

The Economic Impact of Austin Technology Incubator Alumni Companies on Travis County, 2003–2012

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Abstract:

The Austin Technology Incubator (ATI) is the business incubator of the IC² Institute at The University of Texas at Austin. ATI works with seed- and pre-seed-stage technology startups, helping to prepare these businesses for commercial success. This study estimated the value to the Travis County economy of ATI companies that graduated over a 10-year period from 2003 to 2012. The study analyzed ATI's economic contribution in two ways: First, it used data-intensive IMPLAN input-output analysis to estimate quantitative economic and fiscal impacts, based on a survey of ATI alumni company CEOs. Second, short case profiles, derived from interviews with ATI alumni founders, identified qualitative impacts. ATI companies that graduated in the 10 years from 2003 to 2012 are estimated to have generated more than \$880 million dollars in economic benefits, created more than 6,520 jobs, and produced more than \$20 million in local tax revenue. In addition, many of the founders of the graduated ATI companies later created other companies, became angel investors in local startups, and made important civic contributions beyond their incubated company.

Keywords: Austin Technology Incubator; ATI; economic development; economic impact; technology incubation; Travis County, Texas; Austin, Texas



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*Prepared for The Austin Technology Incubator, January 2014
By the Bureau of Business Research, The University of Texas at Austin*

BBR Bureau of
Business Research

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The Bureau of Business Research, The University of Texas at Austin

The Bureau of Business Research (BBR) was established in 1926 to provide small business owners and policymakers with applied economic research and data to strengthen the state's business environment. Throughout its history, the Bureau and its work has been characterized by objectivity and independence. The Bureau's publication history includes *Texas Business Review* and numerous economic assessments and program evaluations.

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Dr. James Jarrett, Bureau of Business Research, The University of Texas at Austin, served as the principal investigator. Ryan Field, Austin Technology Incubator, The University of Texas at Austin, was senior researcher and co-author of the report. Brian Lewandowski of the University of Colorado at Boulder served as senior researcher and conducted the economic impact (IMPLAN) quantitative analysis.

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Executive Summary

The Austin Technology Incubator (ATI) is the business incubator of the IC² Institute at The University of Texas at Austin. ATI works with seed- and pre-seed-stage technology startups, helping to prepare these businesses for commercial success. The Incubator has operated since 1989.

The purpose of this study is to estimate the value to the Travis County economy of Austin Technology Incubator companies that graduated over the 10-year period from 2003 to 2012. (When a company leaves the Incubator, having fulfilled certain success criteria, it is said to have “graduated.”) This study complements ATI’s annual economic impact assessments, which are performed in-house under the guidance of independent economists. The annual assessments measure only the contribution of those companies that are members and/or residents of the Incubator during that one year; they do not take into account the economic value created by companies that have graduated from the Incubator. As a result, the estimates contained in the annual reports are incomplete. This study provides a more comprehensive picture of ATI’s economic impact, including the impact of graduate companies, over the timeframe of a decade.

The study analyzes ATI’s economic contribution in two ways:

First, it uses data-intensive IMPLAN input-output analysis to estimate quantitative economic and fiscal impacts, based on a survey of ATI alumni company CEOs. Conducted by an academic researcher at The University of Colorado at Boulder, the IMPLAN analysis shows that ATI companies graduating in the 10 years from 2003 to 2012 were responsible for significant economic benefits, job creation, and local tax revenues. Based on the IMPLAN analysis of 30 ATI alumni companies and a subsequent estimation process for nine operational alumni companies that did not respond to the survey, the 39 alumni companies:

- Generated more than \$880 million dollars in economic benefits.
- Created more than 6,520 jobs.
- Produced more than \$20 million in local tax revenue.

Second, the study uses short case profiles, derived from interviews with ATI alumni founders, to identify non-quantitative (qualitative) economic impacts. Many of the founders of successful ATI companies later create other companies, become angel investors in local startups, make important civic contributions, and/or have other impacts beyond their incubated company. In order to assess these qualitative impacts, the study conducted seven case interviews of companies that graduated from ATI *before* the 2003-2012 period examined in the quantitative analysis. Although it is impossible to say with certainty what the people involved with the 2003-2012 companies will go on to do, their behavior might be expected to mirror that of their predecessors. If so, these case profiles suggest that the impacts of the 2003-2012 cohort will also be significant.

Part I of this report presents the methodology and results of the quantitative economic and fiscal impact analysis. *Part II* distills the seven case profiles and chronicles the histories and impacts from these companies. *Appendix I* provides a brief overview of ATI as it is operating today. *Appendix II* provides additional data from the economic impact analysis for the 30 companies that responded to the survey.

