LIQUIDMETAL TECHNOLOGIES INC
Form 424B3
March 05, 2014

Prospectus Supplement Filed Pursuant to Rule 424(b)(3)

Registration No. 333-192675

LIQUIDMETAL TECHNOLOGIES, INC.

102,024,643 Shares of Common Stock

PROSPECTUS SUPPLEMENT NO. 1

DATED MARCH 5, 2014

(To Prospectus Dated February 11, 2014)

This Prospectus Supplement No. 1 supplements information contained in, and should be read in conjunction with, that certain Prospectus, dated February 11, 2014, of Liquidmetal Technologies, Inc. (the "Company") relating to the offer and sale from time to time by the selling stockholders named therein of up to 102,024,643 shares of our common stock (as amended and supplemented from time to time, the "Prospectus"). This Prospectus Supplement No. 1 is not complete without, and may not be delivered or used except in connection with, the original Prospectus, including all amendments and supplements thereto.

This Prospectus Supplement No. 1 includes the attached Annual Report on Form 10-K as filed by the Company with the Securities and Exchange Commission on March 5, 2014.

We may further amend or supplement the Prospectus from time to time by filing additional amendments or supplements as required. You should read the entire Prospectus and any amendments or supplements carefully before you make an investment decision.

The Securities and Exchange Commission and state securities regulators have not approved or disapproved these securities or determined if this Prospectus Supplement No. 1 (or the Prospectus, including any supplements or amendments thereto) is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this Prospectus Supplement No. 1 is March 5, 2014.

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2013
TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from _____ to _____

Commission File No. 001-31332

LIQUIDMETAL TECHNOLOGIES, INC.
(*Exact name of Registrant as specified in its charter*)

Delaware	**33-0264467**
(State or other jurisdiction of incorporation or organization)	*(I.R.S. Employer Identification No.)*

30452 Esperanza
Rancho Santa Margarita, CA 92688
(Address of principal executive offices, zip code)

Registrant's telephone number, including area code: **(949) 635-2100**

Securities registered pursuant to Section 12(b) of the Act: None

Securities registered pursuant to Section 12(g) of the Act:

Title of each Class
Common Stock, $0.001 par value

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer," and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer	Accelerated filer	Non-accelerated filer	Smaller reporting company

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes No

The aggregate market value of the registrant's common stock held by non-affiliates of the registrant as of June 28, 2013 was approximately $19,777,092. For purposes of this calculation only, (i) shares of common stock are deemed to have a market value of $0.07 per share, the closing price of the common stock as reported on the OTC Bulletin Board on June 28, 2013 and (ii) each of the executive officers, directors and persons holding more than 10% of the outstanding common stock as of June 28, 2013 is deemed to be an affiliate. The number of shares of common stock outstanding as of March 4, 2014 was 389,302,110.

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PART I

Forward-Looking Statements

This Annual Report on Form 10-K of Liquidmetal Technologies, Inc. contains "forward-looking statements" that may state our management's plans, future events, objectives, current expectations, estimates, forecasts, assumptions or projections about the company and its business. Any statement in this report that is not a statement of historical fact is a forward-looking statement, and in some cases, words such as "believes," "estimates," "projects," "expects," "intends," "may," "anticipate," "plans," "seeks," and similar expressions identify forward-looking statements. Forward-looking statements involve risks and uncertainties that could cause actual outcomes and results to differ materially from the anticipated outcomes or results. These statements are not guarantees of future performance, and undue reliance should not be placed on these statements. It is important to note that our actual results could differ materially from what is expressed in our forward-looking statements due to the risk factors described in the section of this report entitled "Risk Factors" (Item 1A of this report) as well as the following risks and uncertainties:

- Our ability to fund our operations in the short and long term through financing transactions on terms acceptable to us, or at all;
- Our history of operating losses and the uncertainty surrounding our ability to achieve or sustain profitability;
- Our limited history of developing and selling products made from our bulk amorphous alloys;
- Lengthy customer adoption cycles and unpredictable customer adoption practices;
- Our ability to identify, develop, and commercialize new product applications for our technology;
- Competition from current suppliers of incumbent materials or producers of competing products;
- Our ability to identify, consummate, and/or integrate strategic partnerships;
- The potential for manufacturing problems or delays; and
- Potential difficulties associated with protecting or expanding our intellectual property position.

