.ly/2nED2if> See also: Brookings Institute, *Performance measurement in economic development – even the standard can't live up to the standard*, August 2016. <http://brook.gs/2bRb78Y>

²⁶ W.E Upjohn Institute for Employment Research, *Evaluating the Impacts of Local Economic Development Policies On Local Economic Outcomes: What Has Been Done and What is Doable?* 2002, <http://bit.ly/2oDvwEB>

(Note that because the article cited above is from 2002, there are newer economic models, such as RIMS II that have been developed since this article was written.)²⁷ This sort of measure does not attempt to ascribe changes to specific EDO programs but is aimed more at gauging overall impacts and community economic health. A project such as this sort of modeling is a large undertaking and would only make sense as part of a larger strategic initiative.

One very specific measure of an economy that falls into this category is the measurement of economic “leakage.” This approach is one component of the “localism” policies advocated by the Business Alliance for Local Living Economies (BALLE), whose founding board member Michael Shuman, was recently engaged by a local organization to conduct a leakage analysis of the Santa Fe economy.²⁸ In this view, economic development efforts should be aimed at reducing the amount of dollars that flow out of a community (via citizens purchasing online rather than from a local store, or by companies purchasing goods and services from vendors in other states or countries). Localism initiatives track their impacts by measuring reductions in economic leakage over time.

Storytelling. Although not an actual measurement, many EDOs have found that they can communicate their impacts better to citizens and elected officials by supplementing hard data with stories about actual companies, how they have been helped by the EDO, and how they have flourished post-support.

Multi-factorial. Researchers active in the world of EDO metrics have suggested an alternative categorization that goes beyond just measuring “program effectiveness” to examine a wide array of dimensions.²⁹

- **Internal**—measures activities that help an EDO conduct the business of the organization (irrespective of specific programs and functions).
- **ED Program**—helps an EDO measure the performance of its specific economic- development-related functions. (*Note: this is the category that encompasses most of the “traditional” measures outlined above.*)
- **Relationship Management**—measures the EDOs’ efforts made to build and strengthen relationships with internal and external stakeholders.
- **Community**—measures the community’s well-being. Some localities try to measure broad changes in outcomes, such as tracking changes in regional personal income or the tax base over time. This is something that

²⁷ For a good overview of economic modeling for economic development, see *Review of Economic Models: RIMS II Discussion*, September 20, 2015 at <http://bit.ly/2nA3ACA>

²⁸ Note, because this study has not yet been completed it is not cited here.

²⁹ Economic Development Research Partners, *Making it Count: Metrics for High Performing EDOs*, February 2013. <http://bit.ly/2nED2lf>

makes more sense when done by a governmental entity rather than an individual EDO. Measures like this can be useful in creating a broad-brush assessment of regional economic health, yet the ability to attribute outcomes to particular EDO programs still faces the limitations outlined above regarding job creation metrics.

Metric caveats

As noted by the EDRC metric study: “Performance measurement is not for the faint of the heart.” EDOs face many challenges, including these noted by the EDRC.³⁰

- A lack of accurate and timely data. Sometimes the data is not granular enough to effectively pinpoint the work that EDOs have done.
- Stakeholders’ misinterpretation of the data. EDOs oftentimes struggle with demonstrating value and return on investment without inappropriately taking credit for successes and misrepresenting data. At the same time, some feel pressured to show “big wins” to investors and decision-makers, lest they are not interested in funding economic development activities.
- Inconsistent metrics that can complicate performance measurement over time and across programs/projects.
- A lack of time and budget resources needed to collect useful data. EDOs that collect data through surveys of local companies may struggle to gather responses due to either a lack of time or confidentiality concerns.
- A desire among many EDOs and stakeholders to quantify everything, when quantitative data alone is insufficient to effectively capture the full range of an EDO’s efforts.

There is also the issue that without an overall strategy to guide ED activities, metrics can often exist in a vacuum.

Implications for this project: the project will interview the key OED grantees (BizMix, VAF, SCORE and SFBI) to understand how they view the world of performance measurement and to understand why they have chosen the metrics they use. It needs to be stressed that although as a major funder the City OED can urge its EDO grantees to look at metrics in a certain way, EDOs have other funders and boards that may dictate how they are required to measure success, so the EDOs may not be able to comply with any City requests. One potentially promising area of investigation will be into “relationship” metrics as mentioned above, as these are intended to track how EDOs partner and collaborate with each other, and the OED has an interest in seeing that its grantees are working together.

