

INTELLIWHEELS, INC.

Tinker

Empowering wheelchair users by creating
informed consumers.

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Tinker is the first ever 3D product configurator in the wheelchair marketplace. Configurators have been utilized for years to allow consumers to design cars, shoes, bicycles, and other products. They give customers unparalleled levels of feedback and control over the product they are ordering and they function as an incredible communication tool between customers and manufacturers. Tinker's goal is to create transparency in the wheelchair industry by using educational tools to empower wheelchair users, their families, and caregivers to ensure their voices are clearly heard throughout the wheelchair ordering process.

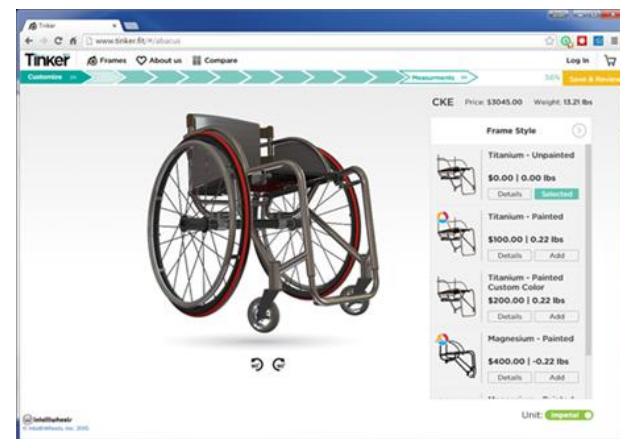
Company Introduction – Tinker by, IntelliWheels, Inc.

IntelliWheels, Inc. is the premier innovation house for wheelchair technology. Along with developing a line of products to meet the needs of today's active and independent wheelchair users, IntelliWheels has recently created Tinker, an innovative online sales and marketing tool comprised of an interactive wheelchair configurator, educational tutorial videos, infographics, and measuring guides designed to enable wheelchair users, families, caregivers, and healthcare providers to become more informed consumers and improve the ordering and purchasing process of wheelchairs in the durable medical market.

Over the past five years, IntelliWheels, Inc. has developed new and innovative products that decrease environmental, social, and physical barriers wheelchair users face on a daily basis. Working side by side with wheelchair users, family members, caregivers, wheelchair dealers, and wheelchair manufacturers, IntelliWheels was able to witness first-hand the frustrations and oftentimes miscommunications that occur during the current method used to order wheelchairs. Having an intimate view of the problems that presently exist with the current wheelchair ordering process has led IntelliWheels to take the first steps in creating what we hoped to be a system wide change in the way wheelchairs are ordered with Tinker.

To illustrate some of the current problems with how wheelchairs are currently ordered imagine yourself in a few scenarios;

The first scenario is as a young 19 year old college sophomore, who in spite of her spinal cord injury wants to be just like the rest of her college peers and blend into college life. After waiting 8 months for her new, sleek, low-profile, matte black wheelchair she was thought to have ordered with the help of the only wheelchair dealer in town, she opens the large box that contains her customized wheelchair and is brought to tears when inside is a large, heavy, bright blue wheelchair instead of the sleek black wheelchair she personally selected to match her style. In this scenario Tinker would allow her and her dealer to have clear communication and get every aspect of her wheelchair correct the first time.



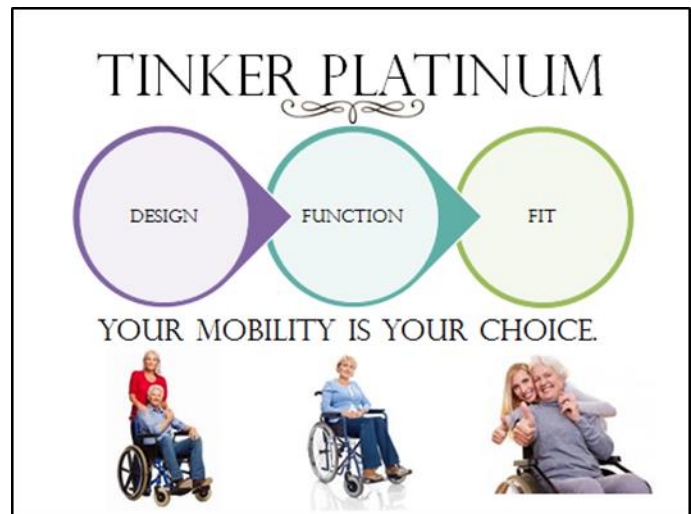
Tinker for Kids

A fun step by step guide to help your child and you design and learn about their custom wheelchair



