Presentation Context

- The presentation focus on the future-proofing of the municipal electricity distribution business, excluding the infrastructure, and consider indicative enablers.

- The perspective is based on a 10-year horizon using the "as-is" status as point of departure.

- The presentations that will follow during the AMEU/SAIEE Webinars will provide further insights in respect of the topics raised during this session.

Where are we ?

Municipal Electricity Distribution "As-Is" Business Perspective...1

Financial sustainability challenges

- Sovereign credit ratings agency Moody's downgraded some South African metropolitan municipalities citing uncertainty in the strength of their revenue collection and increasing financial pressures. (Source: Fin24, 19 July 2021)
- Aggregate municipal consumer debts amounted to R230.7 billion compared to R230.5 billion reported in the second quarter of 2020/21. A total amount of R73.7 billion has been written off as bad debt. (Source: National Treasury, Local government revenue and expenditure report for the third quarter of the 2020/21 financial year)
- Municipalities owed the water boards R13. 94 billion due to non-payment by their water users. (Source: Minister of Water and Sanitation, Senzo Mchunu, Budget Vote at the National Council of Provinces (NCOP), 18 May 2022.)

Municipal Electricity Distribution "As-Is" Business Perspective...2

Escalating bulk tariffs & charges above the business sustainability levels

- Eskom debt ~R400bn.
- 15 Free State Municipalities and Mangaung Metropolitan owe Eskom R16 billion for services rendered, as at the end of February 2022. (Source: Eskom)
- Eskom's Chief Financial Officer Calib Cassim said that since March 2021 *municipal debt has grown* by 15.8% to R40.9 billion. (Source: Eyewitness News).
- The City of Tshwane paid R876.29 million in Eskom debt after "reprioritising" its funds. (Source: Fin24, July 2022)
- "Now, instead of collecting about R3.5 billion a month, which enables us to meet all our obligations, we are collecting around R2.7 billion." (Source: Bokaba, City of Tshwane)
- Eskom has *decreased Soweto's debt* from R7.5 million in March to R6.9 million.(Source: Eyewitness News)

Municipal Electricity Distribution "As-Is" Business Perspective...3

Governance challenges
- Leadership
- Political will
- Corruption & Fraud
- Accountability & Compliance
- AG Findings

Service Delivery
- Understanding the customer requirements
- Petitions
- Capacity to deliver

Municipal Electricity Distribution "As-Is" Business Perspective…4

Revenue management
- Energy management
    - Energy balancing
    - Aggregated losses
- Correct tariffs & charges
- Billing & Vending efficiency
- Revenue collection
- Business/Financial visibility & Accountability

Municipal Electricity Distribution "As-Is" Business Perspective…5

Infrastructure Investment (DX)

- The maintenance, refurbishment and strengthening backlog as per the 2014 updated ADAM report was calculated at R68 130 338 071 and growing.

- Of the stated R68bn, the backlog in DX infrastructure under Eskom control was R35 850 000 009, and the DX infrastructure backlog under municipal control was R32 280 338 071.

- Increase in power interruption frequency and duration.

- Challenges in respect of new entrant access to the network and ability to create a new revenue stream.

Municipal Electricity Distribution "As-Is" Business Perspective…6

Stakeholder & Investor management
- How easy is it to do business with the municipality?
- Substantial incentive for customers to consider alternatives
- Lack of customer/brand loyalty/Public perception
- Inability to generate revenue to sustain the business
- Partnerships and leverage of private investments
- Lack of investor confidence

