INDUSTRY OVERVIEW

The Additive Manufacturing & Rapid Prototyping (AMRP) industry is quickly emerging as a high growth sector worth watching. Leaders in the space provide holistic manufacturing solutions that can significantly enhance production efficiency and product speed-to-market. While traditional manufacturing is owned by single-solution providers with slower and more costly processes, quick-turn manufacturers are creating an exciting one-stop-shop model with sophisticated and cohesive technologies.

Original equipment manufacturers (OEMs) continually seek to launch innovative next-generation products to avoid being marginalized in the marketplace – the exact pain point that the proprietary technologies of rapid manufacturing are targeting. The integration of AMRP technologies reduces production bottlenecks, an enduring issue for the increasingly antiquated industrial production model. The ability to rapidly service and prototype provides a significant downstream competitive advantage for businesses embracing AMRP capabilities.

AMRP has quickly been adopted across major industries including aerospace, healthcare, consumer products, automotive, defense and industrial, among others. This evolution is driving significant growth in the relatively new AMRP industry. Comprised of just over 200 companies, the industry is already approaching $4 billion with a compound annual growth rate of 22.6% from 2010 to 2015. Moreover, analysts are expecting the AMRP industry to reach over $20 billion by 2020 (source: Wholer’s 2014).

![AMRP Industry Revenue 2010-2020 ($ in Millions)](chart)

*Source: IBIS World OD4581 3D Printing and Rapid Prototyping Services*
AM applications in these sectors can support a $40 billion market over the next 15 to 20 years with upside potential from technological advances.

END MARKET SHARE

Industry growth is being fueled by improved technologies, ever expanding applications, increasingly shorter product development cycles and accelerated product launch requirements. Due to the significant advantages offered by AMRP, many industries are weaving rapid solutions into their product development processes. According to Wholers, consumer products/electronics lead the way with 20.3% of the global AMRP market share, followed by motor vehicles (19.5%), medical/dental (15.1%) and aerospace (12.0%).

AMRP technology is of particular interest within the aerospace, healthcare, automotive and industrial sectors where product development, innovation and time-to-market are critical to success. With advancements in materials and processes, AMRP has afforded players in these sectors the ability to further expand their capacity to develop and manufacture complex products that are extremely light, stable and durable. Goldman Sachs suggests AMRP applications in these sectors could support a $40 billion market over the next 15 to 20 years with upside potential from technological advances.

KEY GROWTH SEGMENTS

Capstone expects the medical/healthcare and aerospace sectors to lead the growth in AMRP over the next several years. Some highlights of our thesis and observations include the following:

» **Medical/Healthcare**: As the most rapidly growing downstream area of the industry that accounts for 15.1% of the market, medical firms have quickly employed AMRP services. Available technologies are being utilized to produce a wide range of devices and instruments such as dental implants, custom hearing aids, models of organs and bones for pre-operative evaluations, custom prosthetics and patient specific instrumentation/devices.

In addition, 3D printing has recently found its way into the pharmaceutical drug industry. Earlier this month, the FDA approved the first drug manufactured by AMRP processes. SPRITAM®, by Aprecia Pharmaceuticals, is an adjunctive therapy in the treatment of partial onset seizures. The technology is being used to produce a porous formulation that disintegrates with a sip of water. The application of 3D printing in this capacity is a groundbreaking achievement and provides a highly effective solution for patients that have swallowing difficulties and are subject to greater risk.

» **Aerospace**: Currently accounting for 12% of AMRP market share, the aerospace industry has been a relatively late adopter. This was due to substandard quality of the initial products. However, aerospace has since become a key growth market for AM. With the capabilities to produce high tolerance lightweight and strong components, designers are using AMRP in the production of engine and turbine parts as well as cabin interiors. Robert McEwan, a general manager of Airfoils and Manufacturing Technologies at GE Aviator, stated in in Sierra College’s *Additive Manufacturing: Turing Mind into Matter,* “In our lifetime, at least 50% of a jet engine will be made by AM.”*

**AMRP MANUFACTURING APPLICATIONS**

Engineers and designers have embraced AMRP technology due to its ability to transform the product development cycle by offering speed, design flexibility, customization capabilities and affordability. This quick-turn, low-cost solution allows for on-the-fly design changes and true part customization enabling engineers to now produce multiple product iterations in the same time it would have historically taken to produce a single model. In addition, AMRP technologies provide a real-time feedback loop helping enhance product characteristics such as manufacturability, fit, form, functionality and material optimization.
With the introduction of interactive cloud-based interfaces and software automation processes, designs can now be submitted, analyzed, modified, quoted and approved for manufacturing concurrently on the web. As a result, designs can be approved and quoted within minutes and with same day product shipping. Moreover, as material qualities and dimensional accuracies improve, companies are using AMRP technology in a range of applications including direct part production (19.2%), functional modeling (18.4%), patterns for prototype tooling (12.2%) and fit & assembly (12.1%), as illustrated below.