Next imagine you are the young mother of a child who has been recently been told their child will need to use a wheelchair as their way of mobility. Some of the obstacles parents of children with disabilities face are that they do not know where to turn for more information, or how to be positive and supportive for their child during this unexpected and challenging time in both of their lives. Tinker for Kids makes designing your child's wheelchair educational and fun.

I also think of my mother who is currently struggling to have a conversation with her aging mother, my grandmother, about using a wheelchair to maintain her safety and reduce the chance of falling and injuring herself. The two common problems my mom is facing are that my grandmother does not want a wheelchair, and that my mother knows very little about how to go about purchasing a nice wheelchair so that my grandmother is comfortable and safe. I also wonder how my mother might have to have this same difficult conversation with her husband, my step-father, in a few years.



IntelliWheels, the creators of Tinker, believe the wheelchair user's voice is the most important factor when ordering a wheelchair and that it must be heard throughout the process of ordering their wheelchair. Tinker is an online educational and sales tool that fosters clear communication between the wheelchair user, healthcare provider, dealer, and wheelchair manufacture. Tinker not only allows individuals to customize the look of their wheelchairs with a 3 dimensional view and for the first time see what their wheelchair will look like, but more importantly, Tinker provides educational tools that allow wheelchair users, their family members, and caregivers the ability to be informed consumers, understanding each component of the wheelchair and the measurements that go into the perfect fit.

Innovate-Her

Tinker was designed to help wheelchair users, their families, and the caregivers gain the necessary information to be informed consumers in the wheelchair marketplace. Tinker provides the ability for the young active college sophomore to design her wheelchair, making sure her wheelchair fits her style and her look. Tinker can also be modified for children and the mothers of children with disabilities, providing necessary information for "Mom" to have the knowledge she needs. Tinker Kids is formatted in a fun easy way to help children have fun when selecting their wheelchair. Providing children with disabilities an opportunity to choose the color or design of their wheelchair fosters independence and promotes self-determination.

Along with wheelchair users, Tinker Platinum is helpful for the family members and care givers of the wheelchair users working with wheelchair users' ages 65 years and above. Recent research shows women provide the majority of informal care to spouses, parents, parents-in-law, friends and neighbors, and they play many roles while caregiving such as hands-on health provider, care manager, friend, companion, surrogate decision-maker and advocate (Waliser, et. al., 2002). An estimated 66% of all caregivers are female (AARP, 2009). The average caregiver is a 49 year old woman, caring for her 60 year old mother who does not live with her; she is married and employed (AARP, 2011).

Tinker Platinum is specifically designed to foster productive conversations between the caregiver and older parents. Tinker is the first ever 3D product configurator in the wheelchair marketplace that allows for such improved communication. Configurators have been utilized for years to allow consumers to design cars, shoes, bicycles, and other products. They give customers unparalleled levels of feedback and control over the product they are ordering and they function as an incredible communication tool between customers and manufacturers.

