
Ravi Ganesan
CEO
Core Solutions, Inc.
Outline

• Lessons from History
• Healthcare Today
• The Subscription Economy
• Digital Transformation Strategy
• Q&A
Lessons From History
Looking back before we look forward
History of Industrial Revolutions

1.0 – Mechanical (1784)
2.0 – Electrical (1870)
3.0 – Internet (1969)
4.0 – Data

Empowering Corporations
Empowering Individuals

Copyright (c) Core Solutions, Inc.
“Scalability and growth are critical for survival and success”
“Change is happening faster than any other time in history”
“Great nations (and great companies) rise and fall because of human decisions, not anonymous social or economic forces.”
“We do not learn from history and the consequences of this failure are tragic.”
Behavioral Healthcare Today
Industry Consolidation In Progress

- **Fragmentation**
  - Revenue > $320b
  - Organizations > 30,000

- **Shakeout**
- **Maturity**
  - Revenue > $450b
  - Organizations > 10,000

- **Decline**

Timeline:
- 7-10 years

Sales Volume vs. Time
98% of BH Providers Have Revenues < $5M (Data.com)

<table>
<thead>
<tr>
<th>Revenue Range</th>
<th>Number of Providers</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; $5M</td>
<td>316787</td>
</tr>
<tr>
<td>$5 - $10M</td>
<td>1774</td>
</tr>
<tr>
<td>$10 - $100M</td>
<td>1822</td>
</tr>
<tr>
<td>$100-$250M</td>
<td>70</td>
</tr>
<tr>
<td>$250M+</td>
<td>27</td>
</tr>
</tbody>
</table>

- **Residential Intellectual and Developmental Disability, Mental Health, and Substance Abuse Facilities**
- **Individual and Family Services**
- **Vocational Rehabilitation Services**
- **Offices of Mental Health Practitioners (except Physicians)**
- **Outpatient Mental Health and Substance Abuse Centers**
Over 5,500 Hospitals Provide Healthcare Services In The U.S

- Number of Hospital Units of Institutions: 0
- Number of Nonfederal Long Term Care Hospitals: 79
- Number of Nonfederal Psychiatric Hospitals: 401
- Number of Federal Government Hospitals: 212
- Number of State and Local Government Community Hospitals: 983
- Number of Investor-Owned (For-Profit) Community Hospitals: 1,034
- Number of Nongovernment Not-for-Profit Community Hospitals: 2,845

http://www.aha.org/research/rc/stat-studies/fast-facts.shtml#community
Over 5M Professionals Provide Healthcare Services In The U.S

- Primary Care Physicians: 65%
- Specialist Physicians: 16%
- Registered Nurse (RN): 10%
- Licensed Practical Nurse (LPN): 9%

https://www.kff.org/other/state-indicator/total-active-physicians/

Over 957,000 Professionals Provide Behavioral Health Clinical Services In The U.S

- Clinical and counseling psychologists: 29%
- Mental health and substance abuse social workers: 16%
- Mental health counselors: 14%
- Substance abuse counselors: 12%
- Psychiatrists: 9%
- Marriage and family therapists: 4%
- Educational, vocational and school counselors: 13%
- Rehabilitation counselors: 3%

https://psychcentral.com/lib/mental-health-professionals-us-statistics/
Growth Strategies For The Next Decade

Growth Through Acquisitions

Growth Through Innovation
Key Healthcare Trends
Value Based Purchasing Is Real

• What this means?
  • Provider payments tied to outcomes instead of encounters
  • Being proactive with services
  • Keeping consumers healthy at-home and out of emergency rooms
Value Based Purchasing


<table>
<thead>
<tr>
<th>Year</th>
<th>MH Spending</th>
<th>Out-of-Pocket</th>
<th>Private Insurance</th>
<th>Other Private</th>
<th>Medicare</th>
<th>Medicaid</th>
<th>Other Federal</th>
<th>Other State and Local</th>
</tr>
</thead>
<tbody>
<tr>
<td>1986</td>
<td>$32 Billion</td>
<td>18%</td>
<td>20%</td>
<td>5%</td>
<td>17%</td>
<td>6%</td>
<td>5%</td>
<td>27%</td>
</tr>
<tr>
<td>2009</td>
<td>$147 Billion</td>
<td>11%</td>
<td>26%</td>
<td>13%</td>
<td>27%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>2014</td>
<td>$179 Billion</td>
<td>10%</td>
<td>26%</td>
<td>14%</td>
<td>29%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>2020</td>
<td>$238 Billion</td>
<td>10%</td>
<td>25%</td>
<td>15%</td>
<td>30%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
</tr>
</tbody>
</table>

Note: Bar segments less than 5 percent are not labeled.