³⁰ Economic Development Research Partners, *Making it Count: Metrics for High Performing EDOs*, February 2013. <http://bit.ly/2nED2lf>

Approaches to measuring entrepreneurial ecosystems

A subset of efforts to measure economic development efforts generally is the attempt to measure improvements in the actual environment for entrepreneurship. An initial assumption was that this project might examine certain measures of entrepreneurial ecosystems proposed by the Kauffman Foundation, the national “thought leader” in entrepreneurship. These measures were developed to help regions measure the impact of initiatives to improve entrepreneurship. Kauffman is firmly in the camp that believes that regions should strive to measure the outcomes, rather than “activities” (or inputs) associated with these efforts.

Kauffman acknowledges that the measures adopted will depend on what the community decides it wants to focus on when supporting entrepreneurship.³¹

In some places, the desired outcome is simply more: more entrepreneurs, more companies, and more jobs. Other communities design their ecosystem efforts around a particular type of company or type of job. Some regions, moreover, see the “entrepreneurial ecosystem” as a marketing effort, and focus on a particular type of individual they hope to attract to their area. For other cities, the only thing that matters is the “exit” —initial public offerings and acquisitions.

Kauffman’s primary outcome measures of entrepreneurial ecosystems are³²:

- **Density**: density of new and young firms, defined as the number of new and young companies per 1,000 people in a geographic area; share of employment in new and young firms; and high tech (or the region's preferred sector) density.
- **Fluidity**: population flux, or the level at which people move between cities or regions, providing a constant remixing that is key to idea generation; labor market reallocation, or people's ability to find the right match of jobs within a region; and number of high-growth firms.
- **Connectivity**: program connectivity, or how connected entrepreneurs are with resources and each other; spinoff rates, which indicate the extent to which successive waves of new companies are created; and dealmaker networks, which inform entrepreneurial leaders about how effectively deal professionals are establishing relationships and facilitating new firm formation.
- **Diversity**: economic diversification, which ensures that a city or region is not overly reliant on a particular industry; immigration, or how effectively the ecosystem attracts and assimilates immigrants, who tend to start companies more frequently than the native born do; and income mobility, or how well the entrepreneurial ecosystem diversifies economic opportunity.

³¹ Kauffman Foundation, *Measuring an Entrepreneurial Ecosystem*, March 2015.

³² *Four Indicators to Assess Local Ecosystem Vibrancy*, Kauffman Foundation, March 16, 2015, <http://bit.ly/1LPQw4M>

The general idea is that tracking some or all of these measures over time can be an indicator to how the ecosystem is improving or declining.

One “flavor” of the Kauffman density metric was referred to in the recent announcement that Santa Fe ranked 13th among metropolitan statistical areas in the percentage of employment attributable to startups in 2014. Santa Fe’s rate was 3.7%, well above the national average of 2.1% of employment attributable to startups.³³

Some work that has already been done on density—specifically the density of high-technology firms—included a glimpse into Santa Fe. This particular study (from 2013) believes that, even though new firms are generally the greatest creators of net new jobs, not all new firms are created equally, with high technology firms having an outsized influence.³⁴

Of new and young firms, high-tech companies play an outsized role in job creation. High-tech businesses start lean but grow rapidly in the early years, and their job creation is so robust that it offsets job losses from early-stage business failures. This is a key distinction from young firms across the entire private sector, where net job losses resulting from the high rate of early-stage failures are substantial.

This study found that between 1990 and 2010 the density of hi-tech startups in Santa Fe increased from 1.2 to 1.6 (which is in the second-highest tier of density categories nationwide)³⁵. This is particularly impressive considering that Santa Fe does not seem as strong in some of the key building blocks of technology communities (such as having a nearby research university).³⁶

The data provide a number of insights. First, each of the high-density metros has one of three characteristics, and some have a combination: they are well-known tech hubs or regions with highly skilled workforces; they have a strong defense or aerospace presence; they are smaller university cities.

Still the notion that certain new businesses have an oversized influence on the jobs situation is a useful one. This is not to say that there should be a single-

³³ *Job Creation from Startups as a Percentage of Total Employment in Metro Area*, U.S. Department of the Census, Business Dynamics Statistics, September 2016.