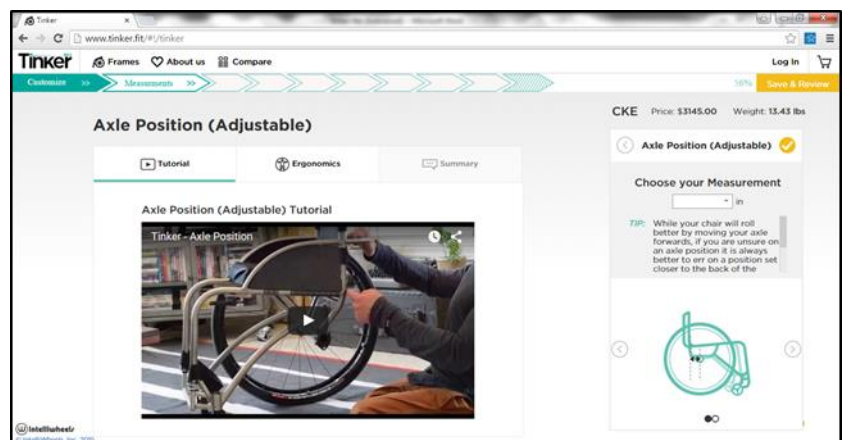
Barriers to independence

“Disability is manufactured by attitudinal and environmental barriers rather than functional limitations.” (Finkelstein, 1993). The definition of “disability” continues to modify with time, however, one commonality among many of the theories and models of disability remains. Disability defines the relationship a person has with his or her environment. When looking at what a disability really means, a disability can be seen as something that is transitory and may exist in one circumstance or environment but not another. It is the idea that the interaction between a person, their wheelchair, and their environment can be altered and a circumstance can be improved upon that drives IntelliWheels, Inc. to develop new technology enable wheelchair users to have the optimal fit in their wheelchair to move through their environment with as few social, environmental, or physical barriers.

Why Tinker?

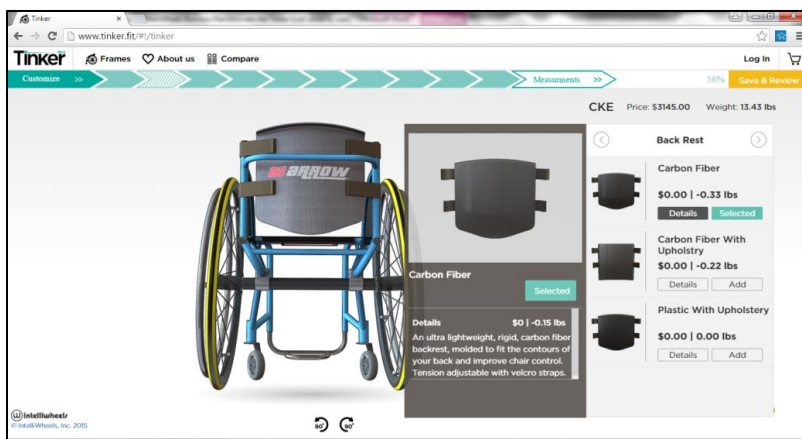
Tinker is striving to put the power back into the hands of the customer and to simplify the convoluted process of ordering a wheelchair. The web based system consists of two distinct parts; the configurator, where customers can “tinker” with their wheelchair to get the exact specs they want, and the measurement system, which streamlines the process of measuring a person for a wheelchair and educates the customer, using text, graphics, and video, on where to measure and what those measurements mean for the functionality and performance of the chair. For cash sales, Tinker will reduce the need to work through a traditional dealer, improve customer service and experience, and act as a great education tool to allow customers to make better purchasing decisions whether they use a dealer or not.

Tinker combines a stellar product configurator with a comprehensive educational system using text, graphics, and videos. It empowers customers by giving them the tools to learn about every aspect of their new chair. The goal is to create informed consumers who are given the tools to be confident in what they want. With Tinker, consumers will understand why the measurements are important, from fitting



the chair properly, to how the performance and functionality of their chair will change depending on the changes they make to the frame.

In the current marketplace, ordering a new wheelchair is an intimidating process. Wheelchair users get one chair every 3-5 years (or more). It is an expensive and important purchase as a wheelchair is a tool for life, and the way a chair fits can greatly affect a person's lifestyle. Experts in how a wheelchair should fit a person to maximize their potential are few and far between. Tinker's financial model is to partner with wheelchair manufactures and wheelchair dealers so that wheelchair users are able to get what they want and need. With Tinker as a digital sales tool wheelchair manufactures and dealer will no longer have to rely on just a person to provide a high level of customer service.



Wheelchair users who have tested the beta version of Tinker feel that the process is “seamless,” and that the educational system offers “just enough information without being overwhelming” (Paralympian, Amanda McGrory). Many users of the beta version keep asking when they will be able to order their next wheelchair through this system.

By partnering Tinker with wheelchair manufactures and dealers, the wheelchair industry can drastically improve their ordering

process. Tinker will enhance their customer's experience ordering a wheelchair, simplify the process for ordering such an important and expensive piece of equipment, minimize miscommunications, and reduce the time it takes to order a wheelchair. In a market filled with middle men lacking in expertise, combining a company with great existing customer service with a tool that empowers and educates wheelchair users, wheelchair dealers and manufactures can improve sales while improving their customers' experiences.