I. Economic and Fiscal Benefits from ATI Graduates, 2003-2012

ATI companies have generated significant economic benefits for the State of Texas, and specifically for Travis County and the City of Austin. The following analysis examines data for ATI graduate companies from 2003 through 2012. (When companies leave the Incubator in good standing, they are said to have “graduated,” hence the term “graduate companies.”) A survey, described below, was conducted of the graduate companies, with results then used as inputs for an IMPLAN analysis. Based on survey responses from the sample of 30 companies and the IMPLAN analysis, the responding alumni companies have contributed to Travis County at least:

- \$772.2 million in total economic benefits
- 5,558 direct and indirect jobs
- \$20.1 million in local tax revenue.

A subsequent analysis was performed to estimate the benefits from the 9 ATI graduates that are operational and did not respond to the survey. That analysis is described in the section below titled “Estimation Process for Non-Responding Graduate Companies and Total Benefits” and led to total estimated benefits of:

- \$880 million in total economic benefits
- 6,524 direct and indirect jobs
- \$20.1 million in local tax revenue¹

Methodology Details

A data-intensive research design was used to quantify the economic benefits. Eligible ATI alumni companies included those that graduated from the Incubator between 2003 and 2012 and are either still operating or have experienced a liquidity event—usually a merger, acquisition, or IPO. In the 10-year period, a total of 53 companies graduated from the Incubator. Of these, 39 met the inclusion criteria. The Austin Technology Incubator provided contact information for these graduate companies to the Bureau of Business Research at The University of Texas at Austin. Researchers at the Bureau designed and tested a survey instrument that was distributed via email. The survey requested information about company operations after leaving the Incubator, including location, revenues, expenditures, employment, and wages.² Thirty of the 39 companies responded in whole or in part to the survey.

Supplemental information was also gathered regarding each of the 30 companies’ industry and property taxes, as well as publically available secondary data on labor, wages, and output—to provide a broad analysis of the economic

¹ For technical reasons, no additional tax revenues were estimated for the 9 non-responding graduate companies; therefore the \$20.1 million dollar estimate is biased downward.

² A copy of the survey instrument is available from the principal investigator.

impact of graduates on Travis County. The primary methodology used in the analysis was an input-output economic modeling tool, IMPLAN. This software, as well as the accompanying multipliers, social accounting matrices, and trade flows, allow for economic analysis of graduate companies and other related industries, on the broader Austin-Travis County economy. The IMPLAN model in this analysis is unique to the economic activity of Travis County. Results from the 440 industry matrix are very detailed and are broken down in terms of direct, indirect, and induced impacts on output, employment, and wages.³

The 30 graduate companies responding to the survey were categorized into the following 13 industries in Table 1:

Table 1: Industry Categories Responding to Survey

Industry	Industry Description
325110	Petrochemical mfg.
325412	Pharmaceutical preparation manufacturing
333242	Semiconductor machinery manufacturing
334413	Semiconductor and related device manufacturing
334510	Electro-medical and electrotherapeutic apparatus manufacturing
334511	Navigational, measuring, electro-medical, & control instruments manufacturing
335110	Electric lamp bulb and part manufacturing
335311	Power, distribution, and specialty transformer manufacturing
443142	Electronics stores
511210	Software publishers
517210	Cellular and other wireless telecommunications
541330	Engineering services
541711	Research and development in biotechnology

IMPLAN incorporates data compiled from the National Income and Product Accounts (NIPA) and the Regional Economic Information System (REIS), both produced by the Bureau of Economic Analysis; the Consumer Expenditure Survey (CES), produced by the Bureau of Labor Statistics (BLS); and the Census Bureau's Annual Survey of State and Local Government Finances (SLGF). By incorporating information from these various sources, IMPLAN estimates industry-specific taxes, fiscal impacts for state and local areas, and aggregated taxes for households and government.

Additional examination of taxes by the research team estimated the percentage of sales and property taxes derived from state versus local sources. This was performed by examining employment and wages and by estimating

³ "Induced" refers to the impacts from households. For this study, indirect and induced are referred to as "indirect."

personal expenditures (*i.e.*, consumption). Components of consumption led to public revenues, including sales taxes, property taxes, fees, licenses, and others. Expenditures and taxes were estimated using rates and values acquired from the Comptroller of Public Accounts, the U.S. Census Bureau, the Bureau of Labor Statistics, individual county assessor websites, and other sources.