Despite improvements in technology, AMRP capabilities do not entirely meet the product developers’ and engineers’ requirements for dimensional accuracy, material properties and cosmetics. As a result, several larger competitors in the sector offer quick-turn manufacturing solutions utilizing CNC machining, injection molding and stamping capabilities. Examples of companies embracing this holistic solution include Proto Labs, Arc Group Worldwide and Stratasys.

**COMPETITION AND DIFFERENTIATION**

The industry remains nascent but its rapid growth over the last five years has attracted robust investment activity in an attempt to capture the relatively untapped and expansive market opportunity. Currently, there is a low market share concentration relative to traditional manufacturing with two dominant market participants: 3D Systems and Stratasys.
There are some companies that have been able to generate above-market profitability by offering superior service.

This dynamic has already started to change as more companies enter the marketplace. New entrants tend to cater to niche industry segments with differentiated specialization. This trend has taken root in areas such as the automotive and aerospace end markets. Gaining footholds in niche markets allows companies to secure demand and command premium pricing as many of their clients represent the early adopters.

BARRIERS TO ENTRY

On the surface, there are moderate barriers to entry in the industry with capital equipment accounting for the vast majority of initial startup costs, namely 3D printers and CNC injection machines. Many smaller firms are forced to source their printing equipment from external manufacturers. Beyond capital equipment, raw materials represent the next significant component of a firm’s cost structure but are not very much of a factor. Because there are a small number of refined material suppliers, players in the industry experience the same price fluctuations for raw materials, such as thermoplastics or nylon. However, the competitive barriers lie much more in advanced capabilities. Sophisticated and integrated solutions, such as automated quotation, engineering systems and front-end web client interfaces separate the market leaders from the remaining fragmented pack.

KEY SUCCESS FACTORS

Companies in the industry compete on features, not price, and this may provide the highest opportunity for emerging firms. The majority of rapid manufacturing providers primarily focus on in-house tooling and production. However, there are some companies that have been able to generate above-market profitability from offering superior services, including advanced mold making, CNC machining and personal customer service. Having an integrated operation is vital, as the largest firms in the industry have prospered from maintenance and services revenue following the initial product sale.

Apart from offering a wide range of services and technologies, rapid manufacturers have potential to separate themselves by offering customization capabilities. Nearly all companies provide quick “in-and-out” mass services with little accommodation for things like design, color and structure that differ from built-in molds. Because of this, the consumer sector is almost entirely untapped and has significant growth potential.

Finally, rapid manufacturers and quick-turn prototype companies compete on speed, quality and proficiency in producing complex parts. Solutions such as short-run prototyping, low-volume injection molding and modernized high speed CNC machining reduce processing time. With interactive quoting and customer service, something not all rapid manufacturers have, the process can be accelerated. Quick-turn producers who can promise design-to-delivery in less than two weeks tend to have much more success.

M&A AND INVESTMENT ACTIVITY

A wide variety of businesses have been acquired in the AMRP industry over the last few years. The healthy deal flow is a reflection of the industry’s growth and attractiveness, as well as companies in the space that continue to vie for market share through acquired technologies, new geographic markets and customers. We expect to see a growth in the number of transactions as the industry continues to accelerate and investors look to participate.

Major companies like 3D Systems and Stratasys have been eager to grow their companies through numerous strategic acquisitions. While, there has also been an influx of more strategic players in the marketplace. Additionally, private equity players have become more aggressive, attracted by the growing industry prospects.
The capital markets have been open across the board with robust strategic M&A activity, active PE investments and successful IPOs.

As illustrated above, the industry is attracting increased levels of institutional investment from the private equity community. In 2013, only four notable deals occurred, representing 17% of the M&A market. That volume jumped quickly to 13 deals (a 27% market share) in 2014. Moreover, there have been 12 deals YTD in 2015 already, representing a 48% market share.

