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Integrated IP management technologies: the means to more ends
Innovation Asset Group Inc and **AzTE**

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Integrated IP management technologies: the means to more ends

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One of the primary characteristics of well-run organisations is that they continually strive to do better. Universities and research organisations increasingly understand the potential commercial value they are creating in the labs. At the same time, they are coming to realise that they must emulate competitively successful enterprises in order to capitalise on that value. Optimally this translates into well-defined processes, an alignment of goals at every step along the value chain from idea conception to commercialisation, and the implementation of smart technologies that support better strategic insight and economies of scale.

Arizona Technology Enterprises (AzTE) is a good example of a technology transfer organisation that has brought these elements together, and which might benefit further from an integration of the technology tools it uses.

AzTE

AzTE is a private company responsible for evaluating, protecting and commercialising technology for Arizona State University, Northern Arizona University and their affiliated research institutions. AzTE was founded on the notion that strong partnerships can be achieved only by being flexible, providing low hurdles for doing business and focusing on “speed to market” as a key driver in a university’s dealings with its commercial partners. AzTE services a customer base of over 3,000 researchers and evaluates over 150 new inventions a year. The firm engages in approximately 50 commercial transactions annually and has started 16 companies – five of which have been sold – since it was started in late 2003. AzTE has seven FTEs responsible for

transaction identification and consummation, and five FTEs in administration to support the operations of the company.

In only three years, AzTE has become recognised as a “best-in-class” technology commercialisation model in terms of efficiency and success rate. Less obvious through its revenue and start-up company numbers is the profound effect AzTE has had on faculty culture and innovation activity at the schools where AzTE performs services. The consensus among the AzTE team is that the firm’s technology backbone and clearly defined operating processes that were developed early at the company are key to much of its effectiveness. The following are some of the areas where AzTE relies heavily on online and in-licensed technology platforms to strategically manage and grow its business.

1. Partner identification and management

The individuals that make up AzTE’s business development team have industrial backgrounds and strong product development expertise. This expertise gives the firm significant insight into the commercial drivers and hurdles of technology adoption in the private sector. AzTE’s strong network allows it to build relationships with industrial and financial partners. The AzTE team spends a significant amount of time meeting with industry-leading companies and venture capital firms to better understand their technology needs. By maintaining an ongoing dialogue with the business community, AzTE can continually connect these partners with sponsored research, technology development and licensing opportunities. This “outside-in” approach has significantly benefited the University but requires an efficient means of capturing information and relationships. As such, AzTE has developed a database that allows the firm to:

- Capture past and ongoing discussions

with existing and potential partners.

- Track transactions at all phases of negotiation.
- Track the status of all technologies that are being actively marketed and to whom.
- Capture specific information on the needs of AzTE's corporate and financial partners for future engagement.

All information is captured on a central database that is accessible by the AzTE team.

2. Technology opportunity identification

There are few institutions (whether public or private) with an internally generated technology portfolio that, standing alone, can solve the world's most pressing healthcare and technology challenges. As a result, AzTE strives to identify technologies developed by other institutions that can bolster the quality and value of its technology portfolio. Bundling technologies from other public and private sources that are synergistic with ASU's portfolio is an important part of AzTE's continued success. In order to implement this strategy, AzTE uses a number of databases to help identify synergistic patents and research programmes where, in conjunction with technologies in AzTE's portfolio, the "sum is worth exponentially more than the individual parts". These include patent analytics as well as market research tools and databases that reflect a potential partner's research focus and investment. Patents often are a reflection of what a company has done in the past. Through effective use of strategic databases and analytical tools, it is possible to obtain insight into where companies are investing for the future.

3. Idea management

For many researchers, a significant portion of the time they will spend with the AzTE team is during the process of evaluating their inventions. As a result, AzTE has developed a technology evaluation process that, in addition to evaluating the commercial relevance of a disclosure, is designed to provide an opportunity for faculty to get to know the AzTE team and gain insight into how evaluation decisions are made. Researchers work alongside the AzTE team to evaluate their technology. They are given transparency to all technology and market due diligence performed. Close interaction between the AzTE team and researchers has taught inventors to better appreciate market needs and expectations, which has increased the quality of invention

disclosures filed. Traditionally, invention disclosure submission and evaluation has been viewed by faculty as a necessary evil. Through the development of a well-articulated, robust and transparent process, at AzTE the evaluation process itself has been an important part of the relationship-building experience between university administration and faculty, and has led to a healthy exchange between the university and the marketplace.

