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AI CHANGING THE ICT LANDSCAPE

A Business Perspective for CXOs

AN AVALON PERSPECTIVE

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INTRODUCTION : THE AI DISRUPTION IN ICT

What was thought to be an innovative experiment in the Tech-space for past few decades or so, now had emerged as an enabler and disruptor - stronger than ever before. Yes, we are talking about Artificial Intelligence (AI), the new salt to every food. We are at an era where a technological breakthrough is reshaping the world of humans starting from day-to-day activity, extending its arms till revolutionizing industrial operations, irrespective of its nature of businesses. And it goes without saying that the Tech industries are the pioneers and the first ones in the queue to witness the transformation.

The Information and Communication (ICT) industry is at the centre of one of the most profound technological breakthroughs of modern times. It's an industry which adapted itself continually with the technological advancements, upgraded its operations, kept on absorbing new ideas and turned into innovations to meet the evolving market demand. ICT giants like IBM, Microsoft, Google, Amazon made multi-billion-dollar investments in AI, integrating AI across cloud infra, AI-enabled software development, 5G networks, cyber security solutions – with one key objective of positioning themselves ahead of the curve and encouraging a healthy competition to grow.

ICT firms and telecom service providers are harnessing the power of AI to drive complex activities such as predictive modelling, digital solutioning, cloud computing, augmentation of operations, automation of service and customer support etc. with optimum efficiency and tangible savings on costs. A prominent market research firm Gartner predicted that by 2030, AI-driven automations would deliver around $3.5 Trillion savings globally. Another report published by a top-tier consulting firm McKinsey suggests that near about 80% of ICT firms have accelerated AI adoption post-pandemic to improve service automation, cybersecurity, and customer support.

As AI is reshaping the global landscape, it's not a question for the ICT industry on whether to adapt, innovate, lead or risk being outpaced by AI-native competitors. The trend has already been set and becoming stronger everyday – the corroboration from the seemingly obvious would be to embrace the AI and stay relevant! To understand the context better, let's take Microsoft's example – where, they invested $10 Billion in OpenAI in 2023, integrating AI across its Azure cloud, Office suite, and cybersecurity solutions. Thinking of the result?

01

$1.5 billion

in additional revenue from AI-integrated Azure services only



02

45%

faster processing times in cloud-based AI workloads, giving them an edge over competitor offerings



03

30%

Increase in employee productivity with AI-powered Copilot tools in Microsoft 365



To put it in simple terms, the investments made in AI technology directly drove business growth, efficiency, and competitive advantage

In this article, Avalon Consulting is presenting a concise on the disrupter's narrative, investment perspective, and an indicative roadmap ahead for AI technology in ICT industry.



AI'S ROLE IN TRANSFORMING ICT BUSINESS MODELS

As indicated, ICT industry has always been at the forefront of innovation, however, proliferation of AI-enabled solutions is accelerating a paradigm shift in how businesses should operate, monetize and engage with their customers.

Now it is not just about achieving efficiency – but being sustainably efficient with consistent profitability. For the ICT firms, the question of "if" has been replaced by "how fast" they can leverage AI to stay competitive.

AI has the major influence in ICT space, predominantly in three areas:

AI-DRIVEN MONETIZATION STRATEGIES

The introduction of AI-powered services/solutions has created entirely new revenue streams for ICT firms, transforming their offerings from just being a standard software and infrastructure sales to an AI-powered insights, automation, and managed services.