Globally, PE firms of particular interest have included The Riverside Company (US), Cornerstone Capital (US), CorpAcq (UK) and SkyLake (Korea), among others.

IPOS AND PUBLIC MARKETS

Notwithstanding the fevered pace of excitement that has built up within the sector, resulting in bullish market sentiment and stratospheric market valuations, some industry bellwethers have recently showed signs of weakness and are looking at troubled waters ahead. 3D Systems, whose stock price traded at a 52-week high of $38.07, is now trading near its low of $8.44. It also reported an operating loss for the quarter ending September 30, 2015 of $34.6 million due to margin compression and higher operating expenses. Additionally, 3DS is facing litigation issues and recently saw their CEO, Avi Reichental, resign. Stratasys, is in no better condition having reported a drop in revenue of 17.6% revenue (driven entirely from a reduction in product sales) to $167 million compared to the same period last year and reported operating losses of $931 million for the quarter ending September 30, 2015.

While both 3D Systems and Stratasys have historically been a litmus test within the industry, their woes appear to be self-contained, due largely to undisciplined acquisition strategies, and poor integration and execution. Moreover, both companies have suffered from fierce competition from international players offering cheaper and more sophisticated printers. Conversely, Proto Labs reported a strong 3Q with revenue and gross profit up 24.3% and 21.9%, respectively, over 3Q 2014. Quarter-over-quarter, Proto Labs also experienced growth in each product line with the strongest growth coming from its 3D printing operations of 79%.

The bottom line is that the industry remains robust and continues to see major players enter the market such as Autodesk and Hewlett-Packard.
SELECTED DEAL BRIEFS

3D Systems Corporation acquires Cimatron Ltd. (February 2015)
In a deal valued at $96.5 million and 10x EBITDA, 3D Systems acquired all shares of Cimatron Ltd. Cimatron designs, develops, manufactures and supports computer-aided design and consumer aided manufacturing (CAD/CAM) software products. With over 300 employees, the inclusion of Cimatron will enable 3D Systems to enhance its 3D digital fabrication as well as add comprehensive 3D CAD/CAM solutions. 3D Systems President and CEO, Avi Reichental, said “Cimatron represents a perfect strategic fit for our business by providing expanded capabilities in product development, sales coverage and complementary technology. We believe that this combination offers unique synergies with significant long-term customer benefits and shareholder value.”

The integration of Cimatron into an additive powerhouse like 3D Systems strengthens 3D’s leadership position in 3D-printing-centric advanced manufacturing by enabling a digital workflow between design and traditional manufacturing processes. The transaction adds complementary technology, extends 3D’s sales coverage globally and is expected to be accretive to the company’s 2015 cash generation earnings per share.

The Riverside Company acquires Fisher/Unitech (November 2014)
Fisher/Unitech (Fisher) operates as a value-added reseller in the additive manufacturing field, with 13 locations focusing on 3D SOLID modeling software, 3D printing hardware and related products and services. The company has been partnered with Stratasys for 15 years and was named North America’s leading Stratasys reseller in 2010. Fisher has more than 8,000 customers, including some of the most prominent manufacturers in aerospace, consumer goods, automotive and defense.

Riverside has a rich history of investing in discrete manufacturing companies. It has invested in more than 80 specialty manufacturing and distribution platform companies. Riverside’s growth plans include investing in the company’s sales, marketing & tech support efforts to capitalize on the strong growth in the core product offering. Riverside additionally plans to enter new markets and product offerings organically through add-on-acquisitions.

Stratasys Ltd. Acquires Solid Concepts Inc. (July 2014)
Solid Concepts is a custom manufacturing solution company with technologies for additive manufacturing, rapid prototyping, cast urethanes and injection molding. Since 1991, Solid Concepts has provided engineering expertise to bring success to new products in the aerospace, medical and consumer product markets. Following this acquisition, Stratasys plans on combining some of its other recently acquired holdings (Harvest Technologies and RedEye) to form a single cohesive advanced additive manufacturing network. The combination of these entities will provide customers with a wider variety of advanced technologies, a higher level of expertise and an extensive production capacity.

