

# Entrepreneurial ID «venture leaders» 2011

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Project/ Company name: THELKIN GmbH

Short description: THELKIN provides advanced systems and services for the mechanical characterization of orthopedic implants and other medical products. This offering helps medical device companies to meet their demanding needs in time- and cost-efficient product testing.

Web site: [www.thelkin.com](http://www.thelkin.com)

Industry: mechanics, engineering



| <i>The Start-up</i>  |  |
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| <b>The one-liner: what's your big idea?</b>  | <i>THELKIN – the new generation of mechanical test systems for orthopedic implants and their materials.</i>  |
| <b>Status:</b> <i>The company has been formally established in June 2010. Executing a well-defined business plan led to the successful development of two products that entered their markets in Q1 / 2011, with two more following in summer 2011.</i>  | <b>Company / team size:</b> <i>The company employs a total of 3.5 full time employees. In addition, two bachelor / master students are working on development projects, and a number of external consultants (software, legal, graphic design) are further supporting THELKIN.</i> |
| <b>Problem / Solution:</b> <i>Today's mechanical testing equipment, particularly in the application area of orthopedic implants, is not up-to-date with technical and user-requirements. At the same time, regulatory needs are growing dramatically and a steep increase in testing activities can be observed. THELKIN is addressing these needs with two product offerings:</i><br><ol style="list-style-type: none"> <li><i>1. Test and analysis equipment for the mechanical characterization of orthopedic implants.</i></li> <li><i>2. Testing of orthopedic implants as a service.</i></li> </ol> <i>Our products are unique in that they have newly developed electric drives and actuators incorporated, thus eliminating the need for hydraulic or pneumatic infrastructure. This technology allows for total flexibility, great dynamics and precision, low-maintenance and reduced operating costs.</i> |  |
| <b>Market Opportunity / Target customers:</b> <i>Our orthopedics customer base can be separated into three groups: research &amp; development and quality control departments of implant manufacturers, commercial test laboratories, and private and governmental research institutions. Overall, the targeted industrial sector is economically stable with solid growth rates of 10-15% / year and a potential market size for THELKIN in the range of CHF 80-100 Mio / year.</i>   |  |
| <b>Competition and competitive advantage:</b> <i>The competition is primarily composed of four large manufactures of general mechanical testing equipment (CHF 200-400 Mio annual revenue each) and two smaller and more specialized companies (annual revenues: CHF 5-10 Mio each). Product offering, market positioning, and business strategy of these companies are well known and will be considered in the strategic positioning of THELKIN. Amongst our competitive advantages is the in-depth knowledge of implant testing requirements and the patented, ground-breaking actuator technology that forms the basis of our systems.</i>   |  |
| <b>Financing:</b> <i>Throughout the first twelve months of operation, the company has been mostly self-financed with the support of the startup competition "venture kick". In addition, to carry us through the ambitious growths plan of the next two years, institutional and private investments of up to CHF 500k will be raised. We expect that the company will live off self-generated profits thereafter.</i>   |  |
| <b>Growth objectives:</b> <i>THELKIN will grow to a solid and well-established company with CHF 8.9 Mio of revenue and profits in the range of CHF 500k by 2015, generated by about 35 employees.</i>  |  |
| <b>US objectives:</b> <i>Goals for Boston:</i><br><ol style="list-style-type: none"> <li><i>1. Learn and exchange knowledge about international expansion strategies and opportunities.</i></li> <li><i>2. Setting foot in the US implant industry – identification of three possible game plans</i></li> <li><i>3. What type and extend of support is available (Swiss chamber of commerce, others)</i></li> </ol> <i>People that could be helpful in meeting these goals would be members of the Swiss chamber of commerce or similar business supporting institutions, local business angles, and US trade organizations that be interested in our product portfolio. These people ideally have a sound understanding of commercial and legal aspects of European companies expanding their business to the US.</i>   |  |

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## Description:

*Today's mechanical testing equipment, particularly in the application area of orthopedic implants, is not up-to-date with technical and user-requirements. At the same time, regulatory needs are growing dramatically and a steep increase in testing activities can be observed. THELKIN is a start-up company that develops at high pace to address these needs and to ease an orthopedics company's pain with two product offerings:*

- 1. Test and analysis equipment for the mechanical characterization of orthopedic implants.*
- 2. Testing of orthopedic implants as a service.*

*We are bringing mechanical testing to the next level by providing highly dynamic and precise, easy to use, low-maintenance and cost-saving systems and solutions. Newly developed, fully electric actuator technologies eliminate the need for hydraulic or pneumatic infrastructure, translating into significant cost-saving opportunities. Implant manufacturers and other users can generate test data quicker and more accurately to develop safe, effective and successful products.*

*With an estimated size of CHF 80-100 Mio per year as the target market at 8-15% annual growth, our specific know-how in implant testing and system engineering provides us with a unique business opportunity. Strong partnerships with Swiss universities and with system development / manufacturing companies help us in reaching our goal of becoming the preferred partner of the orthopedic implant industry in mechanical testing of their devices within the next five years.*



**THELKIN**  
Know the Difference

## The team

*The management is presently staffed with Dr. Thorsten Schwenke, the founder and CEO of THELKIN. Dr. Schwenke has gained experience in the area of mechanical testing for more than 13 years, including a doctorate degree in biomechanics and management positions in research with Zimmer, the worldwide leading manufacturer of orthopedic implants. Filling the opening of "Chief Technology Officer" in Q1 2011 will strengthen the management team. A group of companies and advisors further supports THELKIN: Jossi AG in Islikon (CH) is providing mechanical / software engineering and infrastructure / financial support. With Sotronik GmbH, we have one of the leading embedded software developing companies in Switzerland as our partners. Other experts consult us in finance, sales, service, engineering & manufacturing, and quality control. Three international universities support our project scientifically.*