We undertake no obligation to update publicly any forward-looking statements, whether as a result of new information, future events or otherwise.

Item 1. Business

In this Annual Report on Form 10-K, unless the context indicates otherwise, references to "the Company", "Liquidmetal Technologies", "our Company", "we", "us", and similar references refer to Liquidmetal Technologies, Inc. and its subsidiaries.

Overview

We are a materials technology company that develops and commercializes products made from amorphous alloys. Our Liquidmetal® family of alloys consists of a variety of proprietary bulk alloys and composites that utilize the advantages offered by amorphous alloy technology. We design, develop and sell products and components from bulk amorphous alloys to customers in various industries. We also partner with third-party manufacturers and licensees to develop and commercialize Liquidmetal alloy products. We believe that our proprietary bulk alloys are the only commercially viable bulk amorphous alloys currently available in the marketplace.

Amorphous alloys are, in general, unique materials that are distinguished by their ability to retain a random atomic structure when they solidify, in contrast to the crystalline atomic structure that forms in other metals and alloys when they solidify. Liquidmetal alloys are proprietary amorphous alloys that possess a combination of performance, processing, and potential cost advantages that we believe will make them preferable to other materials in a variety of applications. The amorphous atomic structure of our alloys enables them to overcome certain performance limitations caused by inherent weaknesses in crystalline atomic structures, thus facilitating performance and processing characteristics superior in many ways to those of their crystalline counterparts. For example, in laboratory testing, our zirconium-titanium Liquidmetal alloys are approximately 250% stronger than commonly used titanium alloys such as Ti-6Al-4V, but they also have some of the beneficial processing characteristics more commonly associated with plastics. We believe these advantages could result in Liquidmetal alloys supplanting high-performance alloys, such as titanium and stainless steel, and other incumbent materials in a variety of applications. Moreover, we believe these advantages could enable the introduction of entirely new products and applications that are not possible or commercially viable with other materials.

General Corporate Information

We were originally incorporated in California in 1987, and we reincorporated in Delaware in May 2003. Our principal executive office is located at 30452 Esperanza, Rancho Santa Margarita, California 92688. Our telephone number at that address is (949) 635-2100. Our Internet website address is www.liquidmetal.com and all of our filings with the Securities and Exchange Commission ("SEC") are available free of charge on our website.

Our Technology

The performance, processing, and potential cost advantages of Liquidmetal alloys are a function of their unique atomic structure and their proprietary material composition.

Unique Atomic Structure

The atomic structure of Liquidmetal alloys is the fundamental feature that differentiates them from other alloys and metals. In the molten state, the atomic particles of all alloys and metals have an amorphous atomic structure, which means that the atomic particles appear in a completely random structure with no discernible patterns. However, when non-amorphous alloys and metals are cooled to a solid state, their atoms bond together in a repeating pattern of regular and predictable shapes or crystalline grains. This process is analogous to the way ice forms when water freezes and crystallizes. In non-amorphous metals and alloys, the individual crystalline grains contain naturally occurring structural defects that limit the potential strength and performance characteristics of the material. These defects, known as dislocations, consist of discontinuities or inconsistencies in the patterned atomic structure of each grain. Unlike other alloys and metals, bulk Liquidmetal alloys can retain their amorphous atomic structure throughout the solidification process and therefore do not develop crystalline grains and the associated dislocations. Consequently, bulk Liquidmetal alloys exhibit superior strength and other superior performance characteristics compared to their crystalline counterparts.

