Anatomy Of A Successful Health
Technology Development Business Model

A presentation that demonstrates a business case for offering data-mining service to office-based private small practice physicians using electronic health records (EHRs).

Prepared By

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Health Technology Development Business Model Requirement

A business model informs private investors that your firm has a viable strategy to produce a novel, marketable, problem-solving solution that will help build a profitable company. Moreover, the business model is a significant factor investor consider when deciding to invest in your small firm.

If your business model does not properly answer important questions like what healthcare or medical problem is being solved, how does the proposed solution solve the problem, who are the intended buyers/users, who are the strategic partners, what resources are needed to be successful, what is the company's competitive advantage, how are revenues generated, and costs, then investors will reject the firm's funding request.

This is a special publication that highlights key elements of a health technology development business model that provides answers to potential private investors. In fact, the thirteen-page document demonstrates how to incorporate the necessary business model components, i.e., *customer segments, value proposition, key activities, resources, revenue model, expense (costs) structure, channels (communications), and customer relationships*, into a viable strategy for private sector investment.

In addition, the document illustrates how a small emerging healthcare IT firm successfully combines these business model components to offer a unique Software-as-a-Service (SaaS) solution for health providers. You can use this document as a blueprint to prepare a successful business model strategy for private sector funding.

PatientPoint Healthcare IT

Business Background Information

Company Description

PatientPoint Healthcare IT is a service and software development firm. In particular, the company specializes in helping office-based physician practices incorporate and cost-effectively utilize electronic health records (EHRs) systems.

The company was formed to provide EHR deployment services to small physician practices. Through this experience, the firm's leadership discovered an opportunity to assist physicians on how to benefit from data-mining.

Business Opportunity

With the shift towards value-based reimbursement, the demands of using EHRs, the desire for better patient outcomes, and the necessity to make continual practice management improvements, small physician practices can utilize data-mining to meet these needs.

Service Solution

PatientPoint Healthcare IT's data-mining cloud-based service helps small physician practices analyze operational and patient data contained in their EHRs. More importantly, the service helps to (1) determine precise treatment plans for patients, (2) reduce healthcare delivery service costs, (3) track payments from private and government insurers, and (4) improve overall practice management.

The firm uses a proprietary data-mining software, Info-Health Documents™ , designed to filter through EHR data and detect patterns that will assist physicians with clinical decisions making. It also helps small physician practice owners identify care gaps and recognize operational inefficiencies. Provided through the cloud, it will be offered as a Software-as-a-Service (SaaS).

Product Development & Product Intellectual Property Status

Info-Health Documents™ is at the product prototype development stage. The company filed a provisional patent with the United States Patent and Trademark Office (USPTO) to protect its intellectual property (IP) rights of Info-Health Documents™.

Target Buyers

PatientPoint Healthcare IT offers its data-mining service to office-based, non-hospital owned, small physician practices, with one to five physicians, using a basic EHR system that captures patient history and demographics, patient problem lists, physician clinical notes, comprehensive lists of patients' medications and allergies, computerized orders for prescriptions and laboratory and imaging results.

Market Size

The US Bureau of Labor Statistics indicates that are approximately 230,187 physician practices in the US. Among these physician practices, 52.8% consist of only one office-based physician. Physician practices with 2-5 physicians make up 37.1% of physician offices in the US.

The Global EHR Market is expected to reach $33,294 million by 2023. The Data mining tools market size is expected to reach $1,039.1 Million by 2023, up from $591.2 Million in 2018.

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Market Analysis

Since 2008, office-based physician adoption of an EHR has nearly doubled, from 42% to 87%. Physician specialties with the highest adoption rates are internal medicine / pediatrics (76%), nephrology (75%), family practice (75%) and urology (74%). As of 2017, nearly 9 in 10 (86%) of office-based physicians had adopted any EHR, and nearly 4 in 5 (80%) had adopted a certified EHR

According to a 2015 National Electronic Health Records Survey (NEHRS), 87% of physicians reported using an EHR system and 78% reported using a Certified EHR system.

