How are disruptive technologies redefining industries and business?

Technologies which are unlocking massive market opportunity

- **The internet of things** is massive in terms of data and continues to grow exponentially. These connected devices are becoming intelligent things.
- **Robotics** is enabling enhanced dexterity, intelligence and sensors. Robots are changing the limitations of what humans can do, including people with impaired mobility.
- **The next wave of artificial intelligence** is designed to simulate how a human brain learns, reasons, understands and makes a decision that results in an action.
- **Computational power** growth, in the next five years is creating unprecedented improvements in data processing power.

Business benefits

- Embracing new technologies could lead to:
  - **Productivity** gains
  - **Cost** efficiencies
  - Faster **innovation** cycles
  - Increased **customer** value
  - **Competitive** advantage

Innovation value metrics

- Top ranking metrics include:
  - Number of **patents**
  - **Revenue** growth
  - **Brand/reputation** barometer
  - Market **share**
  - Market **value**

Innovation is a critical differentiator to gain market leadership as competition increases to develop the next leading generation of products and services to add economic value.
Barriers to technology innovation and emerging technologies commercialization

Top issues that constrain tech innovation
• Platform consolidation: challenging to compete with the innovation driven by platform companies
• Ability to demonstrate ROI: in some scenarios new KPIs need to be developed to measure the emerging technologies ROI
• Access to capital: start-ups competition for VC funding and reallocation of resources in Global Fortune 500 companies

Barriers to commercialization
• Technology complexity: abundance of emerging technologies and integration with legacy technologies (at home and at work)
• Funding: not enough access to capital due to competing go-to-market priorities
• Risk management: increasing compliance standards and risk mitigation
• Cybersecurity: lack of innovation in building cybersecurity into processes, products and services is a competitive threat

Boardroom Questions

1. What emerging technologies may disrupt our business and industry in the next 36 months? What are the opportunities and challenges resulting from these new technologies?
2. How are new technologies impacting our customers, suppliers and partners? What are the business implications?
3. How is management and the board proactively assessing technologies that will enable new business models and signal the end of business-as-usual for market leaders? What actions can the board and management team implement to take advantage of these tech disruptors?
4. What is the organizational structure, expertise and process required to understand the scope of change driven by emerging technologies?
5. Is our business strategy and operating model enabling the organization to drive new opportunities resulting from new technologies? Do we have the expertise and agility to take advantage of these technologies?
6. Are we fostering a culture of innovation? Are we enabling experimentation? Do we have the right incentives?
7. Are we prioritizing investments in the people, partnerships and resources to capitalize on opportunities driven by tech innovation?

What actions could the Board consider?

1. Revisit the business strategy often to understand how emerging technologies are impacting partners, customers and suppliers and their value propositions. Assess opportunities and challenges
2. Prioritize the adoption of new technologies that will enable the organization to capitalize on the greatest economic value
3. Rethink the business model to harness these new technologies and the ecosystems around them to gain competitive advantage
4. Develop a strategy that enables the organization to be ready for the accelerating pace of technology disruption
5. Reconsider capital allocation to optimize innovation funding. Revisit the M&A strategy
6. Align resources to capitalize on the value of adopting these technologies: talent, partners, funding, incentives
7. Assess if change management is necessary to create a culture that embraces innovation
8. Review the business plan and consider a digital transformation strategy: people, process, technology

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