Prior to 1993, commercially viable amorphous alloys could be created only in thin forms, such as coatings, films, or ribbons. However, in 1993, researchers at the California Institute of Technology (Caltech) developed the first commercially viable amorphous alloy in a bulk form. Today, bulk Liquidmetal alloys can be formed into objects that are up to one inch thick, and we are not aware of any other commercially available amorphous alloys that can achieve this thickness. We obtained the exclusive right to commercialize the bulk amorphous alloy through a license agreement with Caltech and have developed the technology to enable the commercialization of the bulk amorphous alloys.

Proprietary Material Composition

The constituent elements and percentage composition of Liquidmetal alloys are critical to their ability to solidify into an amorphous atomic structure. We have several different alloy compositions that have different constituent elements in varying percentages. These compositions are protected by various patents that we own or exclusively license from third parties, including Caltech. The raw materials that we use in Liquidmetal alloys are readily available and can be purchased from multiple suppliers.

Advantages of Liquidmetal Alloys

Liquidmetal alloys possess a unique combination of performance, processing and cost advantages that we believe makes them superior in many ways to other commercially available materials for a variety of existing and potential future product applications.

Performance Advantages

Our bulk Liquidmetal alloys provide several distinct performance advantages over other materials, and we believe that these advantages make the alloys desirable in applications that require high yield strength, strength-to-weight ratio, elasticity and hardness.

The comparatively high yield strength of bulk Liquidmetal alloys means that a high amount of stress must be exerted to create permanent deformation. However, because the yield strength is so high, the yield strength of many of our bulk Liquidmetal alloys compositions is very near their ultimate strength, which is the measure of stress at which total breakage occurs. Therefore, very little additional stress may be required to break an object made of bulk Liquidmetal alloys once the yield strength is exceeded. Although we believe that the yield strength of many of our bulk alloys exceeds the ultimate strength of most other commonly used alloys and metals, our bulk alloys may not be suitable for certain applications, such as pressurized tanks, in which the ability of the material to yield significantly before it breaks is more important than its strength advantage. Additionally, although our bulk alloys show a high resistance to crack initiation because of their very high strength and hardness, certain of our bulk alloys are sensitive to crack propagation under certain long-term, cyclical loading conditions. Crack propagation is the tendency of a crack to grow after it forms. We continue to develop new alloy compositions that have improved material properties to overcome these limitations.

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Processing Advantages

The processing of a material generally refers to how a material is shaped, formed, or combined with other materials to create a finished product. Bulk Liquidmetal alloys possess processing characteristics that we believe make them preferable to other materials in a wide variety of applications. In particular, our alloys are amenable to processing options that are similar in many respects to those associated with plastics. For example, we believe that bulk Liquidmetal alloys have superior net-shape casting capabilities as compared to high-strength crystalline metals and alloys. "Net-shape casting" is a type of casting that permits the creation of near-to-net shaped products that reduce costly post-cast processing or machining. Additionally, unlike most metals and alloys, our bulk Liquidmetal alloys are capable of being thermoplastically molded in bulk form. Thermoplastic molding consists of heating a solid piece of material until it is transformed into a moldable state, although at temperatures much lower than the melting temperature, and then introducing it into a mold to form near-to-net shaped products. Accordingly, thermoplastic molding can be beneficial and economical for net shape fabrication of high-strength products.

Bulk Liquidmetal alloys also permit the creation of composite materials that cannot be created with most non-amorphous metals and alloys. A composite is a material that is made from two or more different types of materials. In general, the ability to create composites is beneficial because constituent materials can be combined with one another to optimize the composite's performance characteristics for different applications. In other metals and alloys, the high temperatures required for processing could damage some of the composite's constituent materials and therefore limit their utility. However, the relatively low melting temperatures of bulk Liquidmetal alloys allow mild processing conditions that eliminate or limit damage to the constituent materials when creating composites. In addition to composites, we believe that the processing advantages of Liquidmetal alloys will ultimately allow for a variety of other finished forms, including sheets and extrusions.