> *"The shift from subscription-based services to AI-powered managed services is allowing ICT firms to unlock recurring revenue, increase customer retention, and differentiate themselves in the market"*

Cisco's AI-powered network management:

- AI-powered Intent-based Networking (IBN) has reduced downtime for enterprises by 90%, enabling Cisco to charge a premium for AI-driven networking solutions
- Cisco now offers AI-powered networking solutions that use predictive analytics to detect and resolve network anomalies before they become critical issues
- By integrating AI into its Webex platform, Cisco has increased customer adoption by 47%, particularly among enterprises seeking intelligent collaboration tools

IBM's AI-as-a- Service model:

- IBM's Watson AI platform has transitioned from a software licensing model to a "Pay-as-you-use" AI-driven analytics model, creating a $3 billion revenue stream
- IBM now offers AI-powered cybersecurity services, charging enterprises subscription fees for automated AI threat detection

AI-DRIVEN COST OPTIMIZATION & OPERATIONAL EFFICIENCY

AI is reducing costs and improving operational efficiency across ICT sub-sectors, allowing firms to scale while maintaining profitability and leaner cost structures, managing risks.

> *"AI is enabling ICT firms to slash operational costs, improve service uptime, and reallocate workforce resources more efficiently, leading to higher profitability and sustainable growth"*

AT&T's AI-driven predictive maintenance in Telecom:

- AI-powered automation in network infrastructure maintenance has allowed AT&T to reduce network downtime by 40% and cut annual operational costs by $2 billion
- AI detects signal anomalies and predicts hardware failures, reducing reliance on manual troubleshooting and improving service uptime

Vodafone's AI chatbots & customer service automation:

- Vodafone's AI chatbot "TOBi" handles over 50% of customer interactions, reducing service costs by 30% while increasing customer satisfaction by 22%
- AI-driven support bots have allowed Vodafone to reduce human customer service agents by 25%, shifting workforce resources to higher-value roles like AI training and system management

AI-DRIVEN CUSTOMER EXPERIENCE (CX) & PERSONALIZATION

With AI-driven personalization, ICT companies can anticipate customer needs, automate troubleshooting, and optimize the service delivery – boosting customer satisfaction and revenue.

> *"AI-driven customer interaction tools, automated troubleshooting, and hyper-personalized services are becoming key differentiators for ICT firms looking to improve customer retention and satisfaction"*

Microsoft's AI-Powered Customer Support:

- Microsoft uses AI-driven automation in Azure Customer Support, reducing resolution time by 50%
- AI chatbots have handled more than 1 billion customer queries, significantly reducing manual intervention

Google Cloud's AI-Enhanced User Experience:

- Google's AI-powered predictive cloud resource allocation enables 40% more efficient server usage, reducing costs for enterprise customers
- AI personalization in Google Cloud services has increased enterprise retention rates by 30

MAJOR SECTORS BENEFITING FROM AI

The largest beneficiaries of AI adoption are cloud computing, cybersecurity, telecom networking, and software development, where AI-driven automation is improving scalability, reducing operational costs, and enhancing service delivery.

The rapid pace of AI integration into these core ICT segments is reshaping business models, enabling predictive analytics, intelligent automation, and real-time decision-making. Below, we explore how AI is delivering a disproportionate impact in these ICT domains with data-backed insights and real-world examples:

Cloud computing – AI-optimized infrastructure & cost reduction

The Cloud computing sector is being transformed by storage optimization, automated workload distribution, and energy efficiency, making cloud services run faster, cheaper, and more sustainably.

01	02	03
AI-powered workload management is helping cloud providers distribute computing power more efficiently, reducing idle server time by 50% (McKinsey, 2023)	AI-driven data compression algorithms are reducing cloud storage costs by 30-40%, improving cloud performance and cost-effectiveness for enterprises	AI optimizes cooling and energy management in cloud data centres, cutting power consumption by up to 40% (Gartner, 2024)

Cybersecurity – AI-Driven Threat Detection & Response (TDR)

AI-powered security solutions are reducing attack mitigation time, improving threat intelligence, and enhancing data protection. With cyberattacks growing more sophisticated, AI-driven cybersecurity solutions are no longer optional but essential for protecting the infrastructure and enterprise data.