Municipalities self-generate 71% of their income, but it differs by type of municipality
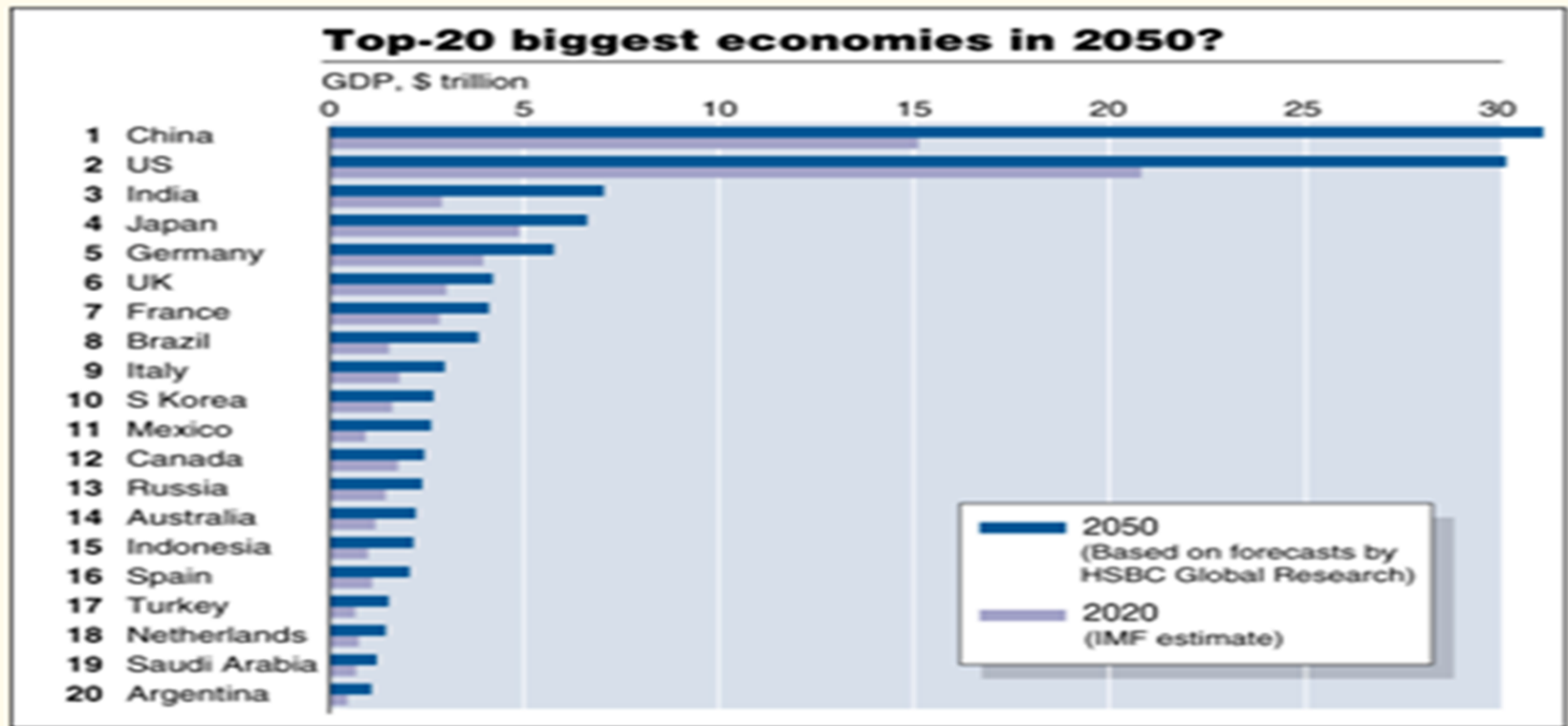Breakdown of total income by source and MIIF category, 2020