The Office of the National Coordinator for Health Information Technology (ONC) figures from 2017 show that most physicians – or 64% -- use one of seven major vendors; Epic Systems Corp. and Allscripts lead the way with about 33% of the physicians as customers. Tens of thousands of physicians use EHRs from other vendors, from well-known makers such as Practice Fusion and eMDs to dozens of niche companies that cater to the unique needs of medical specialists or small independent practices.

Data Mining Industry Profile

The data mining tools market size is expected to grow from USD 591.2 Million in 2018 to USD 1,039.1 Million by 2023, at a Compound Annual Growth Rate (CAGR) of 11.9% during the forecast period. The data mining software major players include IBM, RapidMiner, GMDH, Apteco, University of Ljubljana, Salford Systems, SAS Institute, Oracle, Salford Systems and Lexalytics.

EHR Industry Profile

The Global Electronic Health Records Market was valued at $23,592 million in 2016, and is expected to reach $33,294 million by 2023, growing at a CAGR of 5.0% from 2017 to 2023.

The EHR industry is characterized by medium to high level of market share concentration. While many industry operators control a large share of either the ambulatory or inpatient software market, few companies command a large share of the EHR software market across all healthcare providers, overall. There are approximately over one thousand companies offering EHR systems or solutions.

Based on delivery mode, the electronic health record market has been categorized into web-based/cloud-based server, and on-premise. Among these, web-based/ cloud-based server held the largest share in this market, with 50.9% contribution in 2017. This is attributed to its increasing number of benefits that include low licensing and start-up cost, low maintenance and infrastructure requirements, and wider accessibility. In addition, a web-based EHR system provides enhanced productivity and faster and smoother implementation.

Potential Competitors

PatientPoint Healthcare IT competes against a fragment industry of small, medium and large size firms offering EHR and data mining services. Leading data mining software developers include SAS, IBM, Symbrium, Coheris, Expert System, Apteco, Megaputer Intelligence, Mozenda, GMDH, University of Ljubljana, RapidMiner.

Amazon's Comprehend Medical software service is a major, direct competitor. The service aims to help physicians scour unstructured data in EHR and offer insights for better patient treatments.

PatientPoint Healthcare IT

Market Drivers

Data Mining- According to the Global Data Mining Software Market study report, "Strong demand for advanced business intelligence tools, the move towards artificial intelligence and machine learning, technological developments, rising need amid companies to gain valuable intelligence into the data generated from different business processes, the increasing use of cloud-based solutions are expected to drive the growth of the data mining software market."

Electronic Health Records (EHRs)- According Global Insights Report, "Increasing government expenditure and funding for the development of healthcare IT solution for better understanding of diagnosis and treatment pattern will contribute to considerable EHR market growth over projected timeframe. Additionally, rising internet penetration and campaigns conducted to increase awareness about the importance and benefit of EHR among the doctor community will significantly expand the business size. Thus, growing awareness of EHR in hospitals and healthcare settings will accelerate the demand for electronic medical record systems over forthcoming years."

Value Proposition

PatientPoint Healthcare IT's data-mining EHR service helps small physician practices improve patient care, reduce operational costs and produce profits.

Competitive Advantage

The competitive advantage is the company's skilled, experienced personnel with past accomplishments working within the healthcare industry and working successfully with small physician practices to deploy EHR systems. More importantly, the company's customer satisfaction rating is nearly seventy-five percent (75%).