David Reis, Stratasys CEO, said, “These transactions are consistent with our core strategic imperatives and M&A strategy, which is focused on acquiring leading companies to support our goal of continued leadership in the segments in which we operate, as well as reaching new niche verticals. We will apply our integration expertise to combine Solid Concepts and Harvest Technologies with our existing RedEye digital manufacturing service business to form a single business unit focused on additive manufacturing services”
SELECTED DEAL BRIEFS (CONTINUED)

Proto Labs acquires FineLine Prototyping (April 2014)
Proto Labs acquired North Carolina based FineLine Prototyping, a major prototyping force which relies heavily on additive manufacturing. In the past, Proto Labs stated they had no intention of investing in 3D printing, but this has clearly changed. The acquisition was strategic in nature, allowing them to cater to a larger portion of their customers’ prototyping needs, as about 70% of Proto Labs’ customers also rely on prototyping via 3D printing. The transaction was valued at $37 million, resulting in a 3.8x revenue multiple.

The company plans to use FineLine’s North Carolina facility as its additive manufacturing hub, operating under the Proto Labs name, but they plan to keep the FineLine moniker as the brand name for its 3D printing services. Proto Labs President and CEO Vicki Hold remarked, “The acquisition of FineLine is consistent with Proto Labs’ strategy to expand sales to product developers through envelope expansions and addition of new service offerings which reduce time, cost and waste in new product development.” With this addition, Proto Labs is setting themselves up to be a powerhouse within a rapidly growing industry.

ARC Group Worldwide acquires ATC and Thixoforming (April 2014)
ARC Group Worldwide, Inc., a leading global provider of advanced manufacturing and 3D printing solutions, acquired Advance Tooling Concepts (ATC) and Thixoforming. ATC is an industry leading plastic injection molder offering complete, turnkey plastic injection molding capabilities. They also offer in-house molding and tooling expertise to customers in high growth markets including the medical device, electronic, consumer and defense industries. Thixoforming is a leading provider of magnesium injection molding, producing complex, high-density injection molding components from magnesium alloys.

ARC Group Worldwide stated in the press release, “With the addition of ATC and Thixoforming, ARC has materially strengthened its leading suite of advanced manufacturing, 3D printing and associated tooling capabilities. ARC’s new tooling, plastic injection molding and magnesium injection molding capabilities further accelerate the adoption of ARC’s advanced manufacturing and 3D printing services, as ARC aims to become a holistic solution provider for its customer base. Further, both ATC and Thixoforming provide ARC with significant new customer bases, enabling cross-selling opportunities across the full suite of ARC products and services.”

Laird PLC acquires South Korean-based Model Solutions (April 2014)
Laird PLC acquired 51% of Model Solution, a South Korean Company specializing in quick-turn tooling and the production of injection molded parts, for over $67 million and 2.2x revenue. Model Solution is complementary to Laird’s existing design innovation and manufacturing capabilities. Its high quality and fast turnaround prototyping ability will enhance Laird’s service to existing and new customers in the early prototype phases.

The acquisition provides Laird a South Korean platform to service leading customers in the electronics industry and other international OEMs. It also allowed access to a broad customer base in different market segments and complements the organic investment of capacity expansion in Vietnam announced earlier in the year. David Lockwood, Laird CEO remarked, “This acquisition shows our strategy at work. It allows us to further penetrate the important strategic market that is Korea, demonstrating a broader offering to customers who value the importance of innovative design and speed of delivery.”
## SELECT AMRP M&A TRANSACTIONS