Source: SAMHSA Spending Estimates.
The Secret of Success for Independent and Thriving Hospitals?

<table>
<thead>
<tr>
<th></th>
<th>Total Hospitals</th>
<th>Median Operating Margin</th>
<th>Discharges</th>
<th>Medicare Mix</th>
<th>Medicaid Mix</th>
<th>Private Mix</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>IDN Hospitals</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3,683</td>
<td>-0.3%</td>
<td>4,675</td>
<td>39.4%</td>
<td>6.7%</td>
<td>50.7%</td>
</tr>
<tr>
<td><strong>Independent Hospitals</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1,399</td>
<td>-5.0%</td>
<td>792</td>
<td>50.8%</td>
<td>5.9%</td>
<td>37.8%</td>
</tr>
<tr>
<td>Total OM&gt;-%4</td>
<td>143</td>
<td>8.5%</td>
<td>1,662</td>
<td>41.1%</td>
<td>6.0%</td>
<td>50.4%</td>
</tr>
<tr>
<td>Non-Profit</td>
<td>639</td>
<td>-3.2%</td>
<td>1,344</td>
<td>48.8%</td>
<td>6.0%</td>
<td>40.1%</td>
</tr>
<tr>
<td>Non-Profit OM&gt;-%4</td>
<td>67</td>
<td>-7.2%</td>
<td>2,722</td>
<td>46.2%</td>
<td>7.2%</td>
<td>42.3%</td>
</tr>
<tr>
<td>For-Profit</td>
<td>135</td>
<td>-0.3%</td>
<td>966</td>
<td>40.1%</td>
<td>3.6%</td>
<td>56.0%</td>
</tr>
<tr>
<td>For-Profit OM&gt;-%4</td>
<td>56</td>
<td>25.9%</td>
<td>1,228</td>
<td>37.6%</td>
<td>2.5%</td>
<td>60.9%</td>
</tr>
<tr>
<td>Govt</td>
<td>626</td>
<td>-8.8%</td>
<td>503</td>
<td>56.5%</td>
<td>6.0%</td>
<td>33.4%</td>
</tr>
<tr>
<td>Govt OM&gt;-%4</td>
<td>30</td>
<td>6.7%</td>
<td>1,545</td>
<td>49.1%</td>
<td>7.5%</td>
<td>41.1%</td>
</tr>
</tbody>
</table>

*Median of 2011-2015 Operating Margins (OM=Operating Margin)

Source: Definitive Healthcare

https://blog.definitivehc.com/the-secret-of-success-for-independent-and-thriving-hospitals
Birth Of The Healthcare Consumer

- Consumer Choice
- Consumer Engagement
- Consumer Experience
“Health inequalities and the social determinants of health are not a footnote to the determinants of health. They are the main issue.”

Michael Marmot
### Social Determinants of Health

<table>
<thead>
<tr>
<th>Economic Stability</th>
<th>Neighborhood and Physical Environment</th>
<th>Education</th>
<th>Food</th>
<th>Community and Social Context</th>
<th>Health Care System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employment</td>
<td>Housing</td>
<td>Literacy</td>
<td>Hunger</td>
<td>Social integration</td>
<td>Health coverage</td>
</tr>
<tr>
<td>Income</td>
<td>Transportation</td>
<td>Language</td>
<td>Access to healthy options</td>
<td>Support systems</td>
<td>Provider availability</td>
</tr>
<tr>
<td>Expenses</td>
<td>Safety</td>
<td>Early childhood education</td>
<td>Social integration</td>
<td>Community engagement</td>
<td>Provider linguistic and cultural competency</td>
</tr>
<tr>
<td>Debt</td>
<td>Parks</td>
<td>Vocational training</td>
<td>Support systems</td>
<td>Discrimination</td>
<td>Quality of care</td>
</tr>
<tr>
<td>Medical bills</td>
<td>Playgrounds</td>
<td>Higher education</td>
<td>Community engagement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Support</td>
<td>Walkability</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Health Outcomes**
- Mortality, Morbidity, Life Expectancy, Health Care Expenditures, Health Status, Functional Limitations
Five Things We Know About (Social) Determinants of Health in Health Care