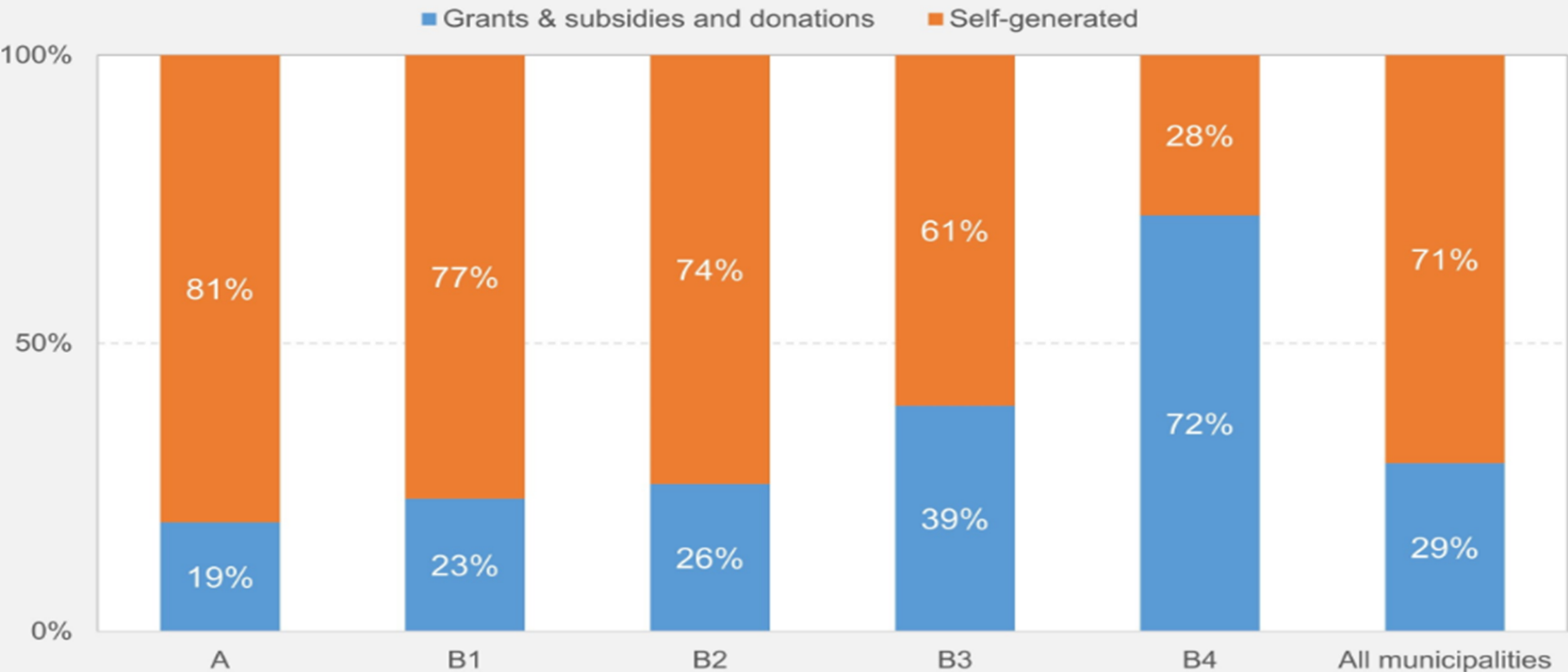
Sources: Financial data: Stats SA, Financial census of municipalities, 2020   MIIF classification: National Treasury