<table>
<thead>
<tr>
<th>Date</th>
<th>Target Description</th>
<th>Acquirer</th>
<th>Target Business Description</th>
<th>Enterprise Value (mm)</th>
<th>EV / LTM</th>
<th>Revenue</th>
<th>EBITDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/02/15</td>
<td>Alpha’s Selected Assets</td>
<td>Proto Labs</td>
<td>Provides selective laser sintering, direct metal laser sintering and stereolithography capabilities services in Europe.</td>
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<tr>
<td>09/23/15</td>
<td>netfabb</td>
<td>Autodesk</td>
<td>Develops software solutions for industrial additive design and manufacturing.</td>
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<tr>
<td>07/23/15</td>
<td>RTI International Metals</td>
<td>Alcoa</td>
<td>Offers a portfolio of titanium mill products, extruded shapes, formed and 3D-printed parts, as well as high speed machined components.</td>
<td>$1,490.6</td>
<td>1.9x</td>
<td>12.9x</td>
<td></td>
</tr>
<tr>
<td>07/02/15</td>
<td>RTC Rapid Technologies</td>
<td>Stratasys</td>
<td>Provides rapid prototyping technologies for design, engineering and manufacturing predominantly in the German-speaking regions.</td>
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<tr>
<td>04/30/15</td>
<td>Mechtronic Solutions</td>
<td>Cornerstone Capital Holdings</td>
<td>Offers engineering, prototyping, manufacturing and product life-cycle support services to a variety of industries.</td>
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<tr>
<td>04/02/15</td>
<td>Easyway Design and Manufacture</td>
<td>3D Systems</td>
<td>Designs, develops, manufactures and markets 3D printers and related products, print materials and services in China.</td>
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<tr>
<td>03/26/15</td>
<td>INITIAL and NORGE Systems</td>
<td>Groupe Gorgé</td>
<td>Manufactures 3D printed parts, components and 3D printers in Europe.</td>
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<tr>
<td>02/27/15</td>
<td>Econolyst</td>
<td>Stratasys</td>
<td>Provides consultancy and research solutions in the areas of additive manufacturing (AM) and 3D printing (3DP) for clients.</td>
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<tr>
<td>02/10/15</td>
<td>Acute3D</td>
<td>Bentley Systems</td>
<td>Sells Smart3DCapture software used in reverse engineering, rapid prototyping and 3D printing.</td>
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</tr>
<tr>
<td>02/10/15</td>
<td>Intelligent CAD/CAM</td>
<td>Stratasys</td>
<td>Provides 3D printing services in China.</td>
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<tr>
<td>01/05/15</td>
<td>botObjects</td>
<td>3D Systems</td>
<td>Designs and manufactures full-color 3D desktop printers for business and home applications.</td>
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<tr>
<td>11/25/14</td>
<td>Robtec</td>
<td>3D Systems</td>
<td>Develops rapid prototyping technologies in Brazil and Latin America.</td>
<td>$21.9</td>
<td></td>
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<tr>
<td>11/17/14</td>
<td>Fisher/Unitech</td>
<td>The Riverside Company</td>
<td>Provides Product Lifecycle Management (PLM) technology solutions to manufacturing companies including 3D printing and rapid prototyping.</td>
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<tr>
<td>11/12/14</td>
<td>First Engineering</td>
<td>Sunningdale Tech</td>
<td>Manufactures ultra-precision molds and plastic injection molded components for performance-critical engineering applications.</td>
<td>$80.0</td>
<td>0.6x</td>
<td>4.7x</td>
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<td>10/16/14</td>
<td>EPM Global Services</td>
<td>Vexos</td>
<td>Provides electronics manufacturing services to OEM’s including rapid prototyping, manufacturing, design and engineering.</td>
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<tr>
<td>10/13/14</td>
<td>Vector Graphics</td>
<td>D3 Technical Services</td>
<td>Distributes 2D and 3D computer aided and drafting design Autodesk solution.</td>
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<tr>
<td>10/01/14</td>
<td>Propshop</td>
<td>voxeljet</td>
<td>Provides 3D conceptual design and manufacture services including rapid prototyping services for large parts and models.</td>
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<tr>
<td>09/30/14</td>
<td>Addipel</td>
<td>Maroon Group</td>
<td>Manufactures custom additive blends, non-dust blends, 3D printing and additive manufacturing materials.</td>
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</tr>