Survey Responses

Individual company data are suppressed in order to preserve proprietary information, and summaries are provided in aggregate. As noted earlier, not all responding companies provided responses to all questions. Of the responding companies, the unadjusted collective sales of companies (n=24) totaled \$265.1 million between 2003 and 2012. Reported expenditures totaled \$379.9 million, of which \$259.5 million (68.3%) were estimated to occur in Travis County. Companies reported 2,828 job years (n=27) and \$190.3 million in wages (n=21); nearly 77% of these workers were estimated to be local. Extrapolating the percentage of workers estimated as local to Travis County, \$165.7 million of these wages stayed in the local community.⁴

Missing values were imputed by the model based on industry standards specific to the region. This increased total estimated direct employment, labor income, and direct spending for the 30 companies.

Economic Benefits from IMPLAN

The direct spending in Travis County circulates through other industries in the supply chain, ranging from real estate and wholesale trade, to food services and health care. These “multiplier” effects bring the total economic benefits of the ATI graduates that responded to the survey to more than \$772 million in direct, indirect, and induced economic activity from fiscal 2003 through 2012. Table 2 shows that direct effects included an estimated 2,572 local workers (presented in job years) and estimated economic benefit of \$240.9 million over the analysis period. The total estimated effect of the 30 ATI graduate companies over the analysis period includes 5,558 jobs and an associated economic benefit of \$772.2 million.

⁴ 21 of the 30 responding companies provided responses to both employment and wages; 27 companies provided responses to either employment or wages.

Table 2: Total Economic Impact of ATI Graduate Survey Respondents, 2003-2012 Cohort⁵

Impact Type	Employment (Job Years)	Labor Income (\$ millions)	Value Added (\$ millions)	Output (\$ millions)
Direct Effect	2,572	\$240.9	\$347.4	\$411.7
Indirect Effect	1,205	\$60.1	\$95.7	\$148.8
Induced Effect	1,782	\$76.0	\$136.3	\$211.7
Total Effect	5,558	\$377.0	\$579.4	\$772.2

Direct Effect: Spending directly undertaken by the companies being studied.

Employment: The number of workers, provided by companies in job years.

Indirect Effect (also known as the Multiplier Effect): Captures the rippling impacts of spending throughout a community. This refers to the increase (or decrease) in economic activity generated in the supply chain of the direct industry.

Induced Effect (included under Indirect Impact) refers to changes in household expenditures impacted by spending or employment in the study industry or firm.

Labor Income: Includes employee compensation as well as proprietor income.

Output: Total production value of goods and services, including intermediate goods purchased and value added.

Value Added: Total sales (output) minus intermediate inputs.

Fiscal Benefits

Fiscal benefits associated with recent ATI graduates include tax revenues for the City of Austin, Travis County, Austin Community College, Austin Independent School District, and the Travis County Healthcare District from sales and use and property taxes. Business fees are *not* included in the analysis.⁶

From 2003 to 2012, an estimated \$20.1 million in local tax revenue was associated with spending by the 30 ATI graduates, their supply chain, and their employees' spending. This analysis is based on a bottom-up approach estimating direct and indirect sales taxes attributable to operations (from spending related to the expenses incurred by ATI graduate companies) and off-site employee

⁵ These impacts are expressed in nominal (unadjusted for inflation) dollars. Table 2 only contains estimates for the 30 ATI companies that responded to the survey. Estimates for the entire 2003 – 2012 cohort can be found at the beginning of Part I on page 3, at the end of Part I, and in the Executive Summary.

⁶ In a Travis County property tax search of the 30 companies identified in the survey responses, property taxes were identified for 14 in 2013, totaling more than \$290,000.

expenditures and of property taxes attributable to employees. Please see Appendix II for additional details from the IMPLAN analysis of the 30 responding companies.

Estimation Process for Non-Responding Graduate Companies and Total Benefits

Nine ATI graduate companies that are known to be operational did not respond to the survey. Without estimating these companies' impacts and using the data from only the sample of 30 companies in the IMPLAN analysis would produce biased estimates (i.e., the estimates would be too low). The estimation process for the non-responding graduate companies excluded a major outlier in the 30 respondents, calculated average estimates of jobs and economic benefits for the remaining 29 respondents, and then projected these average estimates for the nine non-respondents. This estimation process yielded 966 jobs and \$107 million in additional economic benefits. These estimates were added to the earlier IMPLAN results for total estimated benefits of:

- \$880 million in total economic impact
- 6,524 direct and indirect jobs
- \$20.1 million in local tax revenue.