Top-20 biggest economies in 2050?

The future will not be "last year plus 5%"

What will influence the Future-Proof Strategy?

What could a future-proof municipal electricity business look like?

A sustainable energy business which could consist of:

- A ringfenced (but integrated) regulated Wires/Engineering and Energy Trading business, or
- A ringfenced and regulated Wires/Engineering business, or
- A ringfenced Energy Trading business, or
- An infrastructure/asset owner licensed for energy distribution/trading, but activities executed through a third party.

Self regulation vs "enforced" regulation

- Self imposed practices and processes to ensure compliance.
- Investor confidence

Flexibility and significantly different approach to "8 to 5" service delivery

- Customer centricity a reality
- Proactive customer participation and access to the utility – technology enabled

What could a future-proof municipal electricity business look like?

One to many business relationship:
- Embedded generation/IPP's/energy storage.
- Energy wheeling.
- Energy trading vs energy retail:
  - Buying capacity & energy at the best terms available.
  - Competitive market & incentivised RE initiatives.
- Significant technology/digital enablement – real time capabilities.
- Governance, leadership and resources competency driven.

"...We believe a preferred future can be created if we realistically envision and understand our strengths and the nature of the obstacles to our success." - Institute For Future Research (IFR); University of Stellenbosch

Future-Proof – moving from a Linear to Non-linear business ecosystem and blurred industry boundaries through digitalisation
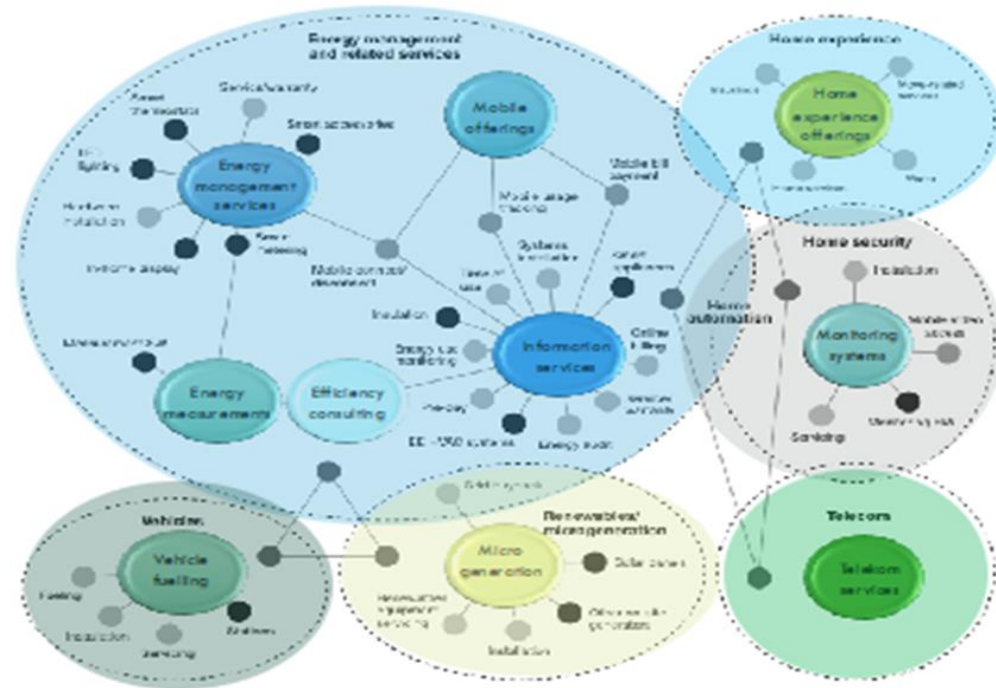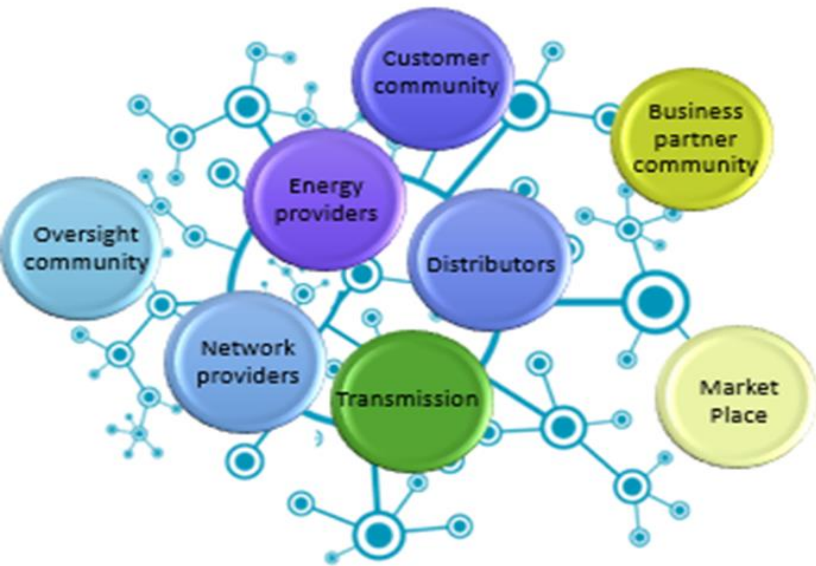
Indicative Practical Considerations to facilitate Future-Proofing

Practical Considerations to facilitate Future-Proofing - Governance

Reference: The last century was "command and control", but this century is "suggest and select". Tomorrow's population is instantly informed about all and any matter, can independently evaluate through social media and ultimately mandate an action or product with transparent and real-time reaction. Market forecasts have assumed business as usual or traditional usage patterns, without anticipating shifts to be as fast or disruptive as they continue to be, where the acceleration of change is increasing exponentially.