³⁴ Kauffman Foundation, *Tech Starts: High-Technology Business Formation and Job Creation in the United States*, 2013. <http://bit.ly/2qITUGs>

³⁵ In this particular way of looking at density, a value of “1” indicates that the region’s high tech density is the same as the average for the entire U.S., so anything over a 1 indicates a greater density.

³⁶ Kauffman Foundation, *Tech Starts: High-Technology Business Formation and Job Creation in the United States*, 2013. <http://bit.ly/2qITUGs>

minded focus on technology companies, but it does suggest that getting good baseline data on local technology firms should be one aim of this project.

As with so many metrics, it all comes down to what, exactly, a community is trying to achieve. Since, as noted above, the City is only just beginning to revisit its strategy for economic development, this project concluded that focusing on more “real world” measures would take precedence over trying to replicate all of the Kauffman measures.

However, once new strategic priorities have been established, an assessment of some or all of these Kauffman measures may make sense, to serve as a baseline to measure progress over time. In fact, the Kauffman measures can be useful for initiating community conversations about goals and priorities when developing an overall strategy.

Implications for the Project

A companion report will detail the exact proposed categorizations of companies and entrepreneurs—influenced by the Kauffman measures—that are ultimately selected for this project.

However, some key Kauffman findings: notably that there are increasing numbers of immigrants, minorities, and people between 35 and 44, among the ranks of entrepreneurs; as well as the finding that a large proportion (nearly 25%) of new entrepreneurs are now made up of people between 55 and 64, all suggested that our project look at entrepreneur age and origin when categorizing entrepreneurs.³⁷

Given the importance attributed to technology firms, this project will make an attempt to capture information on Santa Fe-based technology firms, even those that have not been served by one of the EDO grantees.

Despite not diving too deeply into the Kauffman metrics, this project will attempt to capture, even if only anecdotally, conditions on the ground that can shed light on connectivity (e.g. how companies and institutions spin off new companies and entrepreneurs); fluidity (trying to discern patterns in who is coming to Santa Fe to start businesses) and diversity (paying attention to the businesses and entrepreneurs who represent immigrants and non-technology business sectors).

Since “stage” is generally recognized as important, the effort will try inasmuch as possible to capture the stage of companies served by the EDOs. Generally the

³⁷ Kauffman Index 2016; *Startup Activity; National Trends*, August 2016; Kauffman Foundation, *Incentives for Silver Startups*, 12/07/15. <http://bit.ly/2qOOicS>

proxy for “stage” will be an estimate of the companies’ inception dates. The caveat is that EDOs may not know the “start-date.”

Since many studies (by Kauffman and others) have identified the importance of “scaleup” firms (sometimes called “second-stage companies” or “gazelles”)—companies who have the potential to have an outsized impact on the economy via rapid scaling, and/or export, this project will remain alert to the identification of any firms that the EDO partners regard as having scaleup potential.

An interview with Rhett Morris, an expert in supporting entrepreneurship, highlighted the importance of identifying potential scaleup companies (and their needs)—even if the definition of a scaleup might be different in a region as small as Santa Fe than it would be in a larger city.³⁸ The interview with Morris also pointed to the importance of categorizing companies not just by industry but by their “potential,” looking at categories such as scaleup, startup, “lifestyle” (e.g. not having an interest in growing). It could be useful to try to map the services of EDOs to these categories to better understand who specializes in helping which sort of company.

Based on Kauffman’s (and other organizations’) identification of the importance of “inclusion,” the project will attempt to be alert for issues relating to this—such as EDO services to under-served populations such as immigrants, non-English speakers, and young people.

Based on the importance of the Kauffman notion of fluidity, this project will attempt to characterize where local business founders come from (e.g. recent transplants, longtime residents, “boomerang” people who grew up, left, and came back, whether there are trends in specific geographies where recent business transplants came from, etc.) It will also collect anecdotal information on impacts such as how companies have spawned other companies.

Final Thoughts

An assessment of “best practices” in measuring success—particularly in outcomes—for the City’s economic development efforts overall, will need to be addressed when developing an updated economic development strategy. In the final report for this project, recommendations on revisiting metrics will be made, with the caveat that until there is an overall strategic plan to guide the work of the OED, making major changes in how performance is measured probably does not make sense.

