Disruptive Technologies: Redefining the Business and its Functional Models

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- Leader for PwC [PricewaterhouseCoopers] Consulting business in West and East Africa spanning 12 Countries.

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Agenda

1. Definition, history and examples of disruptive technology
2. Experts view of the future
3. Examples of companies that have disrupted their industries – global and Nigeria
4. Automata Associates’ disruptive solutions currently in the market place
5. Case Study – Jobs4Moi
Definitions.

- A **disruptive technology** is one that **displaces an established technology** and shakes up the industry or a ground-breaking product that **creates a completely new industry**.

  [www.whatis.com](http://www.whatis.com)

- In business theory, a **disruptive innovation** is an innovation that **creates a new market** and value network and eventually **disrupts an existing market** and value network, **displacing established market-leading firms, products, and alliances**.

  [Wikipedia](http://www.wikipedia.com)

Examples of disruptive technologies:

- The **(PC)** displaced the typewriter and changed the way we work and communicate.
- The **Windows operating system’s** enabled Personal computing to disrupt the television industry, as well as a great number of other activities.
- **Email** displaced letter-writing and disrupted the postal and greeting card industries.
- **Cell phones** made it possible for people to call us anywhere and disrupted the telecom industry.
- The **laptop computer** and **mobile computing** made a mobile workforce possible and made it possible for people to connect.
- **Smartphones** largely replaced **cell phones** and **PDAs** and disrupted pocket cameras, MP3 players, calculators and **GPS devices**, among many other possibilities.
- **Cloud computing** has been a hugely disruptive technology in the business world, displacing many resources that would conventionally have been located in-house or provided as a traditionally hosted service.
- **Social networking** has disrupted telephone, email, instant messaging and event planning.
History of technology innovation …

What is the common thread underlying all these technological innovations? It is the advent of the Fourth Industrial Revolution or Industry 4.0. According to the World Economic Forum, “the First Industrial Revolution used water and steam power to mechanize production. The Second used electric power to create mass production. The Third used electronics and information technology to automate production. [The] Fourth Industrial Revolution is … characterized by a fusion of technologies that is blurring the lines between the physical, digital, and biological spheres.”
Experts view of the future …

<table>
<thead>
<tr>
<th>Twelve potentially economically disruptive technologies</th>
<th>A gallery of disruptive technologies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile Internet</td>
<td>Estimated potential economic impact of technologies across sized applications in 2025, $ trillion, annual</td>
</tr>
<tr>
<td>Next-generation genomics</td>
<td>1. Mobile Internet</td>
</tr>
<tr>
<td>Automation of knowledge work</td>
<td>2. Automation of knowledge work</td>
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<tr>
<td>Energy storage</td>
<td>3. Internet of Things</td>
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<td>The Internet of Things</td>
<td>4. Cloud</td>
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<td>3D printing</td>
<td>5. Advanced robotics</td>
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<tr>
<td>Cloud technology</td>
<td>6. Autonomous and near-autonomous vehicles</td>
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<tr>
<td>Advanced materials</td>
<td>7. Next-generation genomics</td>
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<td>Advanced robotics</td>
<td>8. Energy storage</td>
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<td>Advanced oil and gas exploration and recovery</td>
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<td>10. Advanced materials</td>
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<tr>
<td>Renewable energy</td>
<td>11. Advanced oil and gas exploration and recovery</td>
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<tr>
<td>1 Includes Data Analytics</td>
<td>12. Renewable energy</td>
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Digital disruption everywhere ...

- Alibaba.com: The world's highest volume merchant... *OWNS NO INVENTORY!*
- Airbnb: The world's largest accommodation provider... *OWNS NO PROPERTY!*
- Uber: The world's largest taxi company... *OWNS NO CARS!*
- Facebook: The world's largest media company... *CREATES NO CONTENT!*
- Skype: The world's largest phone company... *OWNS NO TELCO INFRASTRUCTURE!*
- Netflix: The world's largest movie house... *OWNS NO CINEMAS!*
- Apple / Google: The largest mobile software vendors... *WHO DON'T WRITE MOST APPS!*
Dilemma of innovation ...