• As a determinant of health, medical care is insufficient for ensuring better health outcomes.
• SDoH Are Influenced by Policies and Programs, and Associated with Better Health Outcomes.
• New Payment Models Are Prompting Interest in the SDoH.
• Frameworks for Integrating SDoH Are Emerging.
• Experiments Are Occurring at the Local and Federal Level.

https://nam.edu/social-determinants-of-health-101-for-health-care-five-plus-five/
The Subscription Economy
At the heart of the Subscription Economy® is the idea that customers are happier subscribing to the outcomes they want, when they want them, rather than purchasing a product with the burden of ownership.

Tien Tzuo, Zuora
Subscription Economy By The Numbers

• The subscription e-commerce market has grown by more than 100% percent a year over the past five years, with the largest retailers generating more than $2.6B in sales in 2016, up from $57.0M in 2011.

• E-commerce subscribers are most likely to be 25 to 44 years old, to have incomes from $50,000 to $100,000, and live in urban environments in the Northeastern U.S.

General Categories

E-commerce subscriptions generally fall into one of three categories.

<table>
<thead>
<tr>
<th>E-commerce subscriptions, %</th>
<th>Key consumer value</th>
<th>Description</th>
<th>Example companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subscribe for replenishment</td>
<td>32</td>
<td>Save time and money</td>
<td>Replenish the same or similar items</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Primary categories are commodity items such as razors, vitamins</td>
<td></td>
</tr>
<tr>
<td>Subscribe for curation</td>
<td>55</td>
<td>Be surprised by product variety</td>
<td>Receive a curated selection of different items, with varying levels of consumer decision making required</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Primary categories are apparel, food, beauty products</td>
<td></td>
</tr>
<tr>
<td>Subscribe for access</td>
<td>13</td>
<td>Gain exclusive access</td>
<td>Membership provides access and can convey additional “VIP” perks</td>
</tr>
</tbody>
</table>

Source: McKinsey analysis
Top 10 sites with highest number of current subscribers by gender

Women

<table>
<thead>
<tr>
<th>Rank</th>
<th>Women</th>
<th>Overall</th>
<th>Men</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Amazon Subscribe &amp; Save</td>
<td>1 Amazon Subscribe &amp; Save</td>
<td>Dollar Shave Club</td>
</tr>
<tr>
<td>2</td>
<td>Dollar Shave Club</td>
<td>2 Dollar Shave Club</td>
<td>Amazon Subscribe &amp; Save</td>
</tr>
<tr>
<td>3</td>
<td>Ipsy</td>
<td>3 Ipsy</td>
<td>Harry’s</td>
</tr>
<tr>
<td>4</td>
<td>Birchbox</td>
<td>4 Blue Apron</td>
<td>Blue Apron</td>
</tr>
<tr>
<td>5</td>
<td>Sephora Play!</td>
<td>5 Birchbox</td>
<td>BarkBox</td>
</tr>
<tr>
<td>6</td>
<td>JustFab</td>
<td>6 Sephora Play!</td>
<td>Loot Crate</td>
</tr>
<tr>
<td>7</td>
<td>Blue Apron</td>
<td>7 Harry’s</td>
<td>Birchbox</td>
</tr>
<tr>
<td>8</td>
<td>BarkBox</td>
<td>8 BarkBox</td>
<td>HelloFresh</td>
</tr>
<tr>
<td>9</td>
<td>StitchFix</td>
<td>9 JustFab</td>
<td>Home Chef</td>
</tr>
<tr>
<td>10</td>
<td>AdoreMe/ShoeDazzle</td>
<td>10 HelloFresh</td>
<td>Instacart</td>
</tr>
</tbody>
</table>

Source: McKinsey analysis
How Peloton is Marketing a $2,000 Bike Beyond the Rich

• Initial business model
  • $1,995 stationary bike with an attached tablet and a $39-a-month subscription service for access to live and on-demand classes.