These total estimated benefits should be viewed as conservative. The local tax revenue is known to be biased downward, although it is not known to what extent. Further, economic benefits and fiscal benefits from the additional 14 companies that graduated, but are no longer operating, could not be included. Many of these companies operated and generated economic benefits after their graduation.

II. Case Profiles: Pre-2003 ATI Alumni

While the quantitative analysis in this study focused on companies that graduated from the Austin Technology Incubator between 2003 and 2012, the following case profiles examine companies that graduated from ATI between 1989 and 2002. Each case study briefly discusses an ATI graduate company and its outcome as well as what the founders have done subsequently. Table 3 below illustrates the outcomes for each of the companies profiled below:

Table 3: ATI Case Study Company Outcomes

Company	Years in operation	Exit
Applied Science Fiction	8	Acquired by Kodak
Evity	2	Acquired by BMC Software
Evolutionary Technologies	17	Acquired by Versata Enterprises
Exterprise	3	Acquired by Commerce One
Haystack Laboratories	6	Acquired by Trusted Information Systems
Isochron Data Corporation	10	Acquired by Crane Enterprises
PSW Technologies	8	IPO

Four major trends emerge from the following case profiles:

- ATI alumni continue to start companies in Austin/Travis County
- ATI alumni invest in startups in Austin/Travis County
- ATI alumni serve as mentors for startups in Austin/Travis County
- ATI alumni serve as community and civic leaders in Austin/Travis County

While it is difficult to say exactly what ATI's more recent alumni will achieve, the behaviors of their predecessors may help to forecast their impacts.

Applied Science Fiction

In the mid-1990s, Applied Science Fiction, Inc. (ASF) formed to commercialize image auto-correction technology developed at the IBM Research Center in Austin, Texas. ASF's image correction technology could be embedded directly in PC scanners, allowing users to automate a number of photo-correction processes that would normally take users hours to correct manually. The founders, Dr. Albert Edgar, Sada Cumber, and Mark Urdahl, negotiated a licensing agreement with IBM that allowed them to independently commercialize the technology. Following their 1995 departure from IBM, the founders joined the Austin Technology Incubator, where they received access to infrastructure support and business relationships. After joining the Incubator, ASF signed major licensing deals with corporate partners, including Nikon, and raised nearly \$40 million dollars in venture capital financing. By 2000, the company had graduated from ATI, grown to 134 employees and planned to raise \$57 million in an IPO. ASF's

IPO was unfortunately timed, however, and as a result of poor market conditions, the company pulled its filing. ASF was acquired by Kodak in 2003 and operated in Austin until 2005.

The founders of Applied Science Fiction have continued to be active in both public service and the Austin technology startup scene. Sada Cumber went on to serve as the first US ambassador to the Organization of the Islamic Conference. He also founded a second digital image processing startup, SozoTek. Dr. Albert Edgar, the technologist behind ASF, went on to found Image Trends, a company that markets digital image processing plugins to OEMs, and that still operates today in Austin. Founding CEO Mark Urdahl relocated to California; he continues to invest in technology startups as a managing partner in White Dove Partners.

Evity, Inc.

Evity, Inc. was founded in 1998. The company developed a product called Site Angel that enabled e-commerce companies to monitor the performance of their website externally (outside of the company's own firewall), as a customer would experience it. In 1999, Evity joined the Austin Technology Incubator and received a \$1.5 million angel investment. This allowed the company to grow to 25 employees and sign major enterprise customers including National Instruments and American Express. Evity's strong customer traction made it attractive to software giant BMC Software. BMC acquired Evity for \$100 million dollars in 2000, approximately one year after the company entered ATI.

Initially, all of Evity's founders joined BMC Software. Founding CEO Rob Neville stayed with BMC from the sale through 2004 as a VP of engineering. After leaving BMC, Neville set his sights on the healthcare world, and formed Savara Pharmaceuticals. Savara, which also joined ATI and graduated in 2012, produces an inhalable antibiotic for the treatment of MRSA in cystic fibrosis patients. Neville also sits on the board of the Central Texas chapter of the Cystic Fibrosis Foundation. Co-founder Chris Marich stayed at BMC software until 2007, when he joined Rob Neville at Savara Pharmaceuticals as the VP of Business Operations.