Notwithstanding the foregoing advantages, our bulk Liquidmetal alloys possess certain limitations relative to processing. The beneficial processing features of our bulk alloys are made possible in part by the alloys' relatively low melting temperatures. Although a lower melting temperature is a beneficial characteristic for processing purposes, it renders certain bulk alloy compositions unsuitable for certain high-temperature applications, such as jet engine exhaust components. Additionally, the current one-inch thickness limitation of our zirconium-titanium bulk alloy renders our alloys currently unsuitable for use as structural materials in large-scale applications, such as load-bearing beams in building construction. We continue to engage in research and development with the goal of developing processing technology and new alloy compositions that will enable our bulk alloys to be formed into thicker objects.

Cost Advantages

Liquidmetal alloys have the potential to provide cost advantages over other high-strength metals and alloys in certain applications. Because bulk Liquidmetal alloys have processing characteristics similar in some respects to plastics, which lends itself to near-to-net shape casting and molding, Liquidmetal alloys can in many cases be shaped efficiently into intricate, engineered products. This capability can eliminate or reduce certain post-casting steps, such as machining and re-forming, and therefore has the potential to significantly reduce processing costs associated with making parts in high volume.

Our Strategy

The key elements of our strategy include:

- *Focusing Our Marketing Activities on Select Products with Optimized Gross-Margins.* We have and continue to focus our marketing activities on select products with optimized gross margins for the long term. This strategy is designed to align our product development initiatives with our processes and cost structure, and to reduce our exposure to more commodity-type product applications that are prone to unpredictable demand and fluctuating pricing. Our focus is primarily on products that possess design features that take advantage of our existing and developing manufacturing technology and that command a price commensurate with the performance advantages of our alloys. In addition, we will continue to engage in prototype manufacturing, both for internally manufactured products and for products that will ultimately be licensed to or manufactured by third parties.

- *Pursuing Strategic Partnerships In Order to More Rapidly Develop and Commercialize Products*. We have and continue to actively pursue and support strategic partnerships that will enable us to leverage the resources, strength, and technologies of other companies in order to more rapidly develop and commercialize products. These partnerships may include licensing transactions in which we license full commercial rights to our technology in a specific application area, or they may include transactions of a more limited scope in which, for example, we outsource manufacturing activities or grant limited licensing rights. We believe that utilizing such a partnering strategy will enable us to reduce our working capital burden, better fund product development efforts, better understand customer adoption practices, leverage the technical and financial resources of our partners, and more effectively handle product design and process challenges.

- *Advancing the Liquidmetal® Brand*. We believe that building our corporate brand will foster continued adoption of our technology. Our goal is to position Liquidmetal alloys as a superior substitute for materials currently used in a variety of products across a range of industries. Furthermore, we seek to establish Liquidmetal alloys as an enabling technology that will facilitate the creation of a broad range of commercially viable new products. To enhance industry awareness of our company and increase demand for Liquidmetal alloys, we are engaged in various brand development strategies that could include collaborative advertising and promotional campaigns with select customers, industry conference and trade show appearances, public relations, and other means.

Applications for Liquidmetal Alloys

We have focused our commercialization efforts for Liquidmetal alloys on four identified product areas. We believe that these areas are consistent with our strategy in terms of market size, building brand recognition, and providing an opportunity to develop and refine our processing capabilities. Although we believe that strategic partnership transactions could create valuable opportunities beyond the parameters of these target markets, we anticipate continuing to pursue these markets both internally and in conjunction with partners.

Components for Non-Consumer Electronic Products

We design, develop and produce components for non-consumer electronic devices utilizing our bulk Liquidmetal alloys and believe that our alloys offer enhanced performance and design benefits for these components in certain applications. Our strategic focus is primarily on parts that command a price commensurate with the performance advantages of our alloys. These product categories in the non-consumer electronics field include, but are not limited to, aerospace components, defense parts, medical devices, sporting goods, leisure products, automotive components and industrial machines. We believe that there are multiple applications and opportunities in the non-consumer electronics product category for us to produce parts that command the higher margin and premium prices consistent with our core business strategy.