Customer Segment

Target Customer Profile

Type of Business:	Small Physician Practice
Size of Operation:	1 – 5 Physicians
Medical Specialty	Family Medicine, Internal Medicine, Pediatrics & Obstetrics
Ownership Type:	Independently Owned
Owner's Age Range:	50 - 65
Estimated Annual Revenues:	$250,000 - $5 million
Years in Business:	2 - 12 years
Geographical Area(s):	Maine To Florida, United States

Channels

Positioned as a service provider helping physicians transform their EHRs into revenue investments, PatientPoint Healthcare IT's marketing & promotional strategies encompass attending national and state medical association conference trade shows, participating, as industry experts, in workshop forums at national and state annual conferences, direct-mail to small physician practices, person-to-person direct sales, and advertisement in targeted trade national and state medical association publications.

Marketing & Promotion Activities

In order to educate, inform, and communicate with potential customers, the company utilizes a variety of promotional activities. The activities include:

Promotional Activities	Approach
Direct Mail	Educating and informing physicians about the benefits of using data-mining for EHRs.
Guest Speaking	Sharing knowledge and expertise on the use of data-mining EHRs.
Public Relations	Issuing Media Releases regarding new client signings, service developments and industry awards.
Advertisement	Placing ads in targeted physician and Healthcare Information Technology (HIT) trade publications.
Networking Events	Attending and developing contacts at industry conferences.
Conference Exhibits	Hosting a booth and providing information at industry conferences.

Customer Relationships

Since the company's management and staff learned how to establish positive and lasting relationships with past clients, they will use this knowledge to do the same with future customers.   The company's service performance includes:

- Working with the client to identify its proper service level needs.

- Communicating with the client at each of service implementation phases.

- Explaining and illustrating the data-mining service process.

- Following-up with the clients to make sure the service met their satisfaction.

Key Resources

The company identified three things needed to provide the service.   They are:

- An experienced, talented and knowledgeable professional staff.

- Established contacts and relationships with individuals, groups and companies that actively participate in the healthcare industry.

- An established, dependable reputation for providing similar services for the company's targeted clients.

Since the company's management team and professional staff have provided EHR deployment services to physician practices, the company possesses all of the required key resources.

Company Leadership

PatientPoint Healthcare IT is led by seasoned professionals possessing a combined 54 years in the healthcare IT industry. In particular, Robert Dibble, the firm's President & CEO, has been directly involved in the healthcare IT arena for twenty-four years; while the vice-president for operations has fourteen years of direct industry experience and the director of marketing and business development has sixteen years of direct industry experience.

Management Team

Chief Executive Officer & President	Robert Dibble
Vice President of Operations	Jack Sanata
Vice- President Marketing/ Business Development	Tina Jones

Robert Dibble, President & Chief Executive Officer

With twenty years as a professional in the healthcare IT industry, Mr. Dibble founded X to provide innovative software and RFID technology solutions for medical centers. Mr. Dibble earned a B.S. in mechanical engineering and a M.S. in mechanical engineering from the University of Michigan, and a MBA from Ohio State University.

Jack Sanata, Vice-President of Operations

Mr. Sanata, who has a B.S. in accounting and an MBA from Boston College, has held a number of positions with both large and small companies focused on operational budgets and accounting matters. Mr. Sanata served as the Chief Financial Officer for two start-up software firms.

Tina Jones, Vice- President Marketing & Business Development

Starting her professional career in the Public Relations arena, Ms. Jones, over a ten year period, expanded her knowledge, experience and skills to become an expert in both marketing and business development. Ms. Jones possess over 10 years of experience in healthcare sales, 6 of which have been in key leadership and management roles.

Ms. Jones earned a B.A. in English Literature from Fairleigh Dickinson University and an MBA from New York University.

Professional Staff

Chief Technical Officer	Mary Armstrong
Software Engineer	Ben Jetta
Information Technology Specialist	Trisha McDonald

Mary Armstrong, Chief Technical Officer

Ms. Armstrong has 15 years of experience in health care information technology management. She previously worked for a software vendor and a national IT consulting firm. She received a BS and a MS in Computer Science from North Carolina State University and an MBA from Duke University.

Ben Jetta, Software Engineer

He has over 17 years of embedded systems, software, and hardware design and development experience, and has been active in relevant standards working groups. Mr. Jetta holds a BS in Mechanical Engineering from American University.