Harvard Business School professor Clayton M. Christensen coined the term *disruptive technology*. In his 1997 best-selling book, "The Innovator's Dilemma," Christensen separates new technology into two categories: sustaining and disruptive. Sustaining technology relies on incremental improvements to an already established technology. Disruptive technology lacks refinement, often has performance problems because it is new, appeals to a limited audience and may not yet have a proven practical application.
From manpower-intensive to technology-centric ...
The future for Accountants: You are doomed ...

Disruptive technologies such as robotic process automation (RPA), artificial intelligence (AI), blockchain, smart contracts, and advanced analytics have reshaped existing business models and facilitated the emergence of new ones wherein repetitive and mundane tasks are becoming less important and the need for high-level skills is increasing.

Though it still will be some time before these technologies affect the workplace at a significant scale, the current “entry-level” jobs that require low-level cognitive skills may eventually disappear. It has been estimated that at least 50% of the work that accountants and other professionals are paid for is automatable through currently available technologies, with an additional 15% automatable through forthcoming technologies (James Manyika et al., “Jobs Lost, Jobs Gained: What the Future of Work Will Mean for Jobs, Skills, and Wages,” McKinsey Global Institute, November 2017, https://mck.co/2LCunZd).
Serial disruptor ...

Elon Musk Profile of a Prolific Entrepreneur

“Going from PayPal, I thought: ‘Well, what are some of the other problems that are likely to most affect the future of humanity?’ Not from the perspective, ‘What’s the best way to make money?’

Elon Musk net worth $13.1 billion

One of the most admired entrepreneurs

Elon Musk Company Formula

<table>
<thead>
<tr>
<th>Industry</th>
<th>How It Could Be Disrupted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Space Launches</td>
<td>Offering lower priced transport into space</td>
</tr>
<tr>
<td>Telecommunications</td>
<td>Offering lower priced service worldwide</td>
</tr>
<tr>
<td>Satellite Internet</td>
<td>Putting more satellites into space for cheaper</td>
</tr>
<tr>
<td>Automobiles</td>
<td>Building the best, lowest-cost electric vehicle</td>
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<tr>
<td>Personal Transport</td>
<td>Eliminating the need for car ownership entirely</td>
</tr>
<tr>
<td>Solar Energy</td>
<td>Increasing access with Powerwall and Solar Roof</td>
</tr>
<tr>
<td>Fossil Fuels</td>
<td>Maximizing efficiency of solar panels</td>
</tr>
<tr>
<td>Car Sharing</td>
<td>By making idle Tesla cars available via app</td>
</tr>
<tr>
<td>Tunneling</td>
<td>Reducing cost of tunneling through the ground</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>Building more efficient transportation infrastructure</td>
</tr>
<tr>
<td>Real Estate</td>
<td>Increasing range people can live from their place of work</td>
</tr>
<tr>
<td>Freight Shipping</td>
<td>Reducing freight costs by a magnitude</td>
</tr>
<tr>
<td>AI/Machine Learning</td>
<td>Owning the best AI system in the world</td>
</tr>
<tr>
<td>Competitive Gaming</td>
<td>Consistently producing better-than-human AIs</td>
</tr>
<tr>
<td>Prosthetics</td>
<td>Reducing cost of effective prostheses by magnitude</td>
</tr>
<tr>
<td>Medicine (Treatment)</td>
<td>Treating serious illness with simple injection</td>
</tr>
<tr>
<td>Military</td>
<td>Allowing enhancement of human capabilities</td>
</tr>
<tr>
<td>Robotics</td>
<td>Better modeling of brain-machine interaction</td>
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Companies used disruptive innovation to transform their industries.
Netflix.

Netflix is a textbook example of successful disruptive innovation. Starting out as a company supplying DVD mailouts, Netflix offered a cost effective and convenient product to an area of the market that was previously overlooked. Targeting people who were movie buffs but not necessarily interested in new releases, Netflix was providing a tailored product to a specific group of people. Netflix did not originally pose a threat to the likes of Blockbuster, operating in a distinctly different segment of the market.

However, following this initial success, Netflix made the bold move to disrupt its own business model, moving away from a safe space and breaking into streaming media. Disruptive innovation usually involves a startup disrupting an established player and this is exactly what happened with Netflix. The new move nudged them into the same competitive space as Blockbuster, eventually pushing them out of the market. Their latest disruptive endeavour was in 2013 when Netflix entered the production business. A roaring success so far, Netflix have proved that they know how to disrupt, innovate and

Source: Jessie Moore - How 3 companies used disruptive innovation to transform their industries (https://ideadrop.co/)
Apple iTunes.