We believe that the continued miniaturization of, and the introduction of advanced features to non-consumer electronic devices is a primary driver of growth, market share, and profits in our industry. The high strength-to-weight ratio and elastic limit and the processing advantages of bulk Liquidmetal alloys enable the production of smaller, thinner, but stronger electronic parts. We also believe that the strength characteristics of our alloys could facilitate the creation of a new generation of non-consumer electronic devices which currently may not be viable because of strength limitations of conventional metal parts in the marketplace today. Lastly, we believe that our alloys offer style and design flexibility, such as shiny metallic finishes, to accommodate the changing tastes of our customers.

On August 5, 2010, we entered into a license transaction with Apple Inc. (“Apple”) pursuant to which, for a one time license fee, we granted to Apple a perpetual, worldwide, fully-paid, exclusive license to commercialize our intellectual property in the field of “consumer electronic” products, as defined in the license agreement. As a result, we will not pursue application of our bulk Liquidmetal alloys in the consumer electronics field. However, we continue to work with Apple to develop and advance research and development in the amorphous alloy space to benefit both consumer and non-consumer electronics fields. For more information regarding our transaction with Apple, see “ – Licensing Transactions” below.

Aerospace and Defense

We design and develop components for aerospace and defense customers to meet their requirements for complex, high strength parts with precision tolerances through our near net-shape molding process. Some of the parts we have developed cannot be made by any other conventional fabrication process, offering designers of high performance, mission critical systems unique alternatives.

Because of the high degree of uniformity and consistency of our volume molding process, we are able to reduce significant costs associated with machining and verifying the dimensional tolerances of high precision parts and post-fabrication steps required to apply highly polished surfaces. Additional key properties for the aerospace and defense market are Liquidmetal's tensile strength, hardness, wear resistance, resistance to corrosion, and Liquidmetal's unique properties associated with explosives and munitions.

The many high value and specialized applications within the aerospace and defense industry present significant opportunities for our technology and solutions, and as they are designed into key systems, will provide us with potential long-term revenue streams.

Sporting Goods and Leisure Products

We are developing a variety of applications for Liquidmetal alloys in the sporting goods and leisure products area.

In the sporting goods industry, we believe that the high strength, hardness, and elasticity of our bulk alloys have the potential to enhance performance in a variety of products including but not limited to golf clubs, tennis rackets and skis. We further believe that many sporting goods products are conducive to our strategy of focusing on high-margin products that meet our design criteria.

In the leisure products category, we believe that bulk Liquidmetal alloys can be used to efficiently produce intricately engineered designs with high-quality finishes, such as premium watchcases and knives, and we further believe that Liquidmetal alloy technology can be used to make high-quality, high-strength jewelry from precious metals.

Medical Devices

We are engaged in product development efforts relating to various medical devices that could be made from bulk Liquidmetal alloys. We believe that the unique properties of bulk Liquidmetal alloys provide a combination of performance and cost benefits that could make them a desirable replacement to incumbent materials, such as stainless steel and titanium, currently used in various medical device applications. Our ongoing emphasis has been on surgical instrument applications for Liquidmetal alloys. These include, but are not limited to, specialized blades, orthopedic instruments utilized for implant surgery procedures, dental devices, and general surgery devices. The potential value offered by our alloys is higher performance in some cases and cost reduction in others, the latter stemming from the

ability of Liquidmetal alloys to be net shape cast into components, thus reducing costs of secondary processing. The status of most components in the prototyping phase is subject to non-disclosure agreements with our customers.

We believe that our future success in the medical device market will be driven largely by strategically aligning ourselves with well-established companies that are uniquely positioned to facilitate the introduction of Liquidmetal alloys into this market, especially as it relates to the unique processing challenges and stringent material qualification requirements that are prevalent in this industry. We also believe that our prospects for success in this market will be enhanced through our focus on optimizing existing alloy compositions and developing new alloy compositions to satisfy the industry's rigorous material qualification standards.

Licensing Transactions

Transaction with Visser Precision Cast, LLC

On June 1, 2012, the Company entered into a Master Transaction Agreement (the "Visser MTA Agreement") with Visser Precision Cast, LLC ("Visser") relating to a strategic transaction for manufacturing services and financing.