- "Technology is not going to be the long pole. The long pole is going to be regulatory." — (Source: Jeff Bezos)

Governance Opportunities:

- Entrepreneurial mindset.
- Competency based appointments.
- Agile and trans-functional organisation structures.
- Initiate future-proof team & process.
- Move from controlling to empowering people with accountability.
- "Outside-in" thinking – with focus on customer.
- Unbundle products & separate value chain activities.
- Reconfigure assets from ownership to accessibility.
- Share assets between alliances and partnerships.
- Increase outsourcing and automation.
- Integrated/cross functional business view through technology deployment.
- Design and implement future-focused intelligence application.

Practical Considerations to facilitate Future-Proofing - Leadership

Reference: For a business to grow and be attractive to investors require decisive, ethical, competent, and respected leadership. A person with a hand in the "cookie-jar" will not qualify as a leader. Prudent governance, compliance, high-performance, resource motivation, a sense of belonging, investor confidence, and customer/stakeholder relations are among the key business ingredients directly influence by the leadership. Visionary leadership is required to ensure the success of the future-proof journey.

- Future-Proof from a leadership perspective means:
    - Constantly thinking about what comes after "next".
    - Looking at how your "current" is already "irrelevant".
    - Following current leaders is merely catching up.

Leadership Opportunities:

- Appoint competent and suitable qualified people.
- Employment contracts should be structured in a way that encourages/promote compliance with the relevant legislation, regulatory and governance framework.
- The performances of the appointed resources should be measured and monitored. Earliest transgressions ought to be addressed with the necessary speed and seriousness.

Practical Considerations to facilitate Future-Proofing – Law & Regulatory

Reference: *It was only fifty years ago that Texas Instruments introduced a pocket calculator, and that a South African doctor performed a heart transplant. The iPhone is merely a decade old. In the blink of an eye, everyday objects are gaining intelligence, robots are taking to the streets, and drones are taking to the air. The quickening pace of technological change challenges regulators across the world. (Anupam Chander. Director of the California International Law Center)*

- Historic approach to governance, compliance, delivering on the mandate, control and risk management was to "get something in place" to avoid something that happened in the past – what we require going forward is a prudent framework, greater accountability, consequence management, reward & recognition for the desired future-proof behaviour.

Law & Regulatory Opportunities:
- Promote with the relevant audience acceptance of the envisaged future electricity utility.
- Leverage relevant legislation and pro-actively influence the changes required in line with future-proof objectives for the envisaged electricity utility.
- Work with the relevant authorities to craft the legislative and regulatory enablers to facilitate the future-proof of the distribution sector as well as the broader energy supply industry.
- Ensure that future-proof initiatives fit in with the national objectives.

Practical Considerations to facilitate Future-Proofing - Capacity

Reference: While the popular believe was that South Africa is not matured enough to consider a work-practice where staff could work from home and be productive, the COVID 19 pandemic provided a different perspective. Going forward, it is clear that a hybrid work model i.e., having some staff "in the office" and some staff working from home, is the model that will dictate the future.

Opportunities:

- Skills could be attracted that will best fit the specific business requirements.
- Define the resources that must be available in the office – full time/part time, and why.
- A hybrid-model will provide access to a wider group of resources (not even limited to a specific geography) that could be attracted to the business.
- Define and invest in the technology to enable the future-proof business operating model.

Capacity Opportunities

- Flexibility derived from a hybrid-model will allow the business to consider more service offerings and greater flexibility in respect of operating "outside office hours".
- A hybrid-model could contribute to cost optimisation and better use of infrastructure and equipment.
- Design future-proof solutions with customer-centric objectives in mind.
- Take staff along and get them involved in mapping out the future-proof journey.
- Initiate and keep initiating strong customer focus and customer service improvement programs
- Transparency and regular engagements will build confidence and yield support.

Practical Considerations to facilitate Future-Proofing - Technology

Reference: The COVID-19 pandemic saw rapid change in the private sector becoming more agile and implementing future-focus customer solutions.

- According to Gartner, governments should modernise their applications by 2025.