• New Model
  • Immersive, indoor cycling experience
  • $97 per month for 39 months for both the bike and subscription service
  • Partnering with Westin Hotels & Resorts to get its bikes and classes in front of more of its target audience, as well as expanding its showroom footprint across the country.

• Results:
  • $170 million in revenue in 2016, up from $60 million in revenue in 2015
Is Healthcare Ready For A Subscription Model?
WE'RE RESTORING HUMANITY TO HEALTH CARE

We believe in primary care that puts people first. Because when we can connect on an individual level, we can impact the entire health care landscape.

EXPLORE OUR STORIES
IORA Health – Business Model

- Venture funded – Raised over $200M in funding; 25+ locations
- Team approach – Provider, Nurse, Health coach
- Health Coach servers as the primary liaison with the client
- Fully integrated behavioral health
- Technology powered
- No transaction fees – Flat fee between $60-$200
Qliance Story

- Founded in 2007 with over $30M in venture investments
- Financial model: Membership fees ($54-$89/month), no insurance
- Unlimited primary care services
- Growth – Over 25,000 members, including Medicaid members
- Customers – Corporate, Unions, Individuals
- Company closed doors in June 2017
Qliance – Lessons Learned

• “Cash is king,” particularly in health care

• Having the right leadership at the right time matters.

• Even with perfect leadership and funding, DPC is a round peg in the square hole of health care.

• More on the changing nature of primary care

https://stateofreform.com/featured/2017/05/lessons-qliance-closing-doors/
Direct Primary Care

• Direct Primary Care (DPC) is an innovative alternative payment model improving access to high functioning healthcare with a simple, flat, affordable membership fee. No fee-for-service payments. No third party billing. The defining element of DPC is an enduring and trusting relationship between a patient and his or her primary care provider.

https://www.dpcare.org
Laws generally define DPC as a medical service outside of state insurance regulation, offer varying levels of consumer protection.

- MT Bill vetoed by governor in 2017. MA has no laws at present.
- OR law needs updates
- PA, MD, WI, GA, SC legislation introduced.
<table>
<thead>
<tr>
<th></th>
<th>FAMILY PRACTICE</th>
<th>DIRECT PRIMARY CARE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical professionals practicing</td>
<td>79,831</td>
<td>1,000</td>
</tr>
<tr>
<td>Patients per doctor</td>
<td>As many as 2,367, according to some estimates</td>
<td>500 – 1,000</td>
</tr>
<tr>
<td>Cost per visit</td>
<td>Depends on insurance plan</td>
<td>Free with monthly membership – often about $50</td>
</tr>
<tr>
<td>How long a visit is</td>
<td>13-16 minutes</td>
<td>30 – 60 minutes</td>
</tr>
<tr>
<td>How doctors get paid</td>
<td>Salary – about $207,000</td>
<td>Paid with monthly membership fees</td>
</tr>
<tr>
<td>Can you use insurance?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Cost of blood tests</td>
<td>Depends on insurance plan, typically billed after the fact</td>
<td>Wholesale price, often included as part of exam for free</td>
</tr>
<tr>
<td>Cost of prescription drugs</td>
<td>Copay amount</td>
<td>Wholesale price plus 10%</td>
</tr>
</tbody>
</table>
support and care, at the right time. Coaches are available to chat anytime, at a moment’s notice—whether it’s the middle of the night, a weekend or a holiday.

**Around-the-clock Coaching**

Coaches can help you achieve personal goals or just be there when you need someone to talk to—day or night.

**Convenient Therapy & Psychiatry**

Expert, licensed therapists and psychiatrists are available for video sessions.

**Personalized Self-care**

Coaches will share self-care Guides to help you achieve your goals and support you every step of the way.