Trisha McDonald, Information Technology Specialist

Ms. McDonald earned an Associates degree, in Computer Science, from Staten Island Community College, City University of New York and a BS in Computer Science from the University at Albany, State University of New York.

Outside Professional Assistance

PatientPoint Healthcare IT has engaged the services of an attorney and an accountant as professional representatives for legal and financial/tax advice.

Key Partners

State Medical Associations/Societies

The company expects to partner with, when possible, state medical associations/societies located from Maine to Florida. Specifically, the company hopes to offer hosting free online workshops that present information regarding the benefits of using data-mining their electronic health records.

Targeted state medical associations/societies include:

Medical Society of the State of New York, New Hampshire Medical Society, Maine Medical Association, Maryland State Medical Society, Connecticut State Medical Society, Vermont Medical Society, Medical Society of New Jersey, Medical Society of Virginia, Pennsylvania Medical Society, Pennsylvania Medical Society, Massachusetts Medical Society, The North Carolina Medical Society, Medical Society of Delaware, Florida Medical Association, Medical Association of Georgia, and South Carolina Medical Association

Large Electronic Health Record Vendors

The company also anticipates partnering with leading large EHR vendors to provide the data-mining services to their existing clients matching our client profile. In partnering with the large EHR, the company will offer the vendors a percentage of the revenue earned from the service performance.

The targeted large vendors include:

Epic, IBM, Allscripts, MedeAnalytics, McKesson, Truven Health Analytics, Optum, Oracle, Cerner, iHealth Analytics, Verisk Health, Amazing Charts, Aprima (iMedica), CareRevolution, Centricity, eClinicalWorks, e-MDs, EpicCare Ambulatory, MEDENT, Medinformatix, MediNotes, MPM Suite, NextGen HER, PowerChart/PowerWorks, Practice Partner, Praxis, Sage Intergy and SOAPware.

Financials

PatientPoint Healthcare IT currently generates one-hundred per cent (100%) of its revenues from EHR deployment and technical assistance service. The company earned less than one per cent (1%) of revenues from federal new health technology developments grants from the Small Business Innovation Research (SBIR) program.

The company anticipates earning nearly thirty percent (30%) of its future revenues from the EHR data-mining service.

PatientPoint Healthcare IT is seeking $1.3 million in equity financing, from either a business angel, venture capital firm, health system venture fund or a corporate venture capital fund, for a 20% position in the firm. The firm will use buy-back as an exit strategy. The investment funding will be used to hire additional staff, such as a nurse informaticist, and implement the marketing & promotional strategy.

Expense Structure

The company's operating expenses include salaries with benefits, office space, taxes, office equipment, information technology services, travel, promotions, office utilities, and professional services.

Revenue Structure

Revenue Source	Percentage of Annual Revenues
EHR Deployment Consulting Service	100%

EHR Deployment Consulting Service

For the EHR deployment service, which involves installing an electronic health record system, the company uses a fee-for-service pricing structure. The service price depends on what is required to start and complete the assignment. Generally, the company's typical service charges range from $25,000 to 40,000 dollars.

Data-Mining Service Pricing Strategy

PatientPoint Healthcare IT data-mining service pricing model is based on software-as-a-service (SaaS). Small physician practices will pay a monthly subscription fee, which includes software licensing, support and report preparation fees.

History Performance

PatientPoint Healthcare IT generated consistent revenues during the first six years of operation. The company broke even in year three and earned profits in the last three years.

Implementation Process

To measure whether or not the stated assumptions are correct, the implementation process includes the following steps:

1) Identify and meet with 25 -30 potential clients to learn/understand their opinions, interests and knowledge of the proposed EHR data-mining service.

2) Identify and meet with 15- 20 representatives from the targeted state medical associations/societies to discuss their interest and requirements to partner with their organizations.