<tr>
<td>08/13/14</td>
<td>APP and APM</td>
<td>3D Systems</td>
<td>Designs, prototypes and manufactures precision and plastic parts in addition to a manufacturing company.</td>
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<tr>
<td>08/11/14</td>
<td>Olympus Engineering</td>
<td>CorpAcq</td>
<td>Manufactures precision machined components in the UK with services including 3D printed rapid prototyping with 24 hour turnaround.</td>
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</tbody>
</table>
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<th>Revenue</th>
<th>EBITDA</th>
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<td>08/06/14</td>
<td>Bordner &amp; Associates</td>
<td>3D Systems</td>
<td>Provides rapid prototyping, manufacturing and product development services.</td>
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<tr>
<td>08/01/14</td>
<td>Harvest Technologies</td>
<td>Stratasys</td>
<td>Produces prototypes and production parts, offering laser sintering, stereo lithography, CNC machining and other technologies.</td>
<td>$19.5</td>
<td>-</td>
<td>-</td>
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<td>07/14/14</td>
<td>Solid Concepts</td>
<td>Stratasys</td>
<td>Provides additive manufacturing/3D printing, rapid prototyping, tooling and injection molding services in North America and internationally.</td>
<td>$190.0</td>
<td>2.9x</td>
<td>-</td>
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<td>07/10/14</td>
<td>Tatra Plastics Manufacturing</td>
<td>Coral Products</td>
<td>Designs, manufactures and prototypes round, oval and square plastic tube and profile extrusions, co-extrusions and injection moldings.</td>
<td>$4.2</td>
<td>0.8x</td>
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<td>05/19/14</td>
<td>EOS Solutions</td>
<td>Prostep</td>
<td>Provides 4D simulation and 3D visualization solutions.</td>
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<td>04/30/14</td>
<td>Interfacial Solutions</td>
<td>Stratasys</td>
<td>Provider of idea-to-production contract R&amp;D services to the plastics industry.</td>
<td></td>
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<td>04/23/14</td>
<td>FineLine Prototyping</td>
<td>Proto Labs</td>
<td>Provides precision prototyping and manufacturing services including stereo lithography, selective laser sintering and 3D printing services.</td>
<td>$37.0</td>
<td>3.8x</td>
<td>-</td>
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<td>04/22/14</td>
<td>Model Solutions</td>
<td>Laird and SkyLake</td>
<td>Engages in prototype model making and quick-turn tooling and production of injection molded parts in South Korea.</td>
<td>$67.6</td>
<td>2.2x</td>
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<td>04/08/14</td>
<td>CR Assembly</td>
<td>Contemporary Research</td>
<td>Provides electronic manufacturing services including prototype services that include 24 hour turnaround time available for prototype assemblies.</td>
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<tr>
<td>03/14/14</td>
<td>Laser Design</td>
<td>CyberOptics</td>
<td>Manufactures and supplies ultra-precise and 3D laser scanning systems and services worldwide.</td>
<td>$3.7</td>
<td>0.6x</td>
<td>-</td>
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<td>01/30/14</td>
<td>Pro CNC</td>
<td>Trulife Group</td>
<td>Provides production CNC machining, prototype machining, prototyping, 3D printing, contract assembly and engineering services.</td>
<td></td>
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<td>-</td>
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<tr>
<td>01/28/14</td>
<td>e-Prototypy</td>
<td>Materialise</td>
<td>Operates as a functional prototype center that uses 3D printing and scanning technologies in Poland.</td>
<td>$1.7</td>
<td>-</td>
<td>-</td>
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<td>01/23/14</td>
<td>Sysopt Engineering</td>
<td>Stratasys</td>
<td>Provides 3D printing applications and solutions in South Korea.</td>
<td></td>
<td>-</td>
<td>-</td>
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<tr>
<td>01/13/14</td>
<td>Realtime Technology</td>
<td>Dassault Systemes</td>
<td>Provides 3D visualization software, consulting and creative services.</td>
<td>$232.5</td>
<td>2.3x</td>
<td>18.3x</td>
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<td>01/02/14</td>
<td>Xerox</td>
<td>3D Systems</td>
<td>Operates in product design, engineering and chemistry group.</td>
<td>$32.5</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**MEAN**
- $181.8
- 1.9x
- 12.0x

