

# Information about Tellspec Inc.

Q&A Confidential

## Company Profile

Basic Information	
Company Name	Tellspec Inc
Contact Name	Isabel Hoffmann (Isabel@tellspec.com)
Company Website	www.tellspec.com
URL 5-minute video	https://www.youtube.com/watch?v=i3a4P7NyJkU

Sector (mark only one)	
x	Big Data
x	Digital Health
x	Mobile Health
x	Bio & Life Sciences
x	BioTech
x	IT - Hardware
x	IT - Software

Other profile questions	
Affiliated university, accelerator and/or incubator, if any:	<b>AZ TechCelerator, Surprise, Arizona; Manchester Univ, UK</b>
Legal form of company? (e.g. C-corp., S-corp., LLC, Partnership)	<b>C-Corp</b>
Intellectual property protection, if any	<b>Patent and name trademark</b>

### Question 1: What is your "Elevator" Introduction?

#### Brief elevator pitch for your company

Tellspec Inc. is digital health company that provides predictive intelligence about food, by combining NIR spectroscopy, bio-informatics techniques & deep learning algorithms in a revolutionary technology that analyzes consumer foods at the molecular level.

Tellspec's mission is to help create a clean food revolution by providing consumers with information about what is really in their food beyond the nutrition label. As the world's first consumer food sensor, Tellspec identifies calories, macronutrients, ingredients and allergens in foods as well as specific nutritional information such as glycemic index. Our three-part system includes a pocket-sized scanner, a cloud-based analysis engine and a mobile app that work together to scan foods, identify ingredients and provide details on what these ingredients.

### Question 2: --Market & Industry Analysis

#### How large is your market? What market segments are you going after and why?

TellSpec's food sensor enables those that who desire weight loss to automatically track their calories and identify food sensitivities by simply scanning their food. TellSpec's food sensor also helps diabetic or pre-diabetic patients to analyze their diet, and in particular count calories and carbohydrates, so they can adjust their insulin doses accordingly. Tellspec app also helps track the total intake of macronutrients and allergens per meal, per day as well as for the month.

#### Is this market growing? How fast?

Global diabetes market is expected to reach \$44.70 billion in 2015, compound annual growth rate (CAGR) of 7.5%. The WHO projects the world's diabetic population: 366 million by 2030. The market for food allergy and intolerance is estimated by Global Industry Analysts to be US\$26.5bn by 2017. This market has grown at 18.5% over the past decade.

#### Who is in the market already? What is the nature of competition – direction, indirect, substitutes?

Several apps target the weight loss industry by offering ways to count calories, some even count macronutrients, but none can detect allergens that a user may react to, because no app can scan, at the molecular level, the actual food. Many medical devices help diabetic people manage their blood sugar ranging from glucose meters to pumps, but none connect this information to the food that the patient eats, so they are not direct competitors but possible collaborators in data integration.

### Question 3: Go-to-Market Plan

#### **Who are your customers? Describe your engagement with them to date.**

Primary customer: diabetic, pre-diabetic, or an allergy sensitive patient. Secondary customer a person that want to lose weight or a person that is following a fitness program and need to track calories, macronutrients and allergens.

On September 3rd, Tellspec is participating in an event for diabetic people, organized by Orange Telecom. The event is called mHealth Grand Tour 2015 <http://www.mhealthtour.com/2015> and it will give riders the chance to cover 1,500 km by bicycle, from Brussels to Geneva via some of the most beautiful parts of France. This Tour brought together around 54 cycling enthusiasts diagnosed with type 1 or type 2 diabetes, fitted with kit from the partners that will enable monitoring of their physical condition and personalized coaching from the Tour's medical team. Tellspec has offered during the tour, our first food sensor which will allow the diabetic riders to analyze their diet, and in particular count calories, carbohydrates, proteins, fats, sugar as well as the glycemic index of each food consumed. After scanning their food and receiving via a mobile app the results, riders can then adjust their insulin dose accordingly, and they can track the total intake of macronutrients per meal, per day as well as for the duration of the ride.

#### **Describe how you win customers today. Describe your future customer acquisition strategy.**

A significant amount of funding to date has been generated from on-line pre-orders. We current pre-sell our food scanners in our site; social media, public speaking & tradeshow appearances methods we currently use. Going forward we plan to: implement a social media strategy partnering with Google digital strategy team, to reach a large qualified audience and create demand; sell product in online sites – Amazon, Alibaba; approach diabetic associations, celiac associations to so they carry our product; partner with large weight control clinics, & fitness organizations; sell product directly to a selected set of large retailers (Best Buy, Apple); El Coret Ingles); partner with wellness and preventive clinics to carry our product; develop partnership with pharmaceutical companies that are already selling medical devices to control blood sugar in order to piggyback on their distribution and as well as to share some of the aggregate data collected.