Evolutionary Technologies International

Founded in 1991, Evolutionary Technologies International (ETI) sold database integration management software to Global 2000 companies in banking, insurance, telecommunications, retail, and healthcare. ETI joined ATI in 1991 with seven employees and exited in 1993 with approximately 40 employees. ATI helped ETI secure its first \$250,000 in angel capital. After leaving the Incubator in 1993, ETI grew rapidly. At the company's height in 1996, ETI had more than \$18 million per year in revenue and more than 200 employees. Personnel setbacks led to a restructuring in the late 1990s, when ETI formed a strategic alliance with NCR Corporation to develop, sell, install, and consult on database products. Later, ETI partnered with India-based Satyam Computer Services Ltd.

to boost productivity. In May 2008, the company was acquired for an undisclosed amount by Austin-based Versata Enterprises, Inc., a leading provider of enterprise software solutions. Versata was itself acquired by Austin-based Trilogy in 2006. ETI is now privately held and continues to operate as an affiliate of Versata, with headquarters in Austin.

ETI's founding CEO, Kay Hammer, has remained an active entrepreneur. After the sale of ETI, she founded Dorsan Biofuels, a biofuel technology company that employed a proprietary fungal biocatalyst to produce diesel fuel. Dorsan's intellectual property was purchased by a Danish Biotechnology firm in 2012. She is also the author of *Workplace Warrior: Insights and Advice for Winning on the Corporate Battlefield*, which chronicled Hammer's transition from a college professor to successful software CEO.

Exterprise

Manoj Saxena founded Exterprise during a collaborative program between ATI and 3M in 1998. The company designed intelligent agents and real-time knowledge processing systems that maintained and solved problems with high-speed data communication lines. Specifically, the company's software, ActiveMarket™, enabled companies to form Internet market networks to promote, sell, and support products and services.

Exterprise joined ATI in 1998. The Incubator helped Exterprise identify new markets, recruit talent, access talent at The University of Texas at Austin, and raise nearly \$9 million dollars. By March 2001 Exterprise employed about 145 people in Austin and a total of 240 people worldwide. In April 2001 Exterprise exited ATI and a month later was purchased by Commerce One in a stock transaction valued at \$114 million.

Since selling Exterprise, founding CEO Manoj Saxena and his team have become pillars of the Austin technology community. Mr. Saxena started his second company, Webify (also an ATI member) in 2002 and later sold it to IBM. Saxena is now General Manager of IBM's Watson Group. Members of the executive team at Exterprise started Austin-based Inventes and Gravitant. Saxena has also been active in public service. In 2002, he founded the Saxena Family Foundation, which promotes STEM education in the United States. He has also served on the boards of the Dallas Federal Reserve Bank and Communities in Schools and has held leadership roles with TiE Austin, The Austin Technology Council, and St. Stephen's Episcopal School.

Haystack Laboratories

Haystack Laboratories can be traced to founding CEO Steve Smaha's research on artificial intelligence and computer security at Austin-based Tracor in the late 1980s. Haystack's first product, Webstalker, protected Web sites by constantly monitoring all activities on a company's Web server. When an invasion occurred, the software expelled the intruder from the system and paged the company's system administrator. In 1991 Haystack joined ATI, which helped broker access

to three of Austin's major local technology companies: Tandem Computers, Lockheed Martin, and IBM. After leaving the Incubator in 1994, the company received approximately \$3 million in venture capital funding from Venrock, which allowed it to scale. In September 1997, Maryland-based Trusted Information Systems (TIS) purchased Haystack for approximately \$24.5 million in an all-stock transaction. At the time, Haystack had 35 employees, most of whom were in Austin. TIS was, in turn, purchased three months later by Network Associates for about \$48 million. Eventually Network Associates was renamed McAfee.

Smaha and his early team have remained active in the Austin tech community. Smaha personally has invested in more than 30 startups in the Austin area since selling Haystack. Additionally, according to Smaha, other employees of Haystack have been involved with at least a half-dozen local startups, either as CEOs, CTOs, or major investors. Smaha is still very involved with the Austin Technology Incubator and regularly contributes to Success Committee meetings and also mentors companies; he also acted as interim director of ATI's Clean Energy Incubator.

