Have you audited your organization’s innovation process?

Kendra MacDonald
Partner, Atlantic Innovation and Risk Advisory
Living in an exponential world

Emergence of new models for customer & channel value

Steady Stream of “Core” Capabilities Progressing Linearly

Exponential Trend

Linear Trend
The disruptive nature of exponential growth

30 linear steps

About 30 yards...

30 exponential steps

(i.e. \(1 + 2 + 4 + 8 + 16 + 32 \ldots\))

... 26 times around the earth
What does exponential change look like?

1983

2015

3D Robotics
What does exponential change look like?

1983

Nintendo

2015

Microsoft HoloLens
Recently disrupted industries: Travel agents
Shopify
9 years to a billion

Spotify
6 years to a billion

AirBnB
4 years

Oculus
just over a year

Slack
just over a year

UBER
+2 years
What do we mean by disruption?

“A process by which a product or service takes root initially in simple applications at the bottom of a market and then relentlessly moves up market, eventually displacing established competitors.”

Clayton Christensen, Author - Innovator’s Dilemma.
The change enablers

- Advanced Robotics
- Artificial Intelligence
- Networks and sensors
- Advanced Manufacturing
- Blockchain
- Collaborative Platforms
- Mixed realities
- Energy
- Advanced Robotics
Artificial intelligence is displacing human workers in professional practices
Meet Amelia, the AI software that understands, learns and communicates like a human.

She works 24/7 in 20 languages and is about to revolutionize businesses across the world.
True virtual / Augmented reality is nearly upon us, and it will revolutionize the way we live, work, play and learn
“Talking about virtual reality is like dancing about Architecture”

September, 2012

Forecasted sales of 12 Million VR headsets in 2016
200 Million units to be sold by 2020 (Fortune.com)

July, 2014

$2 BILLION

Like
Go to "Insert" tab in Ribbon to insert Header & Footer
Lens

Lens is a multi-device, smartglass solution that provides field service workers hands-free access to contextual, real-time information.

EPSON Moverio + Google Glass + THALMICLABS Myo
Networks and sensors enable companies to deliver a level of customization never before possible.
The Industrial Internet brings together brilliant machines, advanced analytics and people to eliminate any unplanned downtime.
Advances in robotics are changing human labour
Meet Tally: the world's first fully autonomous shelf auditing & analytics solution
Collaborative connected platforms are allowing firms to access expertise outside their organizations.
### How crowdsourcing enables disruption

<table>
<thead>
<tr>
<th>Knowledge &amp; Expertise</th>
<th>Ideation &amp; Creativity</th>
<th>Labour &amp; Process</th>
<th>Technology &amp; Data Science</th>
</tr>
</thead>
<tbody>
<tr>
<td>10EQS</td>
<td>XPRIZE</td>
<td>Lionbridge</td>
<td>[TopCoder]</td>
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<td>Wikistrat</td>
<td>INNOCENTIVE</td>
<td>Gigwalk</td>
<td>Crowd ANALYTIX</td>
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<td>CrowdMed</td>
<td>eYeka</td>
<td>fiverr®</td>
<td>kaggle®</td>
</tr>
</tbody>
</table>
The Greatest Crowdfunding Campaign of All Time
$15,000,000,000
Additive manufacturing radically reduce material, energy, and capital cost of complex structure manufacturing.
Advanced manufacturing is disrupting across industries
What are the implications of 3D printing on your supply chain?
"By 2025, everybody will be able to produce and store power. And it will be green and as expensive or even cheaper than buying power from utilities"
Price history of silicon PV cells in $ per watt

Source: Bloomberg, New Energy Finance & PV.Energytrend.com
The impact of electric cars has a material impact on parking.
Decentralized ledgers are changing the way value is transferred and how trust is established.
Blockchain – What it is and why is it important?

Centralized

Decentralized
• Secure
• Transparent
• Instantaneous
• Shared
• Immutable

More than $1B in YTD Investment

Personal Computer
Internet
Blockchain

1970s
1990s
2010s

$2M
$95M
$362M
$482M

2012
2013
2014
2015
What does this mean for internal audit?
Internal Audit at a crossroads
Deloitte’s Global Chief Audit Executive Survey
www.deloitte.com/globalCAEsurvey

CAEs recognize the need for change.

Internal Audit needs more impact and influence.

Gaps in skills must be addressed.

Use of alternative resourcing models will expand.

Analytics presents major opportunities.

Dynamic reporting is poised to increase.

Advisory services will expand.

Innovation is important too.

Reviews of strategic planning and risk management will increase.

Stable Internal Audit budgets may present challenges.
**Understand the nature of disruptive exponential forces and its impact on the market; Appreciate the urgency to innovate**

**Executive alignment** around impact to business and business issue(s) to focus on; **Identify exponentials to explore further** based on business issue

**Pilot and key learnings** for select opportunities; **engagement of external ecosystem**

**Roadmap for broad roll out** of successful opportunities; **implementation** of roadmap

**Innovation is a process**

**CALL TO ACTION**

**ISSUE & FOCUS**

**MOBILIZE**

**VALIDATION**

**EXECUTION**

**EDUCATE**

**DEEP-DIVE**

**PLAN TO SCALE**
Building for sustainable breakthroughs

Innovation Ambition matrix

MARKETS & CUSTOMERS

PRODUCTS & ASSETS

70%

20%

10%

TRANSFORMATIONAL

ADJACENT

CORE
Successful innovators innovate across multiple types of innovation

Once you know this, it’s much easier to conceive breakthrough innovations.
Successful innovators build an innovation capability to realize their ambition

**APPROACH**
1. Innovation strategy
2. Pipeline and portfolio management
3. Process

**ORGANIZATION**
4. Senior leadership
5. Governance
6. Collaboration

**RESOURCES & COMPETENCIES**
7. Funding
8. Talent management
9. Innovation tools

**METRICS & INCENTIVES**
10. Financial and nonfinancial rewards
11. Innovation metrics
12. External attraction
The SUPER SEVEN

Sadie
Sensor
Chameleon
Connector
Kayla
Kreator
Daiya
Designer
Brave
Nouveau
Marcus
Mentor
Baden
Big Builder
Staying current on new disruptive technologies requires active Ecosystem Management.

Engaging an innovation ecosystem
The structure

Every gate is a check point for “Gatekeepers” to decide if teams advance to the next stage or sent back to ideations.
By now you should be asking yourself

- Is my organization experimenting with **exponential technologies**?
- Does my organization have an **innovation objective**?
- Is the innovation objective **supported by and reported to senior management**?
- How has the organization **defined success for the innovation portfolio**?
- What is the **team structure** for the innovation team?
- How are **resources allocated** to “innovation” projects?
- Is **disruption** part of the **strategic risk discussion** for the organization?
- How can I leverage the **10 types of innovation** for the **internal audit function**?
An innovation program is a key strategic initiative of an organization and internal audit should contribute to the innovation conversation!
First, learn more about exponentials

Here are a few starting points:

**Explore**
- Watch Salim Ismail on YouTube
- Watch Peter Diamandis TED
- Visit Exponentials.xyz
- DU Exponentials Whitepaper
- Weekly EXO Deloitte newsletter

**Go deep**
- BOLD book by Peter D
- Exponential Organization by Salim Ismail
- Canada’s Age of Disruption Report
- Attend a SU event
- Doblin’s 10Type book
Kendra MacDonald
Atlantic Innovation & Risk Advisory Leader
758-5141
Kendmacdonald@deloitte.ca
@kendmacdonald

Learn more at:
www.exponentials.xyz