The health technology leader’s agenda for the next decade

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How much change have we seen over the past decade?

What change might the new decade bring?

How can we best prepare for this change?
Change over the past decade: the impact of tech

**Consumers**
Smart phone penetration

- 2011: 20%
- 2021: 85%

**Enterprises**
Data created annually (Zettabytes)

- 2010: 2 Zettabytes
- 2020: 59 Zettabytes

**Industries**
Airbnb market capitalization ($)

- 2010: 70M
- 2020: 85B

Source: Pew Research; IDC; Company financials
Change over the past decade: in healthcare

**Consumers**

Health wearable adoption
Units shipped, Millions

<table>
<thead>
<tr>
<th>Year</th>
<th>Units Shipped</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>&lt;1</td>
</tr>
<tr>
<td>2020</td>
<td>&gt;150</td>
</tr>
</tbody>
</table>

25% of US population

**Enterprises**

EHR adoption among hospitals

<table>
<thead>
<tr>
<th>Year</th>
<th>Adoption Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>16%</td>
</tr>
<tr>
<td>2020</td>
<td>&gt;95%</td>
</tr>
</tbody>
</table>

**Industries**

US national health expenditure

<table>
<thead>
<tr>
<th>Year</th>
<th>Expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>~3 Trillion</td>
</tr>
<tr>
<td>2020</td>
<td>~4 Trillion</td>
</tr>
</tbody>
</table>

Change in life expectancy at birth: ~0%

Source: National Center for Health Statistics; KFF.org; CDC;
What has driven these changes?

- **Shifting customer expectations**: set through experience with digital natives
- **Enabling regulation**: new laws, cost pressures, political factors
- **Tech advances**: as catalysts for change (e.g., processing, cloud, AI, automation)
- **Competition & innovation**: new & non-traditional competitors, business model innovation
- **Traditional industries**
Tech advances have driven the most important shifts; the financial markets reflect this.

Technology companies dominate the stock market
Share of total market cap, %

8/10 of the largest corporations globally now are tech firms

Source: S&P; Bloomberg; company financial reports
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The next decade: a new industrial revolution is underway

Global economic development has always been driven by technology-driven revolutions (GDP per capita, indexed to 1 in 1000 AD)

Source: Maddison Project database; OECD; UBS Asset Mgmt.
The next decade: some technologies likely to drive 10x shifts

1. **Automation**
   - >50% of today’s work activities could be automated by 2030

2. **Connectivity**
   - Up to 80% of global population will have 5G coverage by 2030 to enable pervasive IoT

3. **Edge infrastructure**
   - >75% of enterprise generated data will be processed at edge

4. **Computing**
   - 2030: Year by which Google expects to have a 1 million qubit Quantum Computer

5. **Applied AI**
   - >75% of all digital service touch points (e.g. voice assistants) will have embedded AI

6. **Future of work**
   - ~30x reduction in the workforce required for software development and analytics

7. **Trust architectures**
   - >10% of global GDP could be associated with blockchain by 2030

8. **Biotech**
   - 45x reduction in cost to sequence the human genome in the last 10 years

Source: McKinsey research
The next decade in healthcare: the opportunity is massive

Ratio of support staff to core staff is US services industries

- Healthcare delivery: 48% support, 52% core, ratio 3.6
- Legal services: 56% support, 44% core, ratio 1.9
- Education: 42% support, 58% core, ratio 1.1
- Securities and commodities: 13% support, 87% core, ratio 0.8

Source: Bureau of labor statistics (2017-18); McKinsey analysis
Elements of a 2030 healthcare vision: The consumer view

Intelligent orchestration, enabled by 360° understanding of patients

Engaging with and through a patient’s family, community, and social networks

Enabling Life-Health integration

Remote and continuous monitoring (e.g., after acute care episodes, for chronic conditions)

Higher acuity care in traditional settings (e.g., procedures, intensive care)

Financial assistance for high-value therapies
Elements of a 2030 healthcare vision:
The health system view

- Physical assets
- Digital assets
- Workforce
- Business models

Consumers

Care providers

Pervasive AI

Intelligent operations
Care management & decision support
Orchestration, concierge
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Building blocks of a readiness plan

Core Technology
- Scalable infrastructure
- Fluid data
- AI factory
- Connectivity
- Security

Talent
- Translators
- Engineering
- Product
- Design
- AI

Operating Model
- Multi-disciplinary teams
- Agile, distributed
- Digital fluency
- Funding models
- Partnerships

Value Orientation
- Care outcomes
- Consumer experience
- Staff experience
- New business models
- Growth & efficiency
What is on the CIO agenda today?

**Focus of most transformations over next 2 – 3 years¹**

- Digitizing of end-user experience: 37%
- Scaling data and analytics: 36%
- Enhancing IT architecture: 31%
- Modernizing infrastructure: 30%
- Transforming cybersecurity practices: 26%
- Redesigning tech org: 23%
- Redesigning the IT operating model: 22%
- Changing IT’s delivery model: 17%
- Transforming talent strategy: 15%
- Transforming vendor management: 12%

Source: McKinsey global survey on IT and the business 2020

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Over half of the organizations that have made large scale and purposeful investments in technology transformations see positive impact.
What else should be on the agenda?

**No-regret moves**

- Set a long term aspiration
- Invest in the building blocks
- Build digital talent and fluency
- Mind the data
- Learn to form productive partnerships

**Big, bold bets**

- Products, not projects
- Automation in everything
- AI factories, not AI pilots
- Core business, not back office
- Engineering, not IT support, culture
Questions?

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