Isochron Data Corporation

Isochron Data Corporation integrated 2-way wireless communication technology into vending and packaged ice machines. The company initially targeted the multi-billion dollar cold beverage industry. Aruni Gunasegaram and Erin Defosse co-founded Isochron Data Corporation while still enrolled as MBA students at the McCombs School of Business. They formed the company to participate in the 1998 International Moot Corp. competition—a business plan competition founded in 1984 at the IC² Institute at The University of Texas at Austin. That same year, Isochron joined ATI, which provided the team much-needed credibility and infrastructure support, allowing the founders to focus on growth. By 2000, Isochron had raised more than \$12 million and had achieved major customer traction. The team had grown to 50 employees and it was continuing to actively sign customers. However, when the dotcom bubble burst in 2000/2001, Isochron found it more difficult to continue to raise growth capital. In 2002, a private equity firm purchased Isochron for an undisclosed amount, and the company continued to operate in Austin until 2008, when Crane Merchandising purchased the company's intellectual property assets.

After leaving Isochron, both co-founders returned to ATI to take leadership roles. Defosse served as the Incubator's first director of Wireless and as the interim Executive Director prior to joining BazaarVoice in 2006. Defosse also founded the Magellan International School, a not-for-profit international baccalaureate school in Austin. Gunasegaram returned to ATI and served as the Incubator's Director of Operations from 2008 to 2011, before returning to the private sector. She is currently working with her third technology startup, Querium Corporation.

PSW Technologies

PSW Technologies (PSW) entered the newly formed ATI in May 1989 as its first incubated company. Led by Ed Taylor, PSW was a UNIX software engineering services company that hoped to capitalize on Austin's IBM R&D center. By the time PSW left ATI, it had reached 30 employees and moved to its own facility in Northwest Austin. Taylor continued to run and grow PSW to a 100-employee firm with an impressive list of enterprise customers. In 1994, he left active management of PSW to pursue another startup, and brought in Dr. William Frank King to take the reins as its new CEO.

By 1997, PSW had grown to more than 425 employees with offices around the country. In that same year, it completed an IPO that raised \$25 million. In early 2000 PSW changed its name to Concerro. The stock price continued to climb and by 2001 Concerro had grown to 550 employees and a market cap of just over half a billion dollars. By August 2002, Concerro, like many similar companies, was facing the challenges from 9/11, the dotcom bust, and the recession. In 2003, the company had difficulty in meeting stock listing requirements and the shareholders voted to dissolve the company.

Since leaving PSW, Ed Taylor has continued to have a significant impact on the Austin entrepreneurial community. In 1994, Taylor founded his second IT services company, Collective Technologies, which grew to more than 500 employees. Likewise, according to Taylor, a number of the early PSW employees have launched their own firms that have become successful. He also helped co-found the Austin Software Council, an organization that has since evolved into today's Austin Technology Council. Taylor also had a prominent role for many years in the Ernst & Young Entrepreneur of the Year program for Central Texas and was himself awarded E & Y's Entrepreneur of the Year in 1999.

Appendix I. The Austin Technology Incubator

The Austin Technology Incubator (ATI) is the business incubator of the IC² Institute of The University of Texas at Austin. ATI works with seed- and pre-seed-stage technology startups, helping to prepare these businesses for commercial success. The Incubator has operated since 1989 with a dual mission: create jobs and wealth in Central Texas through technology entrepreneurship, and provide unparalleled teaching and research opportunities for the UT-Austin community.

Historical Performance

Over its first 25 years (1989-2014), ATI has graduated 142 companies. At least six of these companies were publically traded or went public after ATI graduation, more than 40 have merged with or been acquired by larger firms, and another 50 are still operating as going concerns. Tables 4 and 5 present ATI graduate companies that went public or were involved in a merger or acquisition.

Table 4: ATI Alumni Companies with Initial Public Offerings

Company Name	ATI Graduation
PSW Technologies	1990
DTM Corporation	1990
Encore Orthopedics	1995
Medical Polymers Technologies	1995
MetroWerks	1996
Ideal Power Converters	2012

Table 5: ATI Alumni Companies Involved in Mergers and Acquisitions

ATI Alumni Company	Merged with/Acquired by	M/A Year
Hal Computer Corporation	Fujitsu	1993
Haystack Labs	Trusted Information Systems	1997
Skipstone	Adaptec	1997
Fourth State Technology	Advanced Energy	1998
CompuSeis	Input Output (I/O)	1998
Metrowerks	Motorolla-Freescale	1999
Messaging Direct	ACI Worldwide	1999
Evity	BMC Software	2000
GlobSet	Trintech, Inc.	2000
Really Easy Internet	!Hey, Inc.	2000
Exterprise	Commerce One	2001
DTM Corporation	3D Systems	2001
SpeedGate	Mentor Graphics	2001
Silicon Metrics Corp.	Magma Automation Design	2003
ProTier	Surgient Networks	2003