[DOWNLOAD NOW]
Simple, affordable **pricing**

Ginger.io offers a free, initial consultation with a coach. After your first consultation, you can subscribe for ongoing support.

<table>
<thead>
<tr>
<th>Service</th>
<th>Price</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ginger Care</td>
<td>$129</td>
<td>Unlimited, 24/7 chat support from your coach</td>
</tr>
<tr>
<td>Therapy + Ginger Care</td>
<td>$249</td>
<td>Two video sessions a month with your therapist</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Unlimited, 24/7 chat support from your coach</td>
</tr>
<tr>
<td>Psychiatry + Ginger Care</td>
<td>$349</td>
<td>Two video sessions a month with your psychiatrist</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Unlimited, 24/7 chat support from your coach</td>
</tr>
</tbody>
</table>
Become your strongest self
A mobile app with programs that provide effective, affordable support for emotional well-being.

CUSTOMIZE YOUR PLAN
Your Customized Plan

TRACK
Anxiety

PACING
4 sessions/week

COACH
Bob Z

Bob Z is the coach for you, because of your realistic and practical style of motivation and their exploratory, and counseling style of support.

ABOUT BOB Z

Hi, Bob here!
Subscribe now to start your first session

$49/MONTH

Account Information

PREFERRED NAME
Your name or nickname

DATE OF BIRTH
MM   DD   YYYY

GENDER
MALE   FEMALE   SPECIFY+

PERSONAL EMAIL
jane@janedoe.com

PASSWORD
6+ characters

Payment Information

NAME
Name on card

Secure Server

What you get with your $49/month subscription:

UNLIMITED SUPPORT
Message your coach anytime—day or night.

ON-THE-GO CBT TECHNIQUES
Complete skill-building sessions on your mobile device.

GUARANTEED RESULTS
Research and our users say Lantern works. We're confident it'll work for you too.

OR YOUR MONEY BACK
If you're ever unsatisfied with Lantern, you'll get your money back—guaranteed.
How To Complete Against Well Funded Competitors
3 Things People Get Wrong About David vs. Goliath

1. Goliath can't see.
2. Goliath is powerless.
3. David is deadly.

Strategies To Complete

• Identify your “secret sauce”
• Reconstruct market boundaries
• Embrace a “digital first” strategy
• Develop strong partnerships

Copyright (c) Core Solutions, Inc.
Digital Transformation
Reimagine and Reset Your Organization For A Digital World
Digital Transformation

*Digital transformation is the profound and accelerating transformation of business activities, processes, competencies and models to fully leverage the changes and opportunities of digital technologies and their impact across society in a strategic and prioritized way, with present and future shifts in mind.*
Digital is the main reason just over half of the companies on the Fortune 500 have disappeared since the year 2000

Pierre Nanterme
CEO of Accenture
Figure 1: Most Face Digital Market Disruptions

Percentage rating how susceptible their organization is to market disruption in the next three years from a new competitor based on their use of insight, data, or analytics.

(Scale of 1-10)

- 29% Extremely Susceptible (8-10)
- 43% Moderately Susceptible (5-7)
- 27% Not at All Susceptible (1-4)
- 1% Don't Know

60%+ of Healthcare Organizations Expect Their Business To Be Disrupted By Digital Technology
Create a compelling vision that will allow everyone to reimagine your organization as a technology focused, data driven startup.

**TACTICS**
- Cloud Infrastructure
- Data Systems
- Mobility
- Tele Health
- Data Analytics
- IoT

**Customer Experience**
- Help customers to get to their desired outcomes
- Digitize end to end customer experience
- Provide better, faster, cost effective customer experience
Overview of Digital Healthcare
Importance Of Healthy Margins
Growth Strategies For Services Organizations