Wheelchairs don't have to be medical products. Day chairs should fit a person's lifestyle and sports chairs should complement the athlete using it. Tinker is seeking to change the culture surrounding the wheelchair. Giving power to the consumer to make an educated choice in the equipment they use is the first step, working with wheelchair manufactures and dealers to provide wheelchair users a marketplace that makes it easy and fun to purchase a chair is the next.

Development of IntelliWheels, Inc. and Tinker

In May 2010, IntelliWheels, Inc. was founded and started developing products out of the Enterprise Works Start-up Incubator. Throughout the summer of 2010, the company participated in Illinois Launch which provided intense mentorship and entrepreneurial guidance. Funding for IntelliWheels was gathered from a \$20,000 NCIIA grant, \$6,000 from the 2010 Cozad competitions, and \$30,000 from the

Lemelson MIT Illinois student prize. In 2013, IntelliWheels was awarded a phase I SBIR grant of \$165,000 from the National Institutes of Health and closed a series A funding round of \$400,000. IntelliWheels then received a phase II award for \$1.5 million in 2014. IntelliWheels has had steady growth in the wheelchair industry and has the established connections to market Tinker to the important players in the wheelchair market. IntelliWheels has the expertise to continue to develop Tinker and will look to hire additional employees to support the growth of Tinker.

The Wheelchair Marketplace

The wheelchair market place is vast, profitable, and ripe with opportunities for new wheelchair manufacturers. This can be illustrated by the following statistics:

- 2.2 million people in the U.S. use wheelchairs for daily mobility (U.S. Census Bureau, 2002).
- 100-140 million people worldwide with disabilities need wheelchairs, however only 10% have access to one (New Freedom Initiative Act, n.d.).
- In order to meet this demand, there are over 170 U.S. wheelchair manufacturers with a total reported income of \$1.33 billion, but only 5 of these companies have revenues of more than \$100 million (Dun and Bradstreet Marketplace, 2003).

New startups and smaller manufacturers play an important role in this market. While the market is broad, there is little product differentiation and new companies that bring innovation have tremendous potential to seize market share. Experts agree that there is an overwhelming need for the research and development required to make wheelchairs more effective (Cooper, 1998).

The wheelchair marketplace has many smaller companies and a few large ones (e.g. Invacare, Quickie, Eagle). Because of this acquisitions are quite common. Invacare alone acquired 13 companies in the last 10 years (Invacare.com). By building a solid brand based on profitable growth and meaningful innovation, we will be able to grow to the size that makes us attractive as a possible acquisition for one of these large companies.

Market Breakdown

Approximately 2.2 million people in the U.S. use wheelchairs. This group can be divided into four groups: 700,000 power wheelchair users, 400,000 low-functioning manual wheelchair users, 700,000 mid-functioning wheelchair users, and 400,000 high functioning manual wheelchair users.

Mid and high-functioning wheelchair users (1.1 million people) can be described as active, independent people that propel themselves throughout most of their day. Most mid to high functioning wheelchair users experience difficulty pushing because of fatigue, shoulder pain, and environmental difficulties. At the same time, they value the independence, and they want to have the same amount of mobility as an able-bodied person.



Tinker, Tinker for Kids, and Tinker Platinum can be customized to fit each segment of the wheelchair market. Low functioning wheelchair users (400,000 people) can be described as not very independent, utilize their wheelchair indoors only, and often times rely on someone else to physically push them, although their physical bodies may not allow them to self-propel, all wheelchair users should be a part of the selection process of their wheelchair. Additionally, there are 700,000 power wheelchair users in the U.S. and in the future, IntelliWheels would like to expand Tinker to provide more solutions for this group as well as manual wheelchair users.