The year of 2001 saw the release of the first iPod, a portable media player that could hold an average of 1,000 songs. In itself, the iPod was not an attempt at disruptive innovation. A range of other such devices already existed and although the iPod was considered a better product than the majority of these, it did not target a new market. Crucially, it was the combination of the iPod and the simultaneous release of iTunes that brought a fresh disruption, opening up new ways of buying and playing music.

iTunes is both a media library and music marketplace. It locked iPod users into purchasing music from the iTunes store but more importantly, it offered convenience and a lower price point. By integrating the Internet into the music curation process, Apple used disruptive innovation to change the very foundations of the way consumers listened to music. As a result, Walkmans, CDs, MP3 players and record stores are generally considered ancient artefacts in today’s market.

Source: Jessie Moore - How 3 companies used disruptive innovation to transform their industries (https://ideadrop.co/)
Some Nigerian startups with seriously disruptive capabilities …

“Though many investors think of ecommerce giants Jumia and Konga when they talk about Nigeria’s successful tech startups, quite a number of tech startups had already recorded great results before the advent of ecommerce in Nigeria – companies like Interswitch had been recording phenomenal successes in the financial tech space,” said Ojo Victoria, a Nigerian tech startup founder.

Interswitch and ecommerce powerhouses – Jumia and Konga – charted new courses in the tech space in Nigeria and several years later, they remain formidable tech companies till today.

There are a couple of startups in Nigeria that have disruptive capabilities, they are in various stages of development with varying degrees of success.

1. Sliide Airtime app

The app displays trending news and gist straight on the smartphone lock screen but that’s not catchy aspect, users get free airtime just for their phones. It isn’t intrusive and the fact that users are getting free credits means that minimal effort would be needed to promote it in Nigeria.

Why is it disruptive? It is one of the few products that give users something in return. The order of the day used to be individuals paying for services but with Sliide Airtime app and a few others, users earn by engaging with the app.

Source: Paul Adepoju - a media entrepreneur, published author and award-winning Nigeria-based freelance journalist.
Nigerian startups with seriously disruptive capabilities …

2. MyAds

MyAds is an app that rewards everyone. “The user gets rewards, and the advertiser reaches its users.”.

The advertiser can directly reach target users. Advertisers can create and profile ads to meet their chosen demographics: age, gender, location etc. Analytics allows advertiser to monitor ads impressions and measure conversions,”.

App users are rewarded when they view ads shown on mobile phone screen when they receive calls. Users of MyAds will earn points. Points are converted to different rewards, ranging from airtime/talk time to coupons and discount deals.

3. Suregifts

Suregifts introduces a previously strange service into the country – gift cards. The idea for SureGifts was gotten when the co-founders who were previously with ecommerce giant Jumia Nigeria crunched the data of online shoppers and saw that many were buying stuff online as gifts even though not all the gifts would be appropriate and perfect for the recipient.

The service allows gift recipient to choose what is given as gifts. With numerous corporate clients and individual gift card shoppers actively using the service, the company had already ventured into numerous services and products including SureAid.co and SureRemit.co.

Source: Paul Adepoju - a media entrepreneur, published author and award-winning Nigeria-based freelance journalist..
Nigerian startups with seriously disruptive capabilities …

4. Afro

Afro is a tech startup threatening the operations of a globally acclaimed tech company in Nigeria with the fierce competition for the Nigerian taxi hailing app subsector involving the global leader Uber and the local version Afro.

It wasn’t an entirely smooth ride for Afro, known as Afrocab when it initially launched, as it could not pose a significant threat to Uber. Following its initial loss to Uber, the developers went to re-strategize and the app was rebuilt, the result was a highly locally relevant product that satisfies the yearnings of the local users who desire to pay in cash and want to negotiate the price they desire to pay unlike Uber’s no-negotiations-model. Afro has gotten the market right and Uber knows this so much it had to introduce cash payment in Nigeria.

5. Lands.ng

Lands.ng is venturing into something that many would believe is impossible to pull off in Nigeria – selling land online – but that’s what Lands.ng is striving to do.

Barring any of the anticipated lawsuits and reluctance among the targeted users to rely on an online platform to make multimillion naira property decisions, the success of Lands.ng could be an eye opener that will make innovators become aware of the availability of more spaces other than developing products for online buying and selling of groceries and other stuffs.