01	02	03
AI-driven Threat Detection and Response (TDR) reduces incident response times by 95%, enabling real-time attack prevention	AI security solutions have helped banks and enterprises avoid $30 billion in cyber losses in 2024 alone (Gartner, 2024)	AI-powered fraud detection has reduced financial fraud cases by 80%, leveraging real-time behavioural analytics

Telecom & networking – AI for 5G optimization & predictive maintenance

AI is revolutionizing telecom networks, particularly in 5G network planning and deployment, predictive maintenance, and autonomous network management. AI is transforming into the upcoming backbone of next-gen telecom networks with a significant potential of improving efficiency, uptime, and cost-effectiveness for service providers.

01	02	03
AI-powered 5G network optimization has reduced telecom infrastructure costs by 25%, improving latency and connectivity	AI in predictive maintenance helps telecom companies identify network failures before they occur, reducing downtime by 40%	AI-driven self-healing networks are allowing telecom providers to automate network diagnostics and repairs, improving reliability

Software development – AI for code automation & faster rollouts

Lastly, AI is revolutionizing software engineering, reducing development time, improving software quality, testing prototype effectively, and accelerating product releases. AI-powered software development tools are enabling the ICT firms to bring innovations to market faster, in a better quality and with a cheaper rate.

01	02	03
AI-assisted code generation tools reduce software rollout time by 40% (Deloitte, 2024), enabling faster innovation	AI-driven bug detection and debugging reduces software defects by 70%, ensuring more reliable applications	AI-powered DevOps automation speeds up CI/CD pipelines, allowing 30% faster software deployment cycles

Cloud computing firms investing in AI-driven optimization will see massive cost reductions and efficiency gains



Cybersecurity firms must adopt AI-powered threat detection to mitigate cyber risks in real-time



Telecom providers using AI for 5G and predictive maintenance will reduce downtime and improve customer experience



AI-powered software development will cut coding time, improve software reliability, and accelerate product launches





THE INVESTMENT BOOM – WHERE ICT FIRMS ARE BETTING BIG ON AI

Artificial Intelligence (AI) is driving record-breaking investments in the ICT sector, as companies race to integrate AI-powered solutions into various sectors. Especially after global pandemic, AI funding in ICT has skyrocketed, reflecting its growing influence on the business.

According to IDC (2024), global AI investments in ICT have reached $500 billion, with an expected surge to over $1.59 trillion by 2030. Major players including Google, Microsoft, Amazon, Huawei, Cisco, and IBM are leading this investment wave, acquiring AI startups, expanding R&D budgets, and integrating AI across their core services.

Here are some key investment trends from the past four years:

2020-2021: The AI Acceleration Phase

- The COVID-19 pandemic forced ICT firms to scale up automation to reduce reliance on human interventions and manual processes
- AI-powered cloud services grew by 42%, as enterprises increased reliance on cloud architecture
- AI in cybersecurity investments jumped 67% due to the need to restrict cyber theft and data security

2022-2023: The AI Acceleration Phase

- $10 billion investment by Microsoft into OpenAI to integrate AI into Azure and Microsoft 365
- Google's $300 million stake in Anthropic AI, positioning itself as a leader in enterprise AI solutions
- IBM's AI-driven cybersecurity platform "QRadar Suite" gained traction

2024: AI in Every ICT Business Model

- AI spending in cloud computing surpassed $80 billion, with AI-powered data centres cutting operational costs by 35% (Gartner, 2024)
- AI-powered 5G network automation investments hit $65 billion, reducing telecom infrastructure costs by 30%
- AI-driven ICT cybersecurity spending crossed $100 billion, making AI-powered threat detection a must-have for enterprises

But all these are just tip of the iceberg – while the majority of investments are yet to realize in the upcoming decades. The tech firms are expected to continue aggressive AI investments over 2025-2030, focusing on automation, predictive analytics, and AI-powered networking where ICT investments are expected to exceed $1.59 trillion by 2030.