Marketing and Distribution Strategies

Founded by University of Illinois students, IntelliWheels, Inc. aims to proudly carry on the strong tradition of wheelchair innovation that has been seen throughout the history of the University of Illinois. Having the unique opportunity to work with some of the most high profile wheelchair athletes, coaches, spokespersons, representatives, and advocates, IntelliWheels, Inc. has had an ideal environment to develop the first versions of Tinker. Having formed strong relationships within the wheelchair athletics culture provides instant exposure for Tinker on the national and international market. This low cost grass roots marketing strategy is a great way to build our brand as we continue to grow. However utilizing the resources of the Illinois Small Business Center at Champaign County as well as the national and international resources Tinker would have the opportunity to develop into the “gold standard” if presented to wheelchair manufacturers and wheelchair dealers and influential groups such as AARP at trade shows.

IntelliWheels, Inc. also believes in building a solid social mission to operate in a manner that seeks creative ways to provide employment and empowerment for people with disabilities locally, nationally, and internationally. IntelliWheels, Inc. has plans to form partnerships that set up employment opportunities through Tinker. Considering the unemployment rate for people with disabilities is the highest of any minority group at 69% in the U.S., IntelliWheels, Inc. is compelled to provide not only products for people with disabilities but employment as well.

Management Team

Scott Daigle, a mechanical engineer by trade, serves as the CEO of IntelliWheels. He is the creator of Tinker. Scott has a strong technical background in mechanical and electrical design. Combined with his experience in product development and entrepreneurship, he has the skills to bring these products to market. He is listed as an inventor on one U.S. patent and was the 2011 Lemelson MIT Illinois prize winner (\$30,000) for his work on IntelliWheels Products.

Marissa Siebel- Siero has her masters in kinesiology and is currently pursuing her PhD in community health and disability studies. She is an experienced athletic trainer for wheelchair athletes having worked with the wheelchair basketball and racing teams at the University of Illinois and the USA Paralympic teams. Her background in kinesiology and wheelchair athletics provides a balanced perspective on rehabilitation issues as well as a direct connection to a vast network of wheelchair users. She was nominated for the Social Entrepreneurship Award and along with Scott Daigle for the Student Start-up Award at the Innovation Celebration in Champaign, IL for IntelliWheels, Inc. in 2011 and won Woman of the Year in 2013 from the Central Illinois Business Magazine.

Josh George is a 5 time medalist at the Paralympics and travels routinely as a public speaker and professional wheelchair racer. Josh serves as the Director of Public Relations and the key spokesperson for IntelliWheels He is instrumental in maintaining our nationwide wheelchair user network.