Tmanage	MegaPath Networks	2003
Applied Science Fiction	Eastman Kodak	2003
B2G Source	Epipeline	2005
Webify	IBM	2006
BuildForge	IBM	2006
Factory Logic Software	SAP	2006
Austin Biofuels	Safe Renewables Corp.	2006
Cedra Corporation	Worldwide Clinical Trials	2007
Isochron Data Corp.	Crane Merchandising	2008
Evolutionary Technologies	Versata Enterprises	2008
Logical Information Machines	Morningstar	2009
eVapt	MagnaQuest	2009
Lombardi Software	IBM	2010
Phurnace Software	BMC Software	2010
itzBig	Job Target	2010
Bigfoot Networks	Qualcomm	2011
Black Locus	Home Depot	2012
ActaCell	Contour Energy Systems	2012
Ravel Data	W20 Group	2012
Dorsan Biofuels	Novozymes A/S	2012
InfoGlide	Fair Isaac Corp (FICO)	2012
Manticore	Sales Engine International	2012
Agile Planet	Yaskawa Motoman Robotics	2013
Circle Media	S3i Digital	2013

Capital Markets Access

Currently ATI focuses primarily on helping member companies compete successfully in the capital markets. The Incubator has trust-based relationships with multiple venture capital firms and angel investors/angel investor groups, both locally and outside of Central Texas. ATI also helps member companies gain access to public funding, both dilutive and non-dilutive. This “focus on funding” has paid dividends. Of the companies that graduated ATI in 2012, for example, 85% received funding while at the Incubator. Since 2007 ATI members and alumni have raised in excess of \$400 million. See Table 6: “ATI Members and Alumni Company External Funding Totals, 2007-2013” for year-to-year fundraising totals.

Table 6: ATI Members and Alumni Company External Funding Totals, 2007-2013⁷

Year	External Funds Raised
2007	\$ 26,622,500
2008	\$ 24,145,000
2009	\$ 20,323,000
2010	\$ 18,901,293
2011	\$ 111,571,479
2012	\$ 106,070,000
2013	\$ 124,090,406
Total	\$ 431,723,678

Admissions

Admissions at ATI are “rolling,” meaning that the Incubator does not have “classes”—companies can apply at any time. While the Incubator is part of The University of Texas and is located in a UT facility, it will work with any company that meets its admissions standards, regardless of whether the company has a UT-Austin affiliation. Selective in admissions, ATI will review 150-200 applications in a typical year and admit 5-10% of the applicants. The due diligence process can take weeks or months and is highly iterative. ATI also leverages the Austin community extensively in determining which companies to admit into incubation.

ATI is geared to work with seed- and pre-seed-stage companies, although it will admit later-stage companies or very early “proto-company” teams on a case-by-case basis. ATI tends to be most effective with companies whose founders have experience in their target industry, and who have advanced their solutions to at least a prototype/alpha product.

ATI Portfolios

ATI has several specialized sub-incubator programs, each of which is managed by a member of ATI’s professional staff with accountability for that portfolio:

- *IT/Wireless*: software (usually business-to-business) and hardware. Recent members have worked in enterprise software, social tools and web platforms, data analytics tools and platforms, robot control systems, wireless network infrastructure and software, silicon metrology, and chip/server architecture.

⁷ Data for this table comes from multiple sources, including company self-reports, press releases and SEC Reg. D filings. Many ATI companies have raised funds from sources that are not captured in this analysis; thus, Table 6 offers a conservative picture of the total funds raised by ATI members and alumni from 2007-2013.

- *Clean Energy*: energy and clean technology. Recent members have worked in electricity generation, energy management, smart grid tools, energy efficiency technologies, clean hydrocarbon, water purification and management, and transportation technologies.
- *Bio/Health Sciences*: human health applications with regulatory and reimbursement overlay. This portfolio works primarily with medical device, diagnostic, therapeutic, and research tools companies.
- *University Development*: earlier-stage opportunities coming out of The University of Texas. The Development Portfolio works across technologies and markets, preparing pre-seed teams to advance their solutions. This work is often done in collaboration with The University's licensing office and/or academic programs.

In addition to these vertically-focused sub-incubators, ATI also runs a "Landing Pad" program for early stage companies relocating to Central Texas.

Students at the Incubator

ATI has an active student associate program. This allows University of Texas students to get hands-on experience working in the Central Texas startup ecosystem, and provides companies in the Incubator with access to student talent (supervised by ATI staff and/or University faculty).