Under the manufacturing/sublicense component of the Visser MTA Agreement, the Company has agreed to engage Visser as a perpetual, exclusive manufacturer of non-consumer electronic products and to not, directly or indirectly, conduct manufacturing operations, subcontract for the manufacture of products or components or grant a license to any other party to conduct manufacturing operations, except for certain limited exceptions. Further, the Company has agreed to sublicense to Visser, on a fully-paid up, royalty-free, irrevocable, perpetual, worldwide basis, all intellectual property rights held by the Company. In addition, Visser has a right of first refusal over any proposed transfer by the Company of its technology pursuant to any license, sublicense, sale or other transfer, other than a license to a machine or alloy vendor.

Under the financing component of the Visser MTA Agreement, the Company issued and sold to Visser in a private placement transaction (i) 30,000,000 shares of common stock at a purchase price of $0.10 per share resulting in proceeds of $3,000,000, (ii) warrants to purchase 15,000,000 shares of common stock (subsequently increased to 18,562,825 shares under the anti-dilution provision of the warrants, see note 12) at an original exercise price of $0.22 per share (subsequently reduced to $0.18 per share under the anti-dilution provision of the warrants, see note 12) which expire on June 1, 2017 and (iii) a secured convertible promissory note (the "Promissory Note") in the aggregate principal amount of up to $2,000,000 which was convertible into shares of common stock at a conversion rate of $0.22 per share. The Promissory Note was issued pursuant to a $2,000,000 loan facility made available by Visser, but no borrowings were made by the Company under this loan facility, and the deadline for making borrowings under the facility expired on November 15, 2012. All of the shares of common stock issuable upon exercise of the warrants is subject to a lock-up period through December 31, 2016.

In November 2013, the Company and Visser entered into arbitration proceedings to resolve disputes associated with the Visser MTA Agreement (See- Item 3 of this Form 10-K).

Apple License Transaction

On August 5, 2010, the Company entered into a license transaction with Apple Inc. ("Apple") pursuant to which (i) the Company contributed substantially all of its intellectual property assets to a newly organized special-purpose, wholly-owned subsidiary, called Crucible Intellectual Property, LLC ("CIP"), (ii) CIP granted to Apple a perpetual, worldwide, fully-paid, exclusive license to commercialize such intellectual property in the field of consumer electronic products, as defined in the license agreement, in exchange for a license fee, and (iii) CIP granted back to the Company a perpetual, worldwide, fully-paid, exclusive license to commercialize such intellectual property in all other fields of use.

Under the agreements relating to the license transaction with Apple, the Company was obligated to contribute to CIP all intellectual property that was co-developed with Apple through February 2012 (the "Capture Period"). Subsequently, the Company amended the Capture Period to extend through February 2014. The Company is also obligated to maintain certain limited liability company formalities with respect to CIP at all times after the closing of the license transaction.

Other License Transactions

On January 31, 2012, the Company and Engel Austria Gmbh ("Engel") entered into a Supply and License Agreement for a five year term whereby Engel was granted a non-exclusive license to manufacture and sell injection molding machines to the Company's licensees. Since that time, we and Engel have agreed on an injection molding machine configuration that can be commercially supplied and supported by Engel. On December 6, 2013, the companies entered into an Exclusive License Agreement for a 10 year term whereby Engel was granted an exclusive license to manufacture and sell injection molding machines to our licensees in exchange for certain royalties to be paid by Engel to us based on a percentage of the net sales price of injection molding machines.

On January 31, 2012, the Company and Engel Austria Gmbh ("Engel") entered into a Supply and License Agreement for a five year term whereby Engel was granted a non-exclusive license to manufacture and sell injection molding machines to the Company's licensees. Since that time, we and Engel have agreed on an injection molding machine configuration that can be commercially supplied and supported by Engel. On December 6, 2013, the companies entered into an Exclusive License Agreement for a 10 year term whereby Engel was granted an exclusive license to manufacture and sell injection molding machines to our licensees in exchange for certain royalties to be paid by Engel to us based on a percentage of the net sales price of injection molding machines.