Intellectual Property

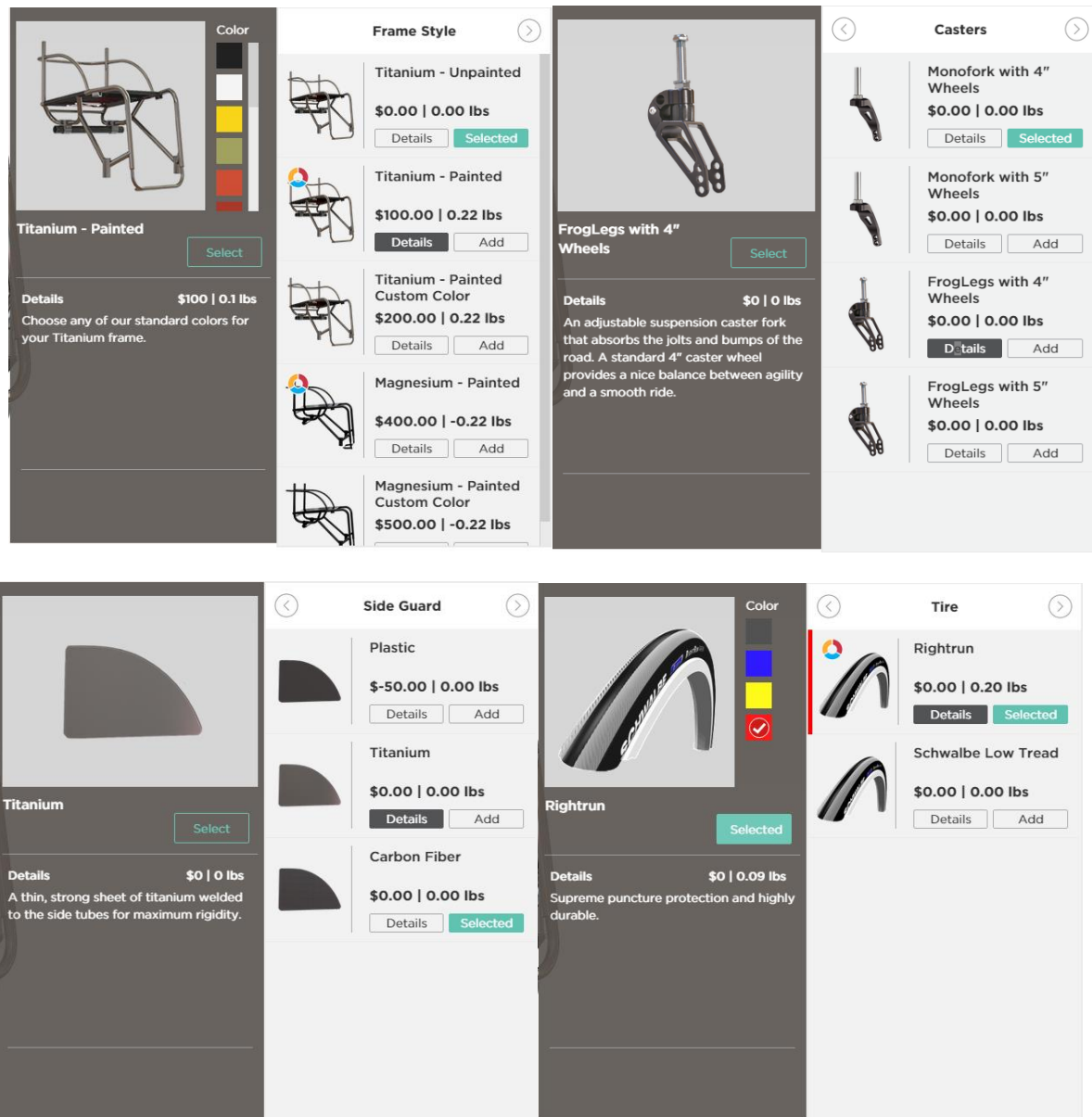
Although currently there is no intellectual property around Tinker, the computer engineering resources IntelliWheels has already devoted to the development of Tinker; along with the depth of knowledge of wheelchairs the IntelliWheels team has already integrated into Tinker leads us to believe we have some protection in the industry.

The next steps

Tinker is currently online in Beta format at www.tinker.fit. IntelliWheels looks to market Tinker to wheelchair manufactures and wheelchair dealers through trade shows and durable medical expo. With help from the SBDC, IntelliWheels would be able to attend domestic and international trades shows to enroll additional clients. Adding wheelchair manufactures and dealers allows more information to be provided to wheelchair users and their families and builds the success of Tinker.

Inside Tinker

Users will have an engaging way to configure and learn about their new wheelchair. IntelliWheels has developed content including the following:

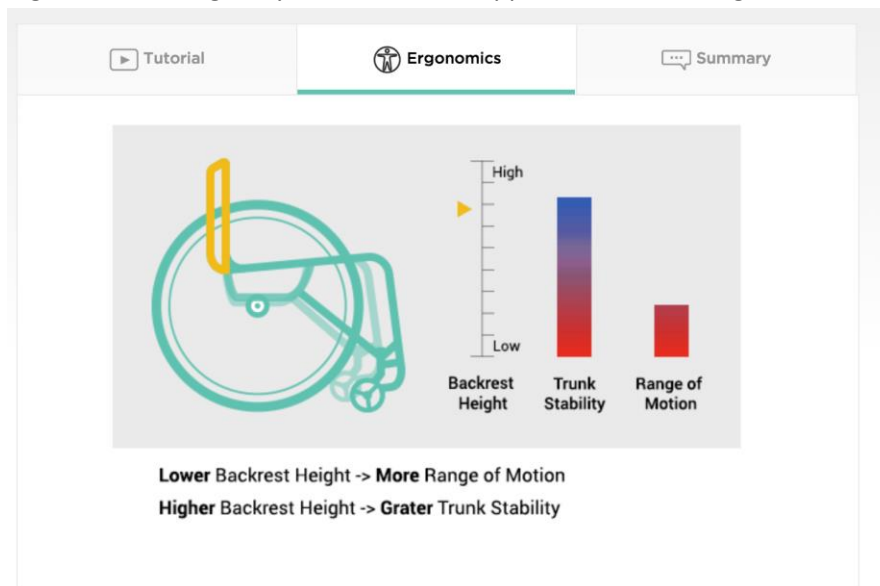


1. A video for each measurement of the chair. The videos will feature Paralympian Josh George and possibly include members of your team or the University of Illinois wheelchair basketball teams, depending on where the videos are shot.