AI'S FUTURE POTENTIAL IN THE ICT DOMAIN



By 2030, AI will be the defining force shaping the ICT industry, driving innovations. AI-powered cloud automation will optimize workload distribution, reducing costs by 40%, while AI-driven cybersecurity is expected to mitigate 95% of cyber threats in real time, saving enterprises billions in financial losses. In telecom, AI will revolutionize 5G networks, cutting operational costs by 30% through predictive maintenance and automated network management. AI in software development will slash coding time by 50%, enabling faster rollouts and reducing software defects nearly by 70%.

Additionally, AI's deep integration into business operations will unlock new revenue streams worth over $500 billion. As global AI investment in ICT surpasses The Trillion mark by 2030, CXOs must prioritize AI-driven business transformation in this AI-first economy.

Avalon's Framework

An AI-driven transformation at an organization level needs strategic planning, risk assessment and performance tracking to ensure a long-term relevance of the firm. On the other hand, it is essential to scope out AI's business potential, scalability and expected ROI.

Hence, from a CXO standpoint, it is imperative to assess the firms AI-readiness and impact potential. To help CXOs assess the same with a structured approach, we are introducing a comprehensive framework to manage the task realistically, and without diving into complexities:

Our Framework for ICT Readiness & Execution in AI (F.I.R.E.) evaluates six crucial parameters, categorized under four segments or categories:

Category	Parameter	Description
AI capability foundation	Infrastructure	Foundational capabilities such as cloud infra, tools and platforms etc.
	Talent and human capital	Existing talent pool and ability to build and evolve AI-capable teams and skills
AI investment & commitment	Budget allocation	Financial commitments to AI
	ROI and business impact	Measurable benefits such as time, effort and cost efficiency, revenue growth etc.
AI adoption and integration	Scalability and integration	Breadth and depth of AI usage across functions and platforms
Governance, Risk, Ethics	Regulatory and ethical compliance	Adherence to governance protocols, ethical guideline, risk mitigation etc.

Each of the category as well as parameter within it are assigned to **different weightages** based on practical observations and our internal expertise. Moreover, individual parameters are allocated with distinct**, mutually exclusive anchor points** as per respective scores:

Category	Category wt.	Parameter	Parameter wt.
AI capability foundation	**30%**	Infrastructure	50%
		Talent and human capital	50%
AI investment & commitment	**30%**	Budget allocation	70%
		ROI and business impact	30%
AI adoption and integration	**25%**	Scalability and integration	100%
Governance, Risk, Ethics	**15%**	Regulatory and ethical compliance	100%

Anchor points defined as per Scores

Parameter	Score 1 (low)	Score 3 (Medium)	Score 9 (High)
Infrastructure and readiness	▪ No dedicated infra; dependent on vendors	▪ Partial usage of internal AI tools, early-stage cloud integration	▪ Scalable cloud infra, full-stack AI platform
Talent and human capital	▪ <10% of workforce AI-aware; no structured training	▪ 10–30% of workforce trained or transitioning to AI roles; some AI hiring or training in place	▪ >30% AI-trained workforce; active upskilling; dedicated AI teams embedded in business units
Budget allocation	▪ <5% of tech/R&D budget allocated to AI; no AI-focused investments or acquisitions	▪ 5–15% budget allocated; one-off AI pilots or vendor-led experiments	▪ >15% of R&D budget; multi-year AI programs; strategic investments or acquisitions in AI startups
ROI and business impact	▪ No measurable outcomes from AI; siloed pilots; no impact on revenue/cost	▪ some savings or minor revenue impact; limited to specific functions or business units	▪ Significant impact on margins, cost reduction, and topline growth
Scalability and integration	▪ AI usage limited to POCs; no cross-departmental usage; not embedded in core systems	▪ Functional-level adoption in a few departments; integration underway only in select processes	▪ Enterprise-wide deployment; AI embedded in products, networks, cloud ops, cybersecurity
Regulatory and ethical compliance	▪ No AI governance implemented	▪ Some awareness and compliance practices in place; governance under development	▪ Formal AI governance policies; ethics reviews; continual compliance audit

Anchors are kept open-ended intentionally for the CXOs to customize as per their business specific needs – however, scoring as per relatedness to reality must be done restrictively, eliminating bias and over-optimism.