³⁸ Interview with Rhett Morris of Endeavor conducted on 11/7/16 by Grace Brill and Ross Chaney.

Ultimately, the City may not be able to exert much influence on how local EDOs report outcomes, but the City may be uniquely positioned to undertake some of the larger-scale assessments of overall economic health.

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- Interview with Rhett Morris of Endeavor conducted on 11/7/16 by Grace Brill and Ross Chaney.
- Michael Shuman & Kate Poole, “*Growing Local Living Economies: A Grassroots Approach to Economic Development*” (BALLE, 2012).

Appendix B: **Report on Categorization of Companies, Entrepreneurs and Entrepreneurial Support Services**

Submitted as Deliverable 2 to the Santa Fe City Office of Economic Development, (OED) under Professional Services contract purchase order: 16172603 - 000 - OP November 9, 2016

Introduction

A major component of this project is to work with the existing economic development organizations (EDOs) that are funded by the Santa Fe Office of Economic Development (OED) to try to categorize the companies/entrepreneurs that they work with in order to give the City a more detailed view of existing entrepreneurs.

The project is developing a template into which information can be input, displayed and analyzed. This report documents some decisions that have been made about how to best categorize the data. The categorization has been influenced by the “Best Practices” study that was the first deliverable under this contract, knowledge of the community, and, to some extent, common sense.

Once there is a snapshot of the companies supported by the grantees, some of these categories may become the basis for ongoing data collection done by either the EDOs themselves or the City OED. For instance, depending on how useful we find these categories to be once we have actual data from companies, the City may elect to use some of these categories to update its existing business survey.

After reviewing the research about best practices from national organizations, this project began an attempt to create the most relevant categories for capturing data in order to understand our existing ecosystem of entrepreneurs and new companies. One guiding principle is that a balance must be struck between being too general and too granular in categorization. If we attempt to capture data at too high a level, it tends to be too general to reveal much. However if the collection is at too granular a level, data collection is difficult (because everything becomes a “category of one”), and larger trends can be harder to identify.

A second reality to be accepted is that in some cases the EDO staff we are relying on for assistance might not know some of the relevant facts about companies. In many cases, data fields (like the age of the entrepreneur) need to be estimated.

A third issue is that we need to have a way to capture information that comes out during the research but which we had not anticipated. This means creating some “free form” fields for capturing data, and for being alert as the project unfolds to trends that we hadn’t been aware of when the project started that might make sense to try to categorize in further efforts.

Finally, because the data report will list the name of the company and company founder(s), and this information may be regarded as confidential, individual names may need to be blanked out in some versions of reports that are generated.

Categorization of Companies

Industry Categorization

One of the biggest goals of this project was a better understanding of the industries of the firms being supported by the EDOs. It turns out that every entity, from the City, to the VAF fund, to Bizmix, to SFBI, to SCORE categorized companies differently. See the appendix for some of these categorization systems.

A uniform system for describing industry exists at the Federal level in the form of NAICS codes. The problem with these codes is that they can be so detailed and granular that people—whether business owners themselves or EDO staff—have difficulty interpreting the codes to correctly categorize a company.

However, since most Census metrics and other statistical reports rely on these codes, it seemed unwise to abandon them entirely. If Santa Fe wants to track progress over time or to interpret federal statistical data, it makes sense to adopt the NAICS system.

The solution adopted here was to embrace the NAICS codes, but only at their highest, most general, or “2-digit” level. This solves the problem of granularity, but does not address the issue that people often have trouble interpreting the codes. The solution to this was to use knowledge of the types of businesses we tend to have in Santa Fe, and provide some annotations, so that anyone who needed to categorize a company has a better idea of how to do so. Each two-digit NAICS code was translated into a common language phrase, with accompanying annotations. See the Chart below (Chart A.) for the classification that was created.

In this system, rather than just listing “Healthcare,” here is a more useful annotation:
Health care and social assistance. All healthcare and day care, social services. (But social advocacy and human rights go in “Other services/nonprofits” and veterinarians go in “Professional/Technical services”).

As another example, since there are so many galleries in Santa Fe, it seemed worthwhile to flesh out the bland NAICS description of “Retail” to state that it includes art galleries.

Similarly, “Information” is a pretty general category so it seemed worthwhile to rebrand it as “Information/Film” and to make clear that it includes: “publishing, software, film production & distribution, and telecom” since this may not be logical off the bat.