**MEDIAN**
- $34.8
- 2.1x
- 12.9x
Proto Labs is pushing the technology envelope to produce bigger and more complex parts, introducing the Firstcut CNC Machining service and opening up manufacturing facilities in Europe and Asia.

**PUBLIC COMPANY SPOTLIGHT PROFILE**

**PROTO LABS**

Based in Maple Plain, Minnesota and founded in 1999, Proto Labs (PRLB) manufactures CNC machined, injection molded and 3D printed custom parts for prototyping and short-run production in various markets including medical, aerospace, electronic, consumer products and industrial machinery. Proto Labs is the world’s largest provider of part-making services to product developers. The company works with innovative product designers and engineers to help bring their ideas from concept to market quickly.

The business first introduced the Firstcut CNC machining service and opened up manufacturing facilities in Europe and Asia. In 2009, the company combined its Protomold and Firstcut services under one corporate name, Proto Labs, to reflect its growing capabilities.

Proto Labs plans to expand its manufacturing processes through acquisitions in an attempt to expand its customer base and broaden its parts envelope. The company looks to establish more advanced technologies to increase the size and complexity of its modeling capabilities. Additionally, with a marketing staff of approximately 30+ and a global support staff of 200+, Proto Labs has been able to establish itself as an industry cornerstone that looks to keep growing.

In April of 2014, Proto Labs established its 3-D printing branch in an acquisition of Fine Line Prototyping. Prior to the move, Proto Labs had no services in 3-D printing, something 70% of the company’s customers utilized. Now the Fine Line branch of the business does all of the additive manufacturing services through embracing stereolithography and laser sintering. This was a large strategic move for one of the pioneers of the industry, with immediate market impact. Fine Line accounted for $9 million in revenues in 2014.

Currently, Proto Labs has over 1,000 employees and just recently surpassed $200 million in sales in 2014. This illustrates a considerable growth pattern, as 2010 revenues were $65 million with $16 million income from operations, opposed to almost $61 million in 2014.

Capstone has been impressed with Proto Lab’s industry foresight and recognizes it as one of the first companies to combine CNC machining, injection molding and 3D printing. The business’s speed and versatility allows customers to take parts from very early stages of prototyping all the way up to the final short-run production of over 10,000 parts, all with one technology-driven process.
PUBLIC COMPANY SPOTLIGHT PROFILE

ARC GROUP WORLDWIDE

Founded in 1987 and based in Florida, ARC Group Worldwide (ARC) is a leading global advanced manufacturing and 3D printing service provider. In addition to being the world leader in metal injection molding, ARC is a leading provider of metal and plastic 3D printing, tooling, plastic injection moldings and automated machining. The company operates in three segments, which include the precision component, fitting and wireless groups.

ARC provides plastic injection, in house moldings, tooling products, high-density injection molding components from magnesium alloys and value-added secondary design and production processing services. Additionally, the company offers custom machining products and flange facings, precision net shape metal components as well as hardware products.

ARC believes the methodologies of how products get manufactures will change over the next 10 years, due to technological automation, 3D printing and other advancements. Their strategy is to expand through their 3D metal service bureau platform. To do this, ARC plans to monetize substantial investment in personnel, equipment and technology as well as continuing to work with previous customers on new production programs.

The quick-turn manufacturer has shaped its strategy around being a “one-stop shop” for its customer base by providing holistic solutions for metal and plastic fabrication. Additionally, ARC offers its services cradle to grave in an attempt to avoid lengthy bottlenecks which bog down the current manufacturing supply chain.

In terms of strategic acquisitions, ARC plans to take advantage of cross-selling opportunities as well as purchasing procurement efficiencies, including mass purchasing discounts.

True to its strategy, in June of 2014, ARC acquired Kecy Corporation, a leading precision metal stamping company utilizing automated manufacturing. Kecy’s utilization of advantage technologies provided an opportunity for ARC to accelerate technological adoption and grow the overall function of the business.

ARC has over 700 employees and sales of nearly $83 million worldwide. The company has posted a 65% CAGR over the last three years.

Capstone Partners tracks ARC’s market activity as we have been impressed by the leading role the company has taken in developing the next phase of manufacturing and production standards and we expect that their input will be influential. Look for ARC to be one of the first initial public companies in an ever-expansive marketplace that is starting to shape the face of industrial production.
PRIVATE COMPANY SPOTLIGHT PROFILE

XCENTRIC MOLD & ENGINEERING

Xentric is a privately owned business and specific information is not publicly available. However, in Capstone’s industry coverage activities, we were given the opportunity to meet with the company’s founding entrepreneurs, Damon Weaver and Brendan Weaver. What we learned in the meeting was exciting enough for us to highlight Xentric as “a company on the move” and to expect it to out-perform the market.

For background purposes, Xentric was founded in 1996 in Michigan. The company specializes in offering injection molding, CNC machining and rapid prototyping services for all industries, including defense, medical, aerospace, automotive and consumer products markets. What impressed us about the company’s capabilities is its highly streamlined and proprietary technologically advanced quotation, engineering and manufacturing process system, enabling it to produce intricate custom plastic and metal parts with what we believe may be among the industry’s fastest lead times for more complex prototypes and production parts. Xentric boasts design-to-delivery capabilities in two weeks or less.