A holistic tools approach

AzTE demonstrates that organisational intellectual asset creation and monetisation are a diffuse combination of people, activities, organisations and assets. An appreciation for how those moving parts operate together leads to more successful results. AzTE also makes apparent the fact that intellectual property is to be regarded as a business asset rather than a purely legal issue.

Independent databases that store critical information can certainly facilitate a well-honed technology commercialisation strategy. A fully integrated system can provide benefits of additional strategic insight, tactical execution and speed that can scale the operation even further.

Enterprise resource planning (ERP) systems provide an analogy. Companies that build products must have the ability to manage every step of the procurement, manufacturing and delivery process. ERP systems help to catalogue and coordinate such information and activities as inventory and build requirements, distribution logistics, resource requirements, vendor contacts, parts delivery, product shipping and invoicing. With complex products that are an integration of many subsystems, ERP solutions allow manufacturing managers to coordinate the timing of delivery for each subsystem to fit within the next step of the build process, effectively negating downtime on the manufacturing line and increasing productivity. For executives, they provide insight as to when products will hit the market, profit/cost ratios and other financial metrics, and the efficiency with which different parts of the company operate. ERP is a standard for any complex manufacturing operation regardless of industry, although traditional ERP systems are not geared for the intangible nature of technology management and exploitation.

AzTE has defined a repeatable process that yields results and has put tools to work on important pieces of the process. A logical

next step is to integrate these tools and bring ERP-like, real-time visibility to decision makers and partners. Such an Intellectual Property Resource Planning (IPRP) system would give an instant credible view of all interdependencies and connections among inventors, invention analysis, productisation, resource allocation, valuation and commercial opportunities.

An effective integrated system would have these characteristics:

- Sophisticated relationship views. The whole is indeed greater than the sum of its parts. One should be able to easily search for any piece of information in the system – any person, technology, activity, organisation, document or financial data – and see all of its interrelationships. Patterns of great strategic significance become visible with such capability. For example, one should be able to search for John and see what IP he has created; what protections are in place with him, such as non-disclosure and invention assignment agreements; what licences are attributable to his inventions and the revenues that tie back. One should be able to see whom else he has worked with and the value of the output of groups with which he has worked. One should be able to see the status of all communications and other activities that relate to John and/or activities and technologies with which he was associated. Such relationship views enable reduced time and risk approaches to funding and resource allocation, opportunity identification, course correction, commercialisation activities and regulatory due diligence.
- Access to external data for analysis. It is distinctly unwise in a fast-moving knowledge economy to ignore the existence of relevant patents, technologies, scientific information and commercial transactions. There are many stories about companies that were savvy enough to have had their eye on key industry and technology trends and innovate in front of them. This produces the ability to clear the way to operate more freely in the market and optimise the value of the organisation. It also enables the efficient identification of others with certain IP rights to which access is necessary in order to unblock innovation pathways or simply to speed time to market. In addition, it serves the cause of commercial negotiations through access to market royalty and other valuation data. An IPRP system should facilitate all of this external data and cross-reference it with internal activities.
- Automated alerts. The system should be capable of monitoring data and triggering alerts (inside the system or to external sources) based upon any user-defined situation. For example, financial executives might want alerts tied to all material transactions; R&D managers and technology review committees might want alerts tied to invention disclosures; licensing and contract specialists might want alerts tied to expiration, renewal and other milestone dates. The system should be able to fire these alerts any time data that fits their criteria is added, removed or modified.
- Patent prosecution is a part of the value chain, whether handled internally or externally. There should always be visibility of status. In addition, an IPRP system should afford the ability to forecast expenses tied to the patent process – those related to prosecution as well as post-grant maintenance fees domestically and internationally. Aside from forecasting such expenses in the first place, many more than a handful of organisations would discover with a simple audit that they are not utilising or deriving royalties from technologies for which they are paying large sums to maintain patents.
- Permission limitations. Integrated systems contain information that is not necessarily relevant to all users. For example, inventors might be restricted to the use of invention disclosure forms and perhaps cross-related research and information; outside service providers such as patent counsel might be limited to a review of a defined class of inventions or individual inventions; licensors might be restricted from viewing anything other than a published catalogue of available technologies and perhaps some next-level due diligence; joint development partners, contractors and others might be able to enter and view only certain kinds of information.
- Secure web accessibility. Research institutions and IP-driven companies are increasingly dispersed geographically. A system accessible from anywhere at any time allows partners and subject matter experts to contribute and consume information very fast. In addition, web-based applications facilitate timely,

instantaneous and seamless distribution of application installation, upgrades, patches, bug fixes, permission and password settings, configurations, training materials and other administrative matters, to wide user communities. The result is much less internal IT resource burden and no disruption of operations.