Some of the more prominent categories in Santa Fe, such as arts, retail, professional/technical services, and manufacturing also needed a little fleshing out. (See chart below). However, in some cases, NAICS breaks down things in ways that seem unnecessary for Santa Fe. For instance they break manufacturing down into three categories, whereas we don't seem to have enough to warrant such sub-division.

Chart A. Proposed Categorization of companies by industry

Proposed Category	NAICS 2-digit	Description + Annotation
Agriculture/Forestry	11	Agriculture, forestry, fishing and hunting

Mining	21	Mining, quarrying, and oil and gas extraction
Utilities	22	Utilities
Construction	23	Construction (including specialty trades like electrical, plumbing, solar installers)
Manufacturing	31-33	Manufacture of food, beverage, textiles, apparel, wood, chemicals, pharmaceuticals, soap, pottery, concrete, metal & metal products, guns, machinery, computer hardware, furniture, medical devices, jewelry. Also services like printing, powder coating, metalworking and machine shops.
Wholesale trade	42	Wholesale trade (firms who wholesale others' products)
Retail	44-45	Retailing of cars, furniture, grocery, drugstores, jewelry, clothing, sporting goods, books, florists, art galleries & dealers, department and thrift stores
Transportation	48-49	Transportation
Information/Film	51	Information (publishing, software, film production & distribution, telecom)
Finance & Insurance	52	Finance & Insurance
Real estate	53	Real estate and rental and leasing
Professional/Technical services	54	Professional, scientific, and technical services (law, design, architects, computer programming, web development, marketing firms, scientific consulting, engineering services, advertising, veterinarians).
Management of companies	55	Management of companies and enterprises
Other services (B2B)	56	Administrative and support and waste management and remediation services, mostly provided to businesses (includes employment agencies, call centers, travel agencies, waste, janitorial)
Educational services	61	Educational services (Public or private schools, colleges, training organizations)
Healthcare	62	Health care and social assistance. All healthcare and day care, social services. (But social advocacy and human rights go in "Other services/nonprofits" and veterinarians go in "Professional/Technical services").
Arts/entertainment	71	Arts, entertainment, and recreation (sports, artists, museums, casinos (but film/media production in information; galleries go in retail)
Accommodation/restaurants	72	Accommodation and food services (bars, hotels, restaurants, catering)
Other services/nonprofits	81	Other services (except public administration) (all repair services, but also salons, beauty services, funeral homes, dry cleaning. Also includes religious, grant-making, civic, professional, and other associations (social advocacy, human rights, business associations)
Other	99	Industries not classified (government, courts, police)

Since most Santa Fe businesses don't fall into some of the NAICs categories when they are presented in *numeric* order, below is a proposed listing that could be more easily used, as it *puts the more common industry types first*. For instance, if the City wanted to ask its EDO contractors to use a standard classification, or wanted to include a self-categorization scheme in its online “business survey,” this ordering of categories (along with descriptions) might be more useful than the one above that goes in NAICs numeric-order.

Manufacturing	Educational services
Construction	Finance/Insurance
Retail	Real estate
Information/film	Wholesaling
Prof/Tech services	Transportation/warehousing
Arts/entertainment	Management of companies
Accommodation/restaurants	Agriculture/forestry
Other services/nonprofits	Mining/oil/gas
Other services (B2B)	Utilities
Healthcare	Other

When categorizing companies by industry for this project, I will use both a primary and a secondary code, since most companies fall into at least 2 categories.

Company stage & age

Whenever possible we will try to capture an “establishment date” for a company. This way, over time we can calculate how old the company is (even if this does not necessarily say anything about company viability or revenue status).

Categorization by stage can be difficult, since to be useful, one must specify at what point in time the description is applied, since it is a moving target. However as a crude measure of the status of companies assisted by the regional EDOs, the categorization below made the most sense. Although the categories are a little imprecise, it did seem worthwhile to distinguish between a company at the “idea” stage versus one at the “startup” stage. The thought was to distinguish people who are merely toying with an idea, a case where EDOs might do as much good by dissuading them, or helping them see the potential pitfalls—from a “startup” where a person has already gone out on a limb to seek a form of incorporation, do some product development, or take other steps that go further than ideation.