On November 16, 2011, the Company and Materion Brush Inc. ("Materion") entered into a Development Agreement to evaluate, analyze and develop amorphous alloy feedstock to be supplied in commercial quantities. Further, on June 17, 2012, the Company entered into a Sales Representation Agreement with Materion whereby Materion shall promote the sale of Liquidmetal's products for certain commissions. This agreement is for a two year initial term with annual, automatic renewals. To date, there have been no commission payments related to this agreement.

The Company's Liquidmetal Golf subsidiary has the exclusive right and license to utilize the Company's Liquidmetal alloy technology for purposes of golf equipment applications. This right and license is set forth in an intercompany license agreement between Liquidmetal Technologies and Liquidmetal Golf. This license agreement provides that Liquidmetal Golf has a perpetual and exclusive license to use Liquidmetal alloy technology for the purpose of manufacturing, marketing, and selling golf club components and other products used in the sport of golf. Liquidmetal Technologies owns 79% of the outstanding common stock in Liquidmetal Golf.

In June 2003, the Company entered into an exclusive license agreement with LLPG, Inc. ("LLPG"). Under the terms of the agreement, LLPG has the right to commercialize Liquidmetal alloys, particularly precious-metal based compositions, in jewelry and high-end luxury product markets. The Company, in turn, will receive royalty payments over the life of the contract on all Liquidmetal products produced and sold by LLPG. The exclusive license agreement with LLPG expires on December 31, 2021.

In March 2009, the Company entered into a license agreement with Swatch Group, Ltd. ("Swatch") under which Swatch was granted a perpetual non-exclusive license to the Company's technology to produce and market watches and certain other luxury products. In March 2011, this license agreement was amended to grant Swatch exclusive rights as to watches, and the Company's license agreement with LLPG was simultaneously amended to exclude watches from

LLPG's rights. The Company will receive royalty payments over the life of the contract on all Liquidmetal products produced and sold by Swatch. The license agreement with Swatch will expire on the expiration date of the last licensed patent.

Our Intellectual Property

Pursuant to our transaction with Apple described under " – Licensing Transactions" above, we license substantially all our intellectual property from our wholly-owned subsidiary, Crucible Intellectual Property, LLC. Our intellectual property consists of patents, trade secrets, know-how, and trademarks. Protection of our intellectual property is a strategic priority for our business, and we intend to vigorously protect our patents and other intellectual property. Our intellectual property portfolio includes 53 owned or licensed U.S. patents and numerous patent applications relating to the composition, processing, and application of our alloys, as well as various foreign counterpart patents and patent applications.

Our initial bulk amorphous alloy technology was developed by researchers at the California Institute of Technology ("Caltech"). We have acquired patent rights that provide us with the exclusive right to commercialize the amorphous alloy and other amorphous alloy technology developed at Caltech through a license agreement ("Caltech License Agreement") with Caltech. In addition to the patents and patent applications that we license from Caltech, we are building a portfolio of our own patents to expand and enhance our technology position. These patents and patent applications primarily relate to various applications of our bulk amorphous alloys and the processing of our alloys. The patents expire on various dates between 2014 and 2032. Our policy is to seek patent protection for all technology, inventions, and improvements that are of commercial importance to the development of our business, except to the extent that we believe it is advisable to maintain such technology or invention as a trade secret.

In order to protect the confidentiality of our technology, including trade secrets, know-how, and other proprietary technical and business information, we require that all of our employees, consultants, advisors and collaborators enter into confidentiality agreements that prohibit the use or disclosure of information that is deemed confidential. The agreements also obligate our employees, consultants, advisors and collaborators to assign to us developments, discoveries and inventions made by such persons in connection with their work with us.

Research and Development

We are engaged in ongoing research and development programs that are driven by the following key objectives:

- *Enhance Material Processing and Manufacturing Efficiencies.* We are working with our strategic partners to enhance material processing and manufacturing efficiencies. We plan to continue research and development of processes and compositions that will decrease our cost of making products from Liquidmetal alloys.