Xcentric has the unique ability to produce high quality sophisticated custom parts, something largely missing from the market. Their advanced molding system is best-of-breed, allowing for custom colors and designs requiring tight tolerances, intricate geometric complexity and multi-component assemblies. Their unique interface and technology platform expands the typical customer reach amongst rapid manufacturers. The company benefits from a diversified customer base and end markets, while some of Xcentric’s rapid manufacturing services may very well play a role in shaping the future of the industry.

While we cannot disclose specific financial information on the business, Xentric has posted top-quartile results in terms of revenue growth rate. In addition, the company has reached critical scale. While we expect the current meteoric growth rate to ease slightly, we also anticipate continued efficiencies and impressive profit margins.

In summary, our preliminary thesis on the attributes of this business are as follows:

» Innovative leader in the quick-turn manufacturing sector with broad capabilities
» Compelling value proposition with injection molding, CNC and additive manufacturing
» Proprietary technology platform that serves as a process engine and key differentiator
» Impressive and sought after base of loyal product developers and engineers
» Business model optimized for low-volume high-margin parts
» Strong diversification across both the customer base and industry end markets
» Sophisticated and scalable business infrastructure with a proven growth strategy
» Viable opportunity to further accelerate growth via web marketing efforts
» In a strong position to exploit the favorable industry dynamics

Based on our research, together with other insights from our meeting with the company’s shareholders, Capstone believes Xcentric is deserving of recognition among the industry leaders. As the industry continues to grow and evolve, we expect Xcentric to be at the forefront (or at very least in the lead pack).
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John has spent his entire 25+ year career serving as a trusted advisor to emerging companies and entrepreneurial business owners. Representative of nearly 200 transactions and related engagements, he has acted in various capacities, including investment banker, management consultant, interim executive, investor, founder and board member. John has been recognized as one of the Top 50 M&A advisors in the US and was honored for his lifetime achievement in the industry as an M&A Advisor Hall of Fame inductee. During his tenure as Managing Partner, Capstone has expanded from Boston to include eight offices in the US and UK with an international platform that spans over 450 professionals in 40 countries worldwide. Prior to Capstone, John worked at several global financial service firms, including Lehman Brothers, Rodman & Renshaw, Deloitte and Arthur Andersen. He completed his undergraduate studies at Wesleyan University and his MBA work at The Anderson School at UCLA and the London School of Economics.

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Eric serves as Managing Director and Head of the Atlantic Region for Capstone, based out of Philadelphia. Prior to Capstone, Eric was responsible for managing the Eastern region for Morgan Stanley Smith Barney’s Capital Strategies Group and its predecessor, Citi Capital Strategies. Eric has more than 20 years of experience managing strategic sale assignments and leveraged recapitalizations for owners of privately held companies. He is head of Capstone’s Health & Medical practice and has successfully completed over 100 transactions in sectors including contract manufacturing, pharmaceutical outsourcing, medical devices and health care services. In 2013, he received the “M&A Deal of the Year” M&A Advisor award for his work on the acquisition and majority recapitalization of Invo HealthCare Associates, Inc. He has also executed complex cross-border transactions with foreign buyers based in London, Germany, Sweden and Switzerland and has structured deals with leading private equity groups and strategic corporate buyers. He graduated cum laude from the University of California and is a Series 7 and 63 Registered Securities Representative as well as a Series 24 Registered Securities Principal.

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Mark is a Director in the Philadelphia office, supporting the management of the Atlantic Region. Previously, Mark served over 10 years as a senior investment banking professional in Morgan Stanley Smith Barney’s Capital Strategies Group. Over his career, Mark has focused on developing deep credentials and expertise in the sale and recapitalization of privately held businesses. Mr. Surowiak’s experience spans a broad range of industries, including the consumer products, post-secondary education, government and defense contracting, manufacturing and outsourced business services sectors. Prior to investment banking, Mark enjoyed a career in the social services field. Mark is a graduate of Illinois State University with a BS in Business Administration. He is a Series 7 and 63 Registered Securities Representative.
ABOUT CAPSTONE PARTNERS

Capstone Partners LLC is a premier investment banking firm dedicated to serving the corporate finance needs of middle market business owners, investors and creditors. The firm provides M&A, corporate restructuring, private placement and financial advisory services. Headquartered in Boston, Capstone has offices in Chicago, London, Los Angeles, Philadelphia, San Diego, Silicon Valley and Tampa with an international presence that spans 450+ professionals in close to 40 countries.

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