- idea
- startup
- early revenue
- growth
- established
- declining

Because so many sources have identified the importance of providing assistance to the very small number of companies who tend to have an outsized influence on job creation,

the data template will have a column to keep track of companies that either are (or have the potential to become) what are known as “scaleup” companies.

Linkages

Because of the importance that Kaufmann assigns to identifying elements of fluidity, such as the companies who spawn spinoffs, I have added a text field in which any data about a linkage between companies can be recorded, even though it is assumed that we either won't have data or there won't be much meaningful data to put in this field. Examples of data that might go into this field are the names of other local businesses that the founder worked in, whether the founder is a serial entrepreneur, whether the founder attended or worked at local universities or laboratories, etc.

EDO support

Whenever possible our data template will have a check box to indicate which EDO support programs the company participated in (e.g. were they counseled by SFBI, a BizMix applicant, etc.).

Categorization of Entrepreneurs

Age. Over time it will be useful to know whether Santa Fe tracks national trends in entrepreneur age. The age ranges proposed, which track the newly revised U.S. Annual Survey of Entrepreneurs (ASE) are:

- Under 25
- 25-34
- 35-44
- 45-54
- 55-64
- over 65
- NA

Gender. This seemed worth capturing to give a fuller picture of who our entrepreneurs are. There are often grants to EDOs who work with specific populations (such as women, minorities or veterans) so beginning to try to track this seemed worthwhile.

Minority status. This seemed worth capturing to give a fuller picture of who our entrepreneurs are. Admittedly we often may not know minority status, so often this will be anecdotal. There are often grants to EDOs who work with specific populations (such as women, minorities or veterans) so beginning to try to track this seemed worthwhile.

Veteran status. This seemed worth capturing to give a fuller picture of who our entrepreneurs are. Admittedly we often may not know veteran status, so often this will be anecdotal. There are often grants to EDOs who work with specific populations (such as women, minorities or veterans) so beginning to try to track this seemed worthwhile.

Categorization of Economic Development Services

One goal of this project is to better understand what services companies need and what services are provided by the EDOs. This may be difficult to find out from our EDO partners, since some of the programs (such as VAF and BizMix) don't offer enough in-depth assistance to their companies to make it possible to classify. If there are enough companies for whom we can detail the exact nature of the assistance provided, this will be tracked separately. In addition, having well-defined categories of need will be helpful in surveying companies moving forward.

At the highest level, the broad categories that EDOs can provide include:

- Business assistance consulting (see below for further breakdown)
- Technical assistance
- Space
- Networking
- Advocacy
- Financing/funding
- Hiring/workforce
- Education/training (see below for further breakdown)

Because “business assistance consulting” and “education/training” can encompass many topics, a detailed breakdown of the specific sorts of topics companies may need help with includes:

- | | |
|---|--|
| <ul style="list-style-type: none"> • Bookkeeping/accounting/tax/financial projections • Business plan • Export/Import • Facilities/space/equipment • Financing/debt/capital/grants • HR/hiring/workforce/ internships • Incentives • Legal/IP | <ul style="list-style-type: none"> • Manufacturing/supply chain • Market research/assessment • Marketing/sales/e-commerce/web • Networking • Relocation from outside the area • Startup assistance • Strategy |
|---|--|

Existing industry categorization schemes used by some of the local EDOs.

SCORE

- | | |
|---|--|
| <ul style="list-style-type: none"> • Arts and Culture • Automotive • Building and Construction • Day Care • Distribution and Wholesaling • Green • Healthcare • Knowledge Based | <ul style="list-style-type: none"> • Hospitality • Manufacturing • Media • Real Estate • Restaurant • Retail • Technology • Other/Don't Know |
|---|--|

City of Santa Fe (in business survey)

- | | |
|---|--|
| <ul style="list-style-type: none"> • Finance/management • Product maker (art/food/manufacturing) • Healthcare/medical • Retail • Education | <ul style="list-style-type: none"> • Technology (hardware/software) • Science/biotech/chemistry • Building/construction • Non-profit • Services provider (note: many self selected in this one) |
|---|--|

- Hospitality
- Food/restaurant
- Outdoor (product/service)
- Film/digital media
- Law
- Intellectual property
- Real estate

Santa Fe Business Incubator

- Health & Life sciences
- Process/Product
- Technology
- Service

Venture Acceleration Fund

(Note: Asterisk * refers to REDI clusters)