ATI also runs an intensive summer program for student entrepreneurs, Student Entrepreneur Acceleration and Launch (SEAL). This program provides structured support for teams of students with potential startup opportunities. It is designed to complement other entrepreneurship support classes and events at The University.

ATI Networks

As a core part of the Central Texas entrepreneurial ecosystem, ATI is deeply networked with the institutions and individuals that drive Austin's startup community. The Incubator manages a network of more than 350 mentors and advisors. This network includes successful ATI alumni, other entrepreneurs and executives, technologists, industry experts, leading academic experts, and investors. Through this network, ATI staff can access people with specific domain expertise, contacts, experience, and/or investment potential on a case-by-case basis.

ATI also maintains a separate network of more than 100 professional service providers whom the Incubator trusts to work with its members in an effective, economical, and ethical manner.

Investors often act as mentors or advisors to ATI companies. The Incubator has relationships with most major individual and institutional investors in Texas and many on the East and West coasts. ATI staff also maintains relationships with state and federal funders.

Finally, as part of The University of Texas at Austin, ATI is highly networked into UT-Austin's academic and research community. ATI also has strong connectivity within the UT System, especially the medical campuses and other Texas universities.

Business Infrastructure

ATI delivers most of its value through its people—experienced professional staff, student associates and faculty at The University of Texas at Austin, networks of mentors/advisors, professional service providers, and investors. However, ATI also provides startups with access to physical infrastructure. The Incubator has more than 25,000 square feet of office space at its location in The University of Texas West Pickle Research building in Northwest Austin. The Incubator allows members access to this space (capacity permitting) at market rate, should they wish to do so.

Graduation

When a company has achieved the milestones that ATI has established, it “graduates” from the Incubator. Graduation milestones typically include:

- Confirming a viable strategy and a plan with realistic and achievable milestones
- Demonstrating the viability of that plan in the marketplace
- Building a team that can credibly execute that plan
- Raising capital sufficient to allow quality execution of the plan in the marketplace
- Creating a governing board to guide management and ensure accountability.

If a company has not made progress against agreed upon milestones, ATI terminates the incubation relationship in order to focus time and resources on those companies that have the highest potential for growth and impact. ATI graduates approximately 10 member companies per year.

Appendix II: Additional Details from IMPLAN Analysis of 30 Responding Companies⁸

Table A1. IMPLAN Analysis of 30 Responding Companies

Travis County, Texas		
Output	Direct Output	\$411,660,239
	Additional Output (Multiplier)	\$360,544,021
	Total Output (Direct & Indirect)	\$772,204,260
Direct Employment	Direct Total Employment	# 2,572
	Total Direct Earnings	\$240,853,154
	City, County, Transit & Special Purposes Taxes	\$1,247,619
	Total Direct employee-related Sales Tax	\$1,247,619
	Country Property Taxes	\$1,317,402
	City Property Taxes	\$1,324,778
	School District Property Taxes	\$3,271,771
	Community College	\$250,520
	Other Direct Employee-Related Property Taxes	\$6,164,470
Indirect Employment	Total indirect Employment	# 2,987
	Total Indirect Earnings	\$136,099,178
	City, County, Transit & Special Purposes Taxes	\$709,994
	Total Indirect employee-related Sales Tax	\$709,994
	Country Property Taxes	\$1,529,882
	City Property Taxes	\$1,538,448
	School District Property Taxes	\$3,799,469
	Community College	\$290,925
	Other Indirect Employee-Related Property Taxes	\$7,158,724
Operations	County, City, Transit & Special Purpose Taxes (Other)	\$1,234,981
	Total Taxes from Direct Operations	\$1,234,981
Infrastructure	Direct Production Property Tax	\$1,701,751
	Indirect Production Property Tax	\$1,848,440
	Total Taxes from Infrastructure	\$3,550,011
Totals	Total Direct Taxes	\$10,348,641
	Total Indirect Taxes	\$9,712,158
	County, City, School, Transit, Comm. Coll., Special: Total Taxes	\$20,060,799

⁸ The estimated sales tax on operations section includes an assumption that 15% of expenditures are spent on taxable goods in the City of Austin. Given the variation in industries represented, it is unclear how precise this assumption is. However, even if this percentage was reduced by 50%, there is not a material impact as the reduction in total taxes would be only \$308,000 over the entire period.

The figures in this appendix do not include estimates for the 9 operational ATI alumni companies that did not respond to the survey. Accounting for these additional companies yielded another 966 direct and indirect jobs and \$107 million in additional economic benefits.

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