Current

Growth Through M&A

Profitability Through Cost Reduction

COST

PROFIT

COST

PROFIT

COST

PROFIT
Profitability Margins Across Industries

<table>
<thead>
<tr>
<th>Name</th>
<th>Net Profit Margin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accounting, Tax Preparation, Bookkeeping, and Payroll Services</td>
<td>19.6%</td>
</tr>
<tr>
<td>Lessors of Real Estate</td>
<td>16.0%</td>
</tr>
<tr>
<td>Automotive Equipment Rental and Leasing</td>
<td>15.8%</td>
</tr>
<tr>
<td>Offices of Dentists</td>
<td>15.4%</td>
</tr>
<tr>
<td>Legal Services</td>
<td>15.4%</td>
</tr>
<tr>
<td>Offices of Other Health Practitioners</td>
<td>13.7%</td>
</tr>
<tr>
<td>Offices of Real Estate Agents and Brokers</td>
<td>13.4%</td>
</tr>
<tr>
<td>Office Administrative Services</td>
<td>12.9%</td>
</tr>
<tr>
<td>Offices of Physicians</td>
<td>12.8%</td>
</tr>
<tr>
<td>Activities Related to Real Estate</td>
<td>12.1%</td>
</tr>
<tr>
<td>Commercial and Industrial Machinery and Equipment Rental and Leasing</td>
<td>11.9%</td>
</tr>
<tr>
<td>Specialized Design Services</td>
<td>10.7%</td>
</tr>
<tr>
<td>Management, Scientific, and Technical Consulting Services</td>
<td>10.7%</td>
</tr>
<tr>
<td>Electronic and Precision Equipment Repair and Maintenance</td>
<td>10.4%</td>
</tr>
<tr>
<td>Coating, Engraving, Heat Treating, and Allied Activities</td>
<td>10.3%</td>
</tr>
</tbody>
</table>

*Time Frame: 12 Months Ended August 27, 2013

https://www.sageworksanalyst.com/p
Financial Performance - All Industries

SALES GROWTH | LAST 5 YEARS

NET PROFIT MARGIN | LAST 5 YEARS

DEBT TO EBITDA | LAST 5 YEARS

NET PROFIT GROWTH | LAST 5 YEARS

Copyright (c) Core Solutions, Inc.

https://www.sageworksanalyst.com/
Health Care and Social Assistance
# Financial Ratios At NFP Hospitals

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintained bed occupancy</td>
<td>64.3%</td>
</tr>
<tr>
<td>Operating margin</td>
<td>3.4%</td>
</tr>
<tr>
<td>Excess margin</td>
<td>6.1%</td>
</tr>
<tr>
<td>Operating cash flow margin</td>
<td>10.3%</td>
</tr>
<tr>
<td>Three-year operating revenue CAGR</td>
<td>5.8%</td>
</tr>
<tr>
<td>Three-year operating expense CAGR</td>
<td>5.5%</td>
</tr>
<tr>
<td>Days cash on hand</td>
<td>211.8 days</td>
</tr>
<tr>
<td>Annual operating revenue growth rate</td>
<td>7.5%</td>
</tr>
<tr>
<td>Annual operating expense growth rate</td>
<td>6.6%</td>
</tr>
<tr>
<td>Current ratio</td>
<td>2.0x</td>
</tr>
<tr>
<td>Debt-to-cash flow</td>
<td>2.7x</td>
</tr>
<tr>
<td>Capital spending ratio</td>
<td>1.1x</td>
</tr>
<tr>
<td>Accounts receivable</td>
<td>48.4 days</td>
</tr>
</tbody>
</table>

Importance Of Productizing Your Service
Embedding Products Into Services

Discover Potential Products

Developing Scalable Technology Driven Products

Profitable Revenue Model
Discover Potential Products

• Define a market segment i.e., MAT, Autism etc.
• What aspects of the client experience can be automated?
• Case Study – EXL
  • EXL is a operations management and analytics company that helps businesses enhance revenue growth and improve profitability.
  • Original Process: EXL employees would examine medical claims for incorrect coding, subrogation, payment errors, nonbeneficial services, and other causes of overpayment.
  • Developed a tool to scan, analyze and score claims thereby eliminating a lot of the manual work.
  • Result – Increased efficiency and reduced costs for processing claims
Developing Scale

• Developing scale starts with thinking big.
• Integrate technology across the board
  • Technology to automate all client interactions – registration, scheduling, requests
  • Integrate tele health into the mix
• Spend time in developing a unique experience and identity
## Innovation Dashboard