Hypothetically, if an ICT firm achieves the following scores using the **FIRE-AI framework**, the following deductions can be made:

Category	Parameter	Category wt.	Parameter wt.	Score	Wt. score	Category Score
AI capability foundation	Infrastructure	30%	50%	3	1.50	0.90
	Talent and human capital		50%	3	1.50	
AI investment & commitment	Budget allocation	30%	70%	9	6.30	1.98
	ROI and business impact		30%	1	0.30	
AI adoption and integration	Scalability and integration	25%	100%	1	1.00	0.25
Governance, Risk, Ethics	Regulatory and ethical compliance	15%	100%	3	3.00	0.45

A total score of 3.58 which can be represented as follows:



From the FIRE-AI score, some high-level observations are as follows:

1. The firm is entering into a transition zone where the firm has expressed a strong urge to adapt AI capabilities into its operations which can be reflected from the budgetary allocation – clearly, the firm is running with an AI-adoption strategy

2. This firm is AI-aware and gradually working its way towards building scalable infra while ensuring to upskill its human capital

3. Although, at the current stage an over-optimistic expectation on revenue growth or savings would be demoralising and forceful, but a diligent effort and consistency will bear even higher returns

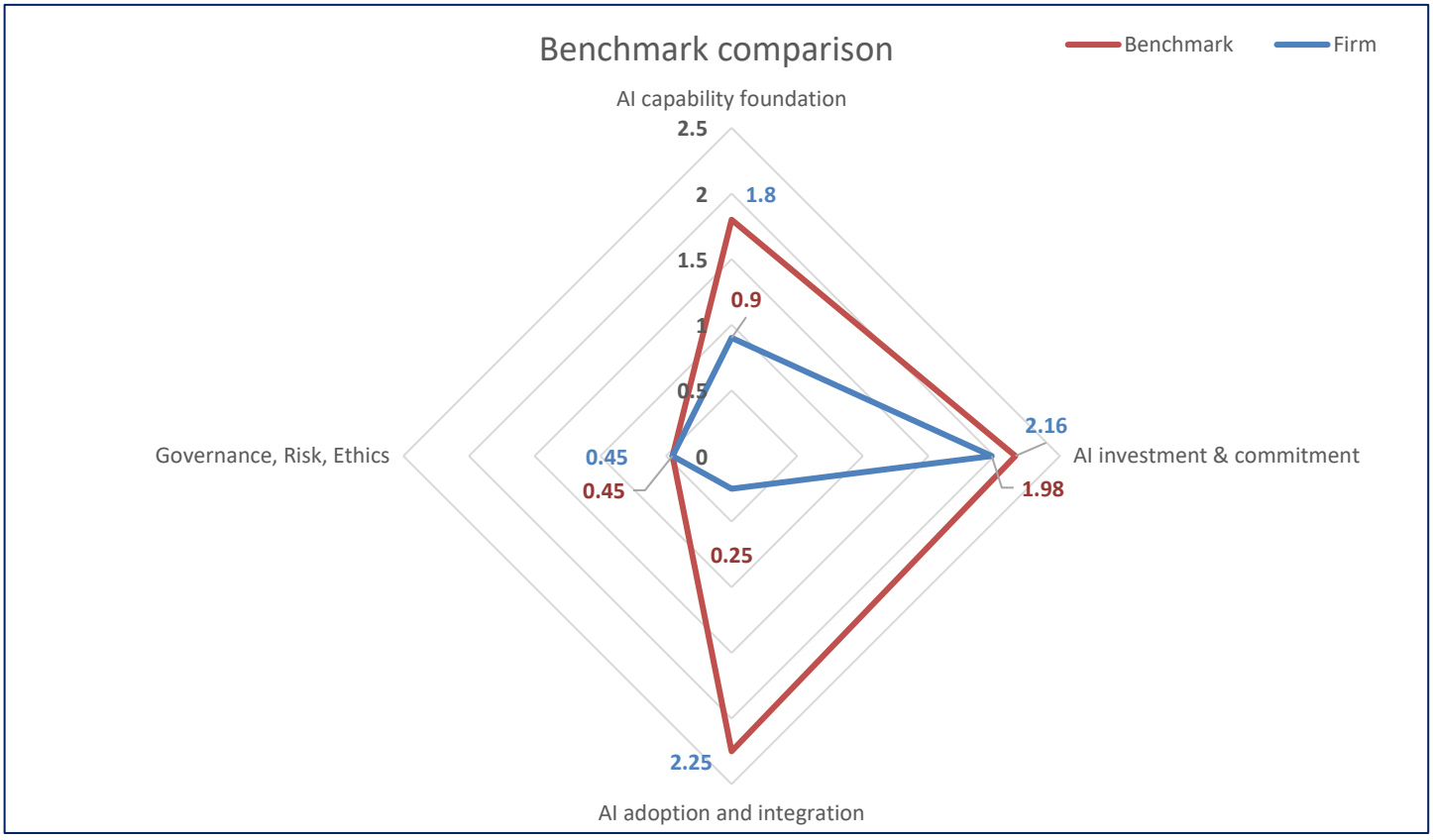
4. As the firm navigates through its AI journey, it must prepare itself for a wider adoption of AI-powered solutions in its core system and must focus on establishing AI-governance at place so that future roadblocks can be identified, acknowledged, mitigated/avoided