- Construction/building trades
- Finance/real estate
- Food/beverage Producer
- *Creative/design/film/media (e.g. filmmaking, web design, artists)
- Government/Non-Profit
- *Green/renewable energy (e.g. services like solar installers, products like biofuels, green building products)
- Health Care/wellness (e.g. medical professionals, massage therapists, etc.)
- Hospitality (hotel/restaurant)
- Manufacturing
- Outdoor/Recreation (producers like backpacks, distributors like bike parts, services like guiding)
- Products NEC (e.g. beauty, clothing, guns, etc.)
- Retail/Gallery
- Services NEC (professional services, IT, etc.)
- *Technology— Software/apps/games/analytics
- *Technology— Medical device/pharma/biotech/genomics
- *Technology— Materials, Hardware, Optics, Energy, Environmental
- *Value Added agriculture/forestry/farming
- Other (please specify below)

Appendix C: Draft Company Data Collection Template

This template may help establish data fields if OED decides to establish an internal database to track companies. Discussion with OED staff will probably result in a somewhat modified scheme, but this will be a good starting point.

During this project it became apparent that many data fields, such as the age, minority or veteran status of a company founder, were not easily obtained. The original reason for wanting to capture this information was that it can help document service levels to specific populations to assist in grant funding.

Company	
Founder Name	
Founder contact	
Brief description	
Website	
Notes	
Linkages	This field is used to capture data such as whether a company is a spinoff of another company.
Primary NAICs	2-digit
Secondary NAICs	2-digit
Scaleup potential	Y/N
Establishment date	
Manufacture locally?	This field was added to the original template as it is often useful to know whether a manufacturer actually produces a product in Santa Fe or not.
Economic base	Y/N
Founder Gender	
Founder veteran status	Y/N
Founder Minority status	Y/N
Founder Age	Using pre-defined categories
VAF applicant	This program field was useful in this project, but it may not make sense to track participation in this or any of the EDO programs listed below in an ongoing basis
VAF awardee	
bizMIX Applicant	
bizMIX participant	
SFBI Client	
SFid Applicant	Since this program is not currently funded this field may not make sense in the future
SFid Participant	Since this program is not currently funded this field may not make sense in the future
Creative Startups cohort member	
SFCC client	
OED direct support	This could be a useful field to track companies who have received City funding via LEDA, IRBs, tax abatements, etc. Or to track whether they have been served by the OBG, a business visitation program, etc.

About the Author

Since 2003, Grace Brill has helped technology entrepreneurs confront market realities and assisted policymakers better understand economic development issues through her own company, Market Intelligence Solutions LLC, as well as with her work with the Regional Development Corporation and Technology Ventures Corporation.

In 2016 Brill played a key role in the research, analysis, writing, and editing for the City of Santa Fe's *Crossroads Economic Development Report*. In 2014 she was instrumental in planning and writing a successful grant application to the Economic Development Administration's *Regional Innovation Strategies* program that allowed the Regional Development Corporation to enhance the Venture Acceleration Fund.

In the arena of entrepreneurial support, her particular skill is helping technology founders "get smart" in areas like customer validation, market channels, and the competitive landscape; she is also knowledgeable in areas such as equity fundraising, general strategy, and operational issues for technology startups. As someone well connected to New Mexico's somewhat confusing entrepreneurial ecosystem, Brill has helped numerous companies connect with the right business support resources. She has served as either an advisor to or a core team member of the Venture Acceleration Fund from its inception in 2006 through 2016 and has also been a mentor to Startup Weekend, bizMIX, and the National Labs Entrepreneurship Academy.

In 2013 and 2014, Brill was an adjunct professor in the Management of Technology Program at UNM's Anderson School, teaching an MBA class covering technology forecasting, market assessment for B2B products, and lean startup methodology.

Prior to her work in entrepreneurial support and economic development, Brill worked in information management with the drug/device manufacturer Mallinckrodt. She received a B.S. in Biology (*Phi Beta Kappa*) and MBA degrees from the University of New Mexico and holds graduate degrees in both Library Science (University of Missouri) and the History of Science (University of Pennsylvania).

In 2012 she was recognized as one of the New Mexico Technology Council's "Women in Technology" award winners. As a great believer in the power of public libraries, she served on the Board of the Santa Fe Public Library from 2009 to 2016, and received the Friends of the Library's "Heart of the Library" award in 2017.