- Flexibility. No two organisations have the same operational profile. Strategies differ, as do procedures in furtherance of those strategies. Even various work groups, units, divisions and affiliates within a single enterprise have varied workflows. A best-in-breed system would wrap itself around any given organisation's way of doing business and not cause more pain than it is intended to solve. It should be pre-configured so as to be immediately useful but should be extremely configurable to meet specific requirements without having to pay a lot of money for customisation.
- The basic architecture of an integrated IP management system must facilitate all of the above characteristics in a way that liberates them to operate reciprocally with other systems and information sources. Most database applications are "silo technologies", meaning they compartmentalise and thus restrict the horizontal flow of information between systems and users. This has a negative impact on the ability of information-driven teams to have a single view of vital pieces of information from various sources both inside and outside of the organisation. The result is a very fractured and piecemeal view of the strategic landscape, and reduced productivity. There are good reasons sometimes to silo data – heightened security requirements and test versus live operational data sets are two of them. But the engine that pushes and pulls information to and from an internal database should do so in a way that enables secure information sharing across the enterprise. It should also combine internal data with the power of the internet and its information resources.

With proper integration of all these elements, small organisations can scale their efforts and not let their size determine their reach. With larger organisations, these systems can help prioritise the myriad opportunities they have available to them just as traditional ERP systems identify which product lines are being effectively

manufactured and at what cost/profit to the company.

Summary

Successful technology commercialisation must be supported by best practices as demonstrated by AzTE as well as effective technology tools. A single platform using a common interface that cuts across organisational boundaries will provide competitively advantageous insights and economies of scale. The very same system that pulls information from a variety of sources will provide the kind of fast analysis capacity to hit opportunities hard and maximise the organisation's value. AzTE has brought innovation to the process of opportunity analysis and execution, highlighting the wider perspective that a group can bring. Technology can help to maximise the commercial success of such efforts.

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Peter Slate is the founding CEO of AzTE. Mr Slate has extensive experience as an entrepreneur and adviser to emerging and start-up ventures. He has also held senior business development and strategy positions with public and private companies, including Baxter International, where he was director of corporate strategy and the founder of Baxter's Global Technology Outlicensing Group, and Zenith Electronics, where he played a key role in the company's operational and financial restructuring. Prior to joining Zenith, Mr Slate was the vice president and associate general counsel of Primecare International Inc, a leading physician practice management company, where he oversaw acquisitions and financing transactions. Mr Slate began his career as a corporate attorney with the law firm of Katten, Muchin and Zavis in Chicago, specialising in mergers and acquisitions, securities, private equity and technology development transactions.

Mr Slate has a BA from the University of Michigan, a juris doctorate from George Washington University and an MBA from the Kellogg Graduate School of Management at Northwestern University. He has served on a number of corporate and philanthropic boards of directors and is a past chairman of the Chicago chapter of the Licensing Executives Society (LES). Mr Slate lectures regularly on the subjects of technology and investment due diligence, venture capital, strategic alliances and licensing.

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Peter Ackerman is president and CEO of Innovation Asset Group Inc, based in Wilsonville, Oregon, USA.

Innovation Asset developed a next-generation software system called DECIPHER™ with a uniquely flexible architecture that connects everyone along the IP value chain from concept to commercialisation. The result is a fully integrated approach to intangible asset management and exploitation.

Mr Ackerman is an attorney by training. He graduated in 1989 from the Santa Clara University School of Law in the heart of Silicon Valley, where he served as an editor for, and was published in, the school's well-known Computer and High Technology Law Journal. He also studied computer law at Oxford University.

Mr Ackerman began his career at Intel Corp in 1989, where he handled a variety of intellectual property issues concerning trademarks, patents, copyrights, trade secrets, licensing and sales, product liability, warranties, joint ventures and human resources. In his private law practice, Mr Ackerman conducted intellectual property assessments for technology companies and provided transactional support to clients involved with Microsoft, HP, Siemens, Novell and Intel.

He has spoken at a variety of events on topics related to the identification and management of IP assets.

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