### BIDMC IS Strategic Plan 2.0 | August 2018
(July 2017 – December 2018)

<table>
<thead>
<tr>
<th>#</th>
<th>Line</th>
<th>Project Description</th>
<th>Reference</th>
<th>FY '17 Q4</th>
<th>FY '18 Q1</th>
<th>FY '18 Q2</th>
<th>FY '18 Q3</th>
<th>FY '19 Q1</th>
<th>FY '19 Q2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>-</td>
<td>Managing Complex Inpatient Population</td>
<td>CD-400</td>
<td>Infrastructure</td>
<td>✔ Rollout</td>
<td>✔ Phase 3 Implementation</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>Inpatient Physician Consult Orders</td>
<td>CD-400</td>
<td>Infrastructure</td>
<td>✔ Rollout</td>
<td>✔ Phase 3 Implementation</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>Predict discharge date using Machine Learning</td>
<td>CR-59</td>
<td>Explore Feasibility</td>
<td>✔ Proof of Concept</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>Teletracking to support inpatient throughput</td>
<td>VS-295</td>
<td>Teletracking Eval</td>
<td>✔ Implementation Support</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>Patient Progression 2.0 (Pride and Joy Software)</td>
<td>VS-306</td>
<td>Rollout in 4 units</td>
<td>✔ Pilot</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>6</td>
<td>-</td>
<td>OR Optimization</td>
<td>CD-506</td>
<td>Validate</td>
<td>✔ Develop</td>
<td>✔ Pilot Prep</td>
<td>✔ Pilot</td>
<td>✔ Rollout</td>
<td>✔</td>
</tr>
<tr>
<td>7</td>
<td>7</td>
<td>Identify Current Flow using Machine Learning</td>
<td>CD-700</td>
<td>Explore</td>
<td>✔ Throttle</td>
<td>✔ Develop</td>
<td>✔ Pilot</td>
<td>✔ Rollout</td>
<td>✔</td>
</tr>
<tr>
<td>8</td>
<td>8</td>
<td>Use Machine Learning for OR block allocation to enhance OR utilization and aid in the leveling of inpatient census</td>
<td>CR-60</td>
<td>Develop Model</td>
<td>✔ Run Scenarios</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>9</td>
<td>9</td>
<td>OR Dashboard &amp; PIH enhancements</td>
<td>CR-61</td>
<td>Planning</td>
<td>✔ Phase I</td>
<td>✔ Phase II</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>10</td>
<td>10</td>
<td>Periop Patient Tracking using Beacons</td>
<td>CR-71</td>
<td>Design</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>11</td>
<td>-</td>
<td>Transfer Center</td>
<td>CR-92</td>
<td>PM</td>
<td>✔ Phase 2</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>12</td>
<td>12</td>
<td>Advanced reporting framework for Transfer Center</td>
<td>CD-701</td>
<td>Phase 1</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>13</td>
<td>13</td>
<td>Support facility upgrade</td>
<td>VS-273</td>
<td>Workstation Install</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>14</td>
<td>14</td>
<td>Teletracking to support transfer center</td>
<td>VS-295</td>
<td>Teletracking Eval</td>
<td>✔ Implementation Support</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
</tr>
</tbody>
</table>
“We develop a six-quarter plan continuously, rather than having fixed yearly plans, because the current pace of innovation requires agility,” said John Halamka, MD, CIO at Beth Israel Deaconess System. “Our approach is to determine business requirements from stakeholders – our 30-member governance committee – then survey emerging technologies, then suggest project tracks that explore novel technologies to support operational priorities.”
Innovation

Opportunities

• EHR/EHR Plus
• Telehealth
• Mobile Apps
• AI/Internet of Things

Criteria

• Regulatory
• Safety
• Patient outcomes
• Patient experience
• Productivity
• Revenue impact,
• Reach
Summary

- Healthcare is changing rapidly
- Digital strategy can be a valuable tool to cope with this change
- The decisions we make today will determine the ultimate future of your organization
- Start small...but let’s start today!
Thank You