#### **How will you displace any competitors? How are you better/different than your competitors? What's your channel/partnership strategy, if any?**

Currently we are totally unique in the fact that we detect and track the intake of not just calories and macronutrients but also allergens and potentially toxic by-products of food manufacturing as well as toxic chemicals in the food. We are creating partnerships with the large pharmaceutical groups that are targeting diabetics, with as well as medical associations, clinics, fitness and wellness organizations to create awareness and traction. We have also requests from several universities, hospitals and clinics, (including Mount Sinai NY and Centre for Clinical Investigation at Harvard University ) to collaborate in clinical trials regarding nutrition, obesity and diabetics.

### Question 4: Technical Product Description and Plan

#### **Briefly describe your product.**

We offer a simple method for the consumer to know what is in their food, and the ability to track calories, macronutrients, glycemic index, allergens and other food concerns.

#### **Describe your technology.**

Tellspec's food sensor is a hand-held near-infrared (NIR) spectrometer. Its major components are: a diffraction grating which spreads light into a spectrum, a digital mirror array which selects different parts of the spectrum, and a solid-state infrared detector which measures the intensity of the light at the selected part of the spectrum. The spectrum is then processed by Tellspec's algorithms in the cloud, to produce information about the food scanned. The scanning process involves light being sent out to reflect off of the food being scanned. The grating spreads the returning light into a spectrum so that different wavelengths hit different parts of the digital micromirror device (DMD). Tellspec has a partnership agreement with Texas Instrument to use the TI's DLP projection technology and its optical semiconductor (DMD). One after another, mirrors on the DMD are moved to cause different wavelengths to shine on the detector. The scanner records the intensity of the different wavelengths, and that generates a unique spectrum or fingerprint of the food.

The scanner then sends this fingerprint that it collects to your smartphone and the phone sends it on to Tellspec's servers in the cloud. Tellspec's algorithms, residing in the cloud, do the analysis the spectrum for information about the food, and send the results back to your phone for you to see.

The data from the scanner is first processed to put it into a standard form, called absorbance. This removes some of the variation due to differences in the intensity of the light source and the wavelength-dependent response of the detector. The absorbance spectrum is used for analysis and for training. Our algorithms are based on machine learning, but we also use several bio-informatics techniques. In addition, Tellspec does pre-processing the spectral data in light of known principles of spectroscopy and chemometrics to improve the algorithms' accuracy and speed. The combination of machine learning, bio-informatics techniques and

traditional spectroscopy gives Tellspec the ability to extract nutritional information from a spectrum or from the unique fingerprint of the food scanned.

**Technology Validation. (What evidence can you present that your product works as advertised? Future validation plans?)**

We currently do validation in-house, and have written validations reports for several of our algorithms. We have line-up several universities to work with us to do third party validation studies.

**Describe the remaining product development risks and your plans to overcome them.**

We are still building our food database of scans to improve the accuracy of our detection; the height of our current beta scanner is still going to be reduced by 50%; and not all models for food detection are finalized. We are currently working on all these three issues, and with respect to the hardware, we continue to have the support & collaboration of Texas Instruments and other of our partners.

**Describe your product's advantages (features, for example) for end-users vs. substitute solutions (not just direct competitors).**

The advantage we provide is that our user can detect and track allergens and any other food ingredients such as by-products of food manufacturing or contaminants, which may be of concern to the user's health. We also offer a method to track what foods may cause food sensitivities by offering a the tracking capability on how the user feels after each meal scanned; this can potentially replace expensive and regular allergy tests.

**Describe your company's current intellectual property status and plans for the future.**

We have a pending patent application, and several trade secrets. Patent published: 015-02-05 Publication US20150036138. Our name and logo has been trademarked and this trademark is now registered.

**Discussion of any non-IP barriers to entry for your market.**

Our IP resides on our algorithms & methods for detection. We have patented this aspect and hope to be awarded the patent soon. We have signed manufacturing arrangements with a mass manufacturer in Taiwan and we have over many global expressions of interest for distribution and direct retail. We have signed a letter of Intent with Samsung Electronics, Seoul, Korea for the collaboration in the creation of food scanners embedded into some of Samsung's kitchen appliances with the use of Tellspec detection algorithms and food database. We are also talking to many weight control clinics and gyms to retail our scanners.