This framework insights can also be used to get a bird's eye view on the industry benchmark of AI readiness vs. firm's AI readiness:

Hypothetically, if the industry benchmark is as follows:

Category	Parameter	Category wt.	Parameter wt.	Score	Wt. score	Category Score
AI capability foundation	Infrastructure	30%	50%	9	4.50	1.80
	Talent and human capital		50%	3	1.50	
AI investment & commitment	Budget allocation	30%	70%	9	6.30	2.16
	ROI and business impact		30%	3	0.90	
AI adoption and integration	Scalability and integration	25%	100%	9	9.00	2.25
Governance, Risk, Ethics	Regulatory and ethical compliance	15%	100%	3	3.00	0.45

A total benchmark score of **6.66**



A This comparative view will help the firm understand the parameters for which it is lagging behind the industry benchmark and the ones where it's making up to the pace. Thus, it acts as a starting point of the decision-making journey for CXOs.

CONCLUSION

The next decade will be defined by AI-driven transformation in the ICT sector, reshaping business models, revenue streams, and operational efficiencies at an unprecedented scale. To remain competitive, CXOs must prioritize AI investments, integrating AI into core ICT functions, workforce upskilling, security frameworks, and new revenue models.

AI-driven subscription services, predictive analytics, and autonomous IT management will soon become industry standards, not optional upgrades. Companies that fail to act now will face rising operational inefficiencies, cybersecurity vulnerabilities, and market irrelevance.

AI is no longer just a tool – it is the foundation of future ICT business growth and innovation. The firms that invest strategically, automate intelligently, and innovate fearlessly will dominate the AI-powered ICT economy for years to come.





Our Values - The Avalon EDGE

E ENTREPRENUERSHIP
Enterprising ownership to transform ideas into pragmatic and profitable solutions

D DEDICATION TO EXCELLENCE
Commitment to premier quality and highest standards in everything we do

G GREAT VALUE CREATION
Focus on delivering maximum client impact through innovation and collaboration

E ETHICAL APPROACH
Respect, fairness, and transparency in all our interactions

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