Its success could become a revolutionary idea that will shape the future of Nigeria’s tech startup landscape.

Source: Paul Adepoju - a media entrepreneur, published author and award-winning Nigeria-based freelance journalist..
Crowdfunding: FS industry disruptor! …

Crowdfunding is the practice of funding a project or venture by raising small amounts of money from a large number of people, typically via the Internet. – https://en.wikipedia.org/wiki/Crowdfunding

Online Crowdfunding and fundraising platforms are providing new opportunities to raise money to fund creative projects, non-profits and businesses and we believe that this may help resolve the financial inclusion dilemma we face in Nigeria most especially providing capital to SMEs. We may just be witnessing the early stage of financial services industry disruption.

Some of the leading crowdfunding sites in Nigeria include:

1. Kickstarter is a funding platform for creative projects. It is a great platform for artists, filmmakers, musicians, designers, writers, illustrators, explorers, curators, promoters, performers, and others to bring their projects and ambitions to life.

2. NaijaFund is a crowdfunding platform that empowers everyone and enables people to raise funds for anything including business.

3. Fundanenterprise is a donation-based crowdfunding website built specifically for fundraising activities, solely in the form of grants to support start-ups, micro, small and medium-sized enterprises in Nigeria and beyond.

4. CircleUp - if your business is focused on building and producing consumer brands, check out CircleUp. CircleUp it’s one of the best equity crowdfunding platforms around.

5. MicroVentures is an equity crowdfunding investment platform, combining the best of venture capital with equity crowdfunding.

Source: https://invoice.ng/blog/best-crowdfunding-sites-in-nigeria/
Our Experience so far in providing disruptive technologies.
What are the issues and what tech ideas are we using to solve these problems …

Problems/Challenges faced by SMEs

- Inadequate skilled workforce
- Poor attitude to work by prospective employees
- Poor technology infrastructure, most especially power
- Cost of IT – servers, PCs, software and manpower
- Prohibitive cost of goods and services to the SMEs
- Poor financial data that is hindering access to finance.

Disruptive Technologies being deployed

1. Largely Data Analytics

- Mobile Internet
- Cloud technology
- Automation of knowledge work
- The Internet of Things
- Renewable energy

1. Largely Data Analytics
ADiT (Virtual Advertising Agency) …

www.aditng.com

- Provides world-class Advertising Agency services to individual, small or big businesses.
- Cost-effective and efficient advertising services purchasing
- End-to-end agency services –script development, content creation, placing and monitoring of adverts
- Access to all media types (Radio, TV, Digital, and Print)
- Connects potential employees to potential employers.
- Recruiters advertise vacancies.
- Job Seekers create their profile once but can update as necessary.
- Job Seekers view and apply to jobs they qualify for.
- Uses advanced technology to automatically shortlist candidates
BIZinCloud (Integrated Business Solution [SaaS] for SMEs)

- Provides integrated business solution suites (sales, inventory management, invoicing, etc.) to SMEs over the cloud.
- Turnkey solution – Software, Hardware, Internet and Manpower.
- Key infrastructure have extended independent power solution.
- Bundles other services – audit, tax advisory, stock taking as option.
CASE STUDY:
WWW.JOBS4MOI.COM

A cloud (SaaS) recruitment platform where job seekers meet employers
Typing [jobs4moi.com](http://jobs4moi.com) in your browser will land on this home page.

You will see a list of all current vacancies from several companies.

A click on [learn more](http://jobs4moi.com) takes you to a full description of the vacancy.
A click on learn more >> takes you to this page.

You can then review the vacancy, and at the bottom of the page, you can click to apply [Apply Now] for the job or go back to the home page.
To apply for a position, you first have to register and create your profile. The profile will include a summary, skills, education and work histories. You also can upload your picture and CV. You can apply for as many jobs as you want. You can also update your profile anytime.
Both the applicant and the Employer can monitor applications on-line.
Employers have access to a sophisticated set of administration tools

- Create vacancies
- Create job descriptions
- Manage vacancies
- Monitor applications
- Mine the applicants’ data, both structured – profile and the unstructured - CV

Recruiters have access to an advanced technology that mine unstructured data in the attached CV thus enabling automatically shortlist of candidates that meet the specified criteria.
THANK YOU

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