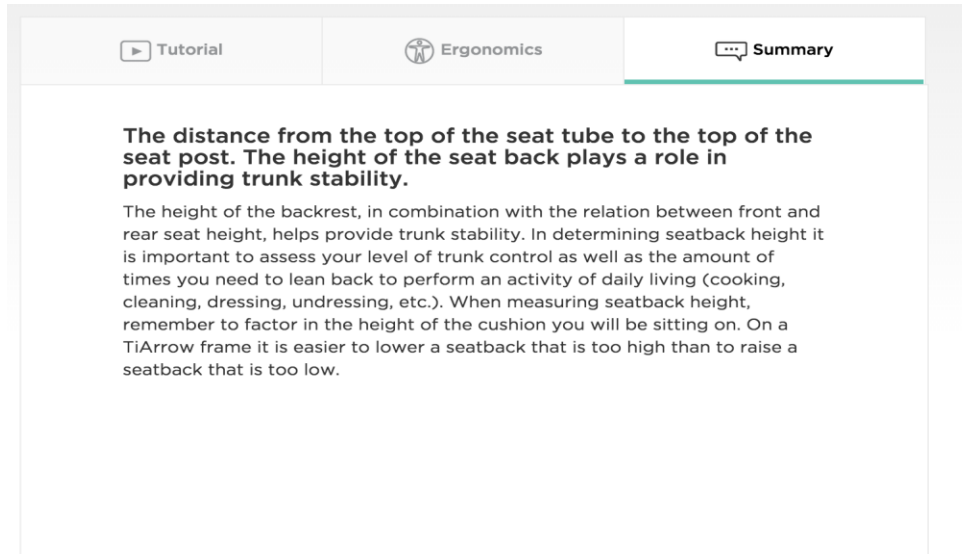
Rear Seat Width Tutorial



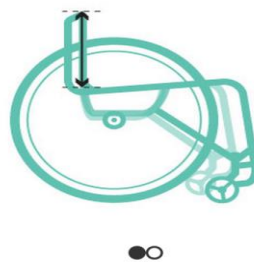
2. An animation for each measurement. The animations will focus on explaining the functional and performance impacts of the measurement, and they will address the biggest impact for each measurement. For example, an animation will be created to explain how having a higher seat back gives you more trunk support, but limits range of motion.



3. A plain text summary that explains everything in more depth. While some people learn better through videos or graphic visuals, some still prefer to read. For them, and anyone who wants a little more detail, we will provide a written summary of how to get the best measurement for each part of the chair, and how that affects the performance and function.



4. A static graphic to illustrate what the measurement is asking for. This is simply a picture, or series of pictures that visually explain what is being asked. The measurement for “seat depth,” for example, will include a line drawing of a wheelchair with arrows pointing from where to where this measurement is taken as well as a picture of a seated human with arrows highlighting their upper leg.



5. A quick tip that helps users measure each piece of the chair. These tips come from experts in the field, are simple to follow, and ensure that measurements are accurate. Each tip is positioned just below the input box for each measurement to ensure that customers will see them before they input their selection.

TIP: An easy way to measure seat width is to press a book firmly against either hip and measure between them.

Tinker Pricing for Wheelchair Manufactures

- Startup fee: \$5,000 (½ due on kick-off of project, and ½ due on completion).
- Licensing Fee: A licensing fee calculated as 7.5% of all sales processed through the Tinker System.

Note; this does not include sales that are called in by dealers, individuals, or made in person. It only includes sales processed through the Tinker system. The fee is earned when a user or dealer presses submit or purchase, and invoices the customer as a result.