**Question 5: Economics**

**Pricing and downstream value analysis. Prove there is a compelling ROI for end-users and partners based on your pricing.**

**Financial model summary**

	2015	2016	2017	2018	2019
Number of Units Sold	120	20,000	150,000	350,000	500,000
Avg. selling price	390	612	518	418	337
Gross margin %		60%	60%	60%	60%
Below in (\$000s)					
Revenues	\$47	\$12,247	\$79,003	\$173,371	\$209,339
EBITDA	\$-2,249	\$-5194	\$2,131	\$33,925	\$48,696
Cash burned / created	\$-2039	\$10,876	\$76,873	\$139,445	\$160,643
Funding required		\$7,934			

**Note – Dollar amounts in the Financial Model Summary above is in thousands.**

**Question 6: Risk vs. Talent Narrative**

**What risks has your team mitigated so far (business-related and technical as it relates to your business)? What are the next few major risk-reduction milestones?**

Mitigated the risk of using different spectrometers from different brands to test algorithms, our algorithms are now "hardware agnostic". Have reduced actual spectrometer size, made portable, wireless and blue-tooth enable. Have built an initial but consistent and accurate food database. Next challenge "temperature" of the sample & sample shape are our next milestone for algorithm deployment. Finally, we intend to build algorithms for volume recognition so the user does not have to enter the actual volume consumed. For this R&D project we are in discussions with several universities for collaboration.

## KEY EMPLOYEES

**Isabel Hoffmann**, CEO, experienced executive leadership, founded eight companies in preventive medicine, genetics, technology, in North America & Europe. Negotiated large strategic investments & raised equity investment & convertible debenture notes. Strategic negotiator on several business acquisitions, including US\$28M acquisition of Corel Multimedia business division. Many awards including E&Y's Entrepreneur of the Year (Canada) MacLean's Honor Role Canadian Business Excellence.

**Jason Vincent**, VP Technology and Operations, since joining Tellspec, I have been working closely with the technology and engineering teams on ensuring milestones are met for the delivery targets, and exploring commercial opportunities in the European territory.

**Dr. Pablo Carbonell**, Chief Scientists, researcher, 16 years in bioinformatics, PhD Computer, ControlEngineering (Polytechnic University of Valencia, 1999), post-doctoral from NYU Polytechnic School of Engineering, where he worked on the development of theoretical models for bio-inspired systems. He has been PI or scientific partner in at least 13 projects.

**Jason Coulls**, VP Software, is a software engineer who has worked in the mobile space since its inception in the late 1990's, having progressed through Palm OS, Blackberry, Windows CE, Windows Mobile, and now iOS. He has worked on many projects for very high profile customers that required the utmost trust, including national government agencies, law enforcement and national banks, his biggest contribution to consumer mobile software comes working on Clear Channel's iHeartRadio product (now called iHeartMedia) supporting over 4+ million users.

**Gail Gannon**, VP Strategy, is a seasoned healthcare industry entrepreneur, well connected to KOLs in private and public sectors. Strong reputation for conducting due diligence and negotiating agreements with entities ranging from start-ups to Fortune 500 companies to global health agencies, e.g. OneWorld Health-PATH, Gates Foundation.

**Mark Bloore**, Senior Software Architect, has over 20+years of experience in software design and development in many areas, from electromagnetic prospecting equipment, distributed computing control, highly-parallel web crawling, to iOS apps.

**Nazanin Samadifard**, Machine Learning Specialist, is an accomplished scientist with extensive knowledge and experience in multidisciplinary research, programming, machine learning, and data analytics. She holds a M.Sc. degree in Physics from the University of Ottawa and M.A.Sc. in Chemical Engineering from the University of Toronto.

## Briefly describe any holes in your leadership team. What are your plans to address any recruiting needs in the next 18 mos.?

We currently are missing team leaders for marketing and sales, business development, operations, senior chemist and human resources. In the next 18months we plan on hiring team leaders for these areas of the business.

## KEY ADVISORS and their contributions to date:

**Dr. Louis Florence** is a Finance faculty member & Director of the Undergraduate Programs, School of Management University of Toronto has extensive business and finance experience. Past President of a software training company, which he founded in 1984 and sold in 1998.

**Larry Wilson**, 32 over years of business experience, former National Board Secretary & President of The American Chamber of Commerce in Canada. Current Trade Commissioner in Canada, for City of Surprise AZ, and in this capacity he initiated Tellspec's relationship with the AZ TechCelerator.

**Simon Mou** a strategic investor currently developing a 37-acres of land, comprising 200 new residential homes in S/W Ontario. Career in finance, held Senior Management positions in corporate finance, lending and retail banking at HSBC subsequent to engaging in several management positions at TD Canada Trust. Former Director of the United Way Blossom Ball, past Senior Director of Toronto Chinese Business Association.