- *Optimize Existing Alloys and Develop New Compositions.* We believe that the primary technology driver of our business will continue to be our proprietary alloy compositions. We plan to continue research and development on new alloy compositions to generate a broader class of amorphous alloys with a wider range of specialized performance characteristics. We believe that a larger alloy portfolio will enable us to increase the attractiveness of our alloys as an alternative to incumbent materials and, in certain cases, drive down product costs. We also believe that our ability to optimize our existing alloy compositions will enable us to better tailor our alloys to our customers' specific application requirements.

- *Develop New Applications.* We will continue the research and development of new applications for Liquidmetal alloys. We believe the range of potential applications will broaden by expanding the forms, compositions, and methods of processing of our alloys.

We conduct our research and development programs internally and also through strategic relationships that we enter into with third parties. Currently, our internal research and development efforts are conducted by a team of nine scientists, engineers, and technicians each of whom we either employ directly or engage as a consultant.

In addition to our internal research and development efforts, we enter into cooperative research and development relationships with leading academic institutions. We have entered into development relationships with other companies for the purpose of identifying new applications for our alloys and establishing customer relationships with such companies. Some of our product development programs are partially funded by our customers. We are also engaged in negotiations with other potential customers regarding possible product development relationships. Our research and development expenses for the years ended December 31, 2013, and 2012 were $1.16 million and $0.94 million, respectively.

Raw Materials

Liquidmetal alloy compositions are comprised of many elements, all of which are generally available commodity products. We believe that each of these raw materials is readily available in sufficient quantities from multiple sources on commercially acceptable terms. However, any substantial increase in the price or interruption in the supply of these materials could have an adverse effect on our business.

Manufacturing

Our current manufacturing strategy is to partner with global companies that are contract manufacturers and alloy producers. We are seeking third party companies with a proven track record of success and that can gain specialized skills and knowledge of our alloys through close collaborations with our team of scientists and engineers. We believe that partnering with these global companies will allow us to forgo the capital intensive requirements of maintaining our own manufacturing facilities and allow us to focus on our core business which is to expand our patent portfolio of intellectual property and develop long term relationships with our customers.

Under the manufacturing/sublicense component of the Visser MTA Agreement, the Company has agreed to engage Visser as a perpetual, exclusive manufacturer of non-consumer electronic products and to not, directly or indirectly, conduct manufacturing operations, subcontract for the manufacture of products or components or grant a license to any other party to conduct manufacturing operations, except for certain limited exceptions.

In November 2013, the Company and Visser entered into arbitration proceedings to resolve disputes associated with the Visser MTA Agreement (see note 17 in the accompanying footnotes to the financial statements).

Customers

During 2013, there was one major customer, who accounted for 80% of our revenue. During 2012, there were three major customer, who together accounted for 70% of our revenue. In the future, we expect that a significant portion of our revenue may continue to be concentrated in a limited number of customers, even if our bulk alloys business grows.

Competition

Other than our authorized licensees, we are not aware of any other company or business that manufactures, markets, distributes, or sells bulk amorphous alloys or products made from bulk amorphous alloys. We believe it would be difficult to develop a competitive bulk amorphous alloy without infringing our patents. However, our bulk Liquidmetal alloys face competition from other materials, including metals, alloys, plastics and composites, which are currently used in the commercial applications that we pursue. For example, we face significant competition from plastics, zinc and stainless steel in our non-consumer electronics components business, and titanium and composites

will continue to be used widely in medical devices and sporting goods. Many of these competitive materials are produced by domestic and international companies that have substantially greater financial and other resources than we do. Based on our experience with developing products for a variety of customers, we believe that the selection of materials by potential customers will continue to be product-specific in nature, with the decision for each product being driven primarily by the performance needs of the application and secondarily by cost considerations and design flexibility. Because of the relatively high strength of our alloys and the design flexibility of our process, we are most competitive when the customer is seeking a higher strength as well as greater design flexibility than currently availab