Custom Development of Tinker Timeline

Product configurator:

- Planning: 2 weeks
- Design: 2 weeks
- Design & coding: 1.5 - 2 month
- Modification: 1 month
- **Total: 12 - 14 weeks**

Measurement video:

- Planning: 2 weeks
- Filming: 2-3 weeks
- Editing: 1 week
- **Total: 5-6 weeks**

TINKER 5 Year Budget

	Year	2016	2017	2018	2019	2020	(%)
ASSUMPTIONS							
Number of New Partners		1	2	2	2	2	
Number of Partners		1	3	5	7	9	
Avg. Licensing Fee per Partner	\$	90,000	\$ 108,000	\$ 130,000	\$ 156,000	\$ 187,000	20%
Avg. Setup Fee Per new Partner	\$	5,000	\$ 9,000	\$ 15,000	\$ 26,000	\$ 44,000	70%
INCOME							
Licensing Fees	\$	90,000	\$ 324,000	\$ 650,000	\$ 1,092,000	\$ 1,683,000	
Setup Fees	\$	5,000	\$ 18,000	\$ 30,000	\$ 52,000	\$ 88,000	
TOTAL INCOME	\$	95,000	\$ 342,000	\$ 680,000	\$ 1,144,000	\$ 1,771,000	
EXPENSES							
Salaries							
Developers	\$	80,000	\$ 96,000	\$ 115,000	\$ 138,000	\$ 166,000	20%
Graphic Designers	\$	10,000	\$ 12,000	\$ 14,000	\$ 17,000	\$ 20,000	20%
Content Managers	\$	20,000	\$ 35,000	\$ 61,000	\$ 107,000	\$ 187,000	75%
Sales People	\$	10,000	\$ 11,000	\$ 12,000	\$ 13,000	\$ 14,000	10%
Total Salaries	\$	120,000	\$ 154,000	\$ 202,000	\$ 275,000	\$ 387,000	
Overhead Contribution	\$	48,000	\$ 62,000	\$ 81,000	\$ 110,000	\$ 155,000	40%
Marketing/Promotion	\$	2,000	\$ 10,000	\$ 13,000	\$ 17,000	\$ 22,000	30%
Hosting	\$	200	\$ 600	\$ 1,000	\$ 1,400	\$ 1,800	
Travel	\$	3,000	\$ 9,000	\$ 15,000	\$ 21,000	\$ 27,000	
TOTAL EXPENSES	\$	173,200	\$ 235,600	\$ 312,000	\$ 424,400	\$ 592,800	
NET INCOME	\$	(78,200)	\$ 106,400	\$ 368,000	\$ 719,600	\$ 1,178,200	

The business model for Tinker is simple. We partner with various wheelchair manufacturers to make the ordering process as easy and engaging as possible for their end users. We build the online configurator once, and we repackage it for each manufacturer and load in their various product offerings. We charge a licensing fee and a setup fee to each partner.

At the time that we are writing this business plan, we already have one partner signed on. The deal with this partner earns us a \$5,000 setup fee, 2.5% commission on all sales entered by employees, and 7.5% commission on all sales entered by end users. Based on their annual sales numbers, we expect this to net us \$90,000 in licensing fees for 2016.

As we move forward as a company, we expect to sign up 2 new partners every single year. As we gain experience in this business sector, we expect each new deal to be worth more on average until year 5 when we are making \$187,000 in licensing fees from each partner plus a setup fee of \$44,000 on average.

To manage this we will be using at least 1 full time developer, in addition to a graphic designer, a content manager, and a sales person. The developer is already full time on this project and his efforts are bolstered by one to two interns. Our graphic designer, content managers, and sales people are shared between IntelliWheels' other business sectors.

The budget shown here is only for the Tinker Business sector of IntelliWheels. Therefore, there are no line items for insurance, payroll taxes, office rent, and all the other normal overhead items. All of those items are shared with the other business sectors of IntelliWheels. Overhead items are estimated as a single line item called Overhead Contribution which is calculated as 40% of the salaries involved on this project.

We expect spend a small amount on Marketing since most of our new business will be developed by traveling to trade shows and meeting with our potential partners there. Our hosting costs are minimal, but worth listing in this budget. They are currently \$200 per year for our one partner and will scale accordingly. Lastly, we expect to spend roughly \$3,000 on travel per partner to visit them a few times every year.

If the budget numbers hold true, this business sector can net IntelliWheels 1.2 million per year by the end of year 5.

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