3) Identify and meet with 20 – 25 representatives from targeted large EHR venders to discuss their interest and requirements to partner with their companies.

4) Build a minimum viable product (prototype) that will be utilized and tested by a group of Early Adopters, e.g. potential clients seeking a need for the proposed product.

5) Collect and analyze the feedback from the four implemented steps and use the information to improve the product and correct the stated assumptions in each section of the business model

PatientPoint Healthcare IT

Partners

(1) The company expects to partner with, when possible, state medical associations/societies located from Maine to Florida.

(2) The company also anticipates partnering with leading large EHR vendors to provide the data-mining services to their existing clients matching our client profile.

Customer Relationships

The company intends to:

- Work with the client to identify its proper service level needs.

- Explain and illustrate the data-mining service process.

- Communicate with the client at each of the service implementation phase.

- Follow-up with the clients.

Resources

The company identified three things needed to deliver the service. They are:

- An experienced, talented and knowledgeable professional staff.

- Established contacts and relationships with individuals, groups and companies that actively participate in the healthcare industry.

Market Size

The market size consists of approximately 230,187 physician practices in the United States; 52.8% are one office-based physician.

The Global EHR Market is expected to reach $33,294 million by 2023.

The Data mining tools market size is expected to reach $1,039.1 Million by 2023, up from $591.2 Million in 2018.

Company Description

PatientPoint Healthcare IT is a service and software development firm. In particular, the company specializes in helping office-based physician practices incorporate and cost-effectively utilize electronic health records.

Customer Segment

Office-based physician practices: non-hospital owned, primary care physician practice, with one or five physicians, using a basic EHR system that captures patient history and demographics, patient problem lists, physician clinical notes, comprehensive lists of patients' medications and allergies, computerized orders for prescriptions and laboratory and imaging results.

Value Proposition

The company's data-mining EHR technology solution and service helps physician practices improve patient care, reduce operational costs and produce profits.

Revenue Stream

Currently the company generates one-hundred per cent (100%) of its revenues from EHR deployment and technical assistance service. The data-mining service pricing model is based on software-as-a-service (SaaS). Small physician practices will pay a monthly subscription fee, which includes software licensing, support and report preparation fees.

Cost Structure

The company's operating expenses include salaries with benefits, office space, taxes, office equipment, information technology services, travel, promotions, office utilities, and professional services.

About Eighteen Ventures

Eighteen Ventures (EV) is a small business development advisory firm providing consulting and fundraising services to health technology entrepreneurs, startups, and small emerging firms nationwide. In particular, we offer our clients pertinent services, i.e., business development, business model development and Small Business Innovation Research (SBIR) Phase I proposal, that help them build successful businesses with a novel health technology or medical device concept.

We also help our clients secure new health technology development funding from Small Business Innovation Research (SBIR) programs, i.e., National Institutes of Health (NIH) and National Science Foundation (NSF),   Venture Capital Firms, Health System Venture Funds, Healthcare Corporate Venture Capital Firms and Pharmaceutical Venture Funds.

Business Model Development

A service designed to help you establish a practical business case for your proposed health technology concept, document a significant growth opportunity and attract private or public sector growth capital. Specifically, we work with you to research and prepare a business model that demonstrates how your company plans to derive value, such as attract potential buyers, generate revenues, gain market share and earn profits, from your proposed original health technology solution.

Business Model Review Service

To help health technology startups and small emerging firms gain private investor funding, Eighteen Ventures' Business Model Review Service analyzes the strengths and weaknesses of their business strategy.   In particular, the review process ensures that the business model includes the necessary information & data which informs investors about the company's intentions of growing a successful business with a novel, problem-solving, marketable solution.

The review process, more importantly, identifies ways to improve each component, i.e., customer segment, value proposition, revenue structure, etc., resulting in a persuasive document that attracts the interest and attention of potential private investors.

Contact Mr. Darrell Williams, Darrell@eighteenventures.com or (305) 322-2443, to learn more about our consulting services.