Opportunities:

- Integrate replacement/improvement of legacy systems with investment in technology/digital transformation with business future-proof as objective.
- Identify process & practices where synergies can be leveraged, and capabilities be enhanced/integrated through technology deployment.

Technology Opportunities:
- Define and implement the enablers to facilitate digital transformation that will improve among others mobility, functionality, usability, data security, automation, improve business performance, and enhance service delivery.
- Invest in digital technologies, products, and services to facilitate secure future-proof systems, long-lasting processes and faster processing times.
- Adopt digital capabilities to future-focus customer solutions & interface.
- Implement multichannel technologies to enhance interaction with customers/stakeholders/investors.
- Identify time-consuming activities/work practices that could be automated/technology enabled.

Technology Opportunities:

- Develop and train staff to enhance their digital skills and to promote their acceptance of the future-proof journey.
- Unlock barriers to distributed-generation/IPP projects and facilitate wheeling over the municipal infrastructure to multiple end-customers.
- Identify and engage the correct technology/digital business transformation partner.

Expectations of time spent in metaverse in 5 years, by generation,[1] hours per day

Gen Z	Millennials	Gen X	Baby boomers	Average
4.7	4.7	3.6	1.8	~3.7
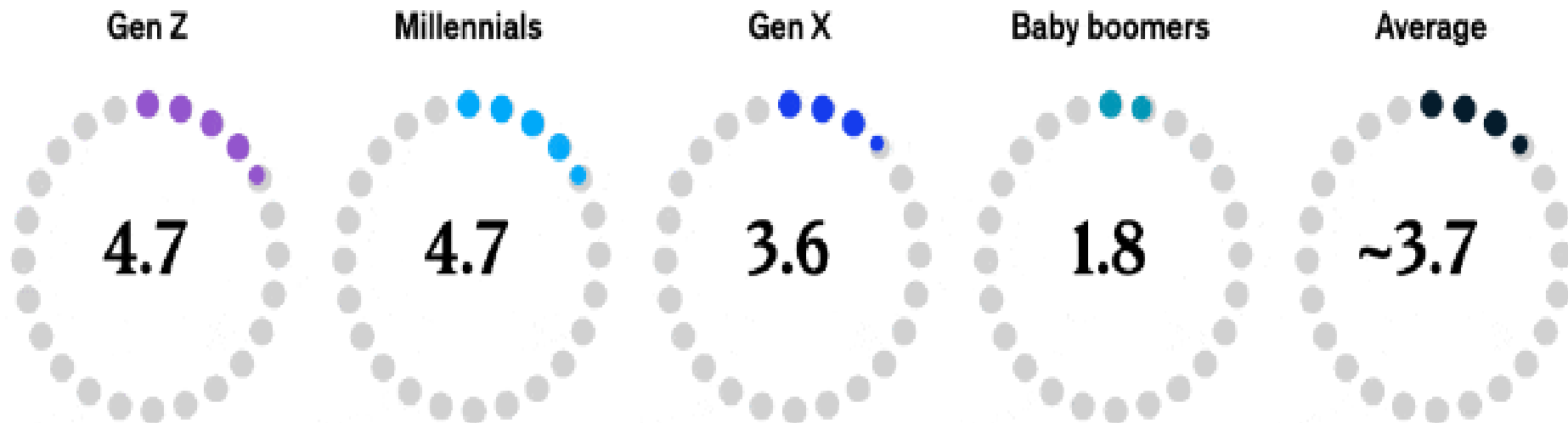
[1]Question: In 5 years, approximately how many hours per day do you think you'll spend in the metaverse on an average day?
Source: McKinsey Metaverse Consumer Survey (Feb 2022)

"The best way to predict the future is to create it." -Peter F. Drucker

Future-Proof Statements of Relevance

View of the Future example: General Motors had taken a view of the future by investing $500 million in Lyft, a competitor to Uber that uses a lift sharing model. Cars will become a service industry. That is GM's vision of the future. They are also working on driverless cars.

A San Francisco based consultant was recently asked: "What are the factors which make an innovative society?" The answer: "A constantly questioning society, always looking for better or different ways to do things in daily life and all other things. This is not in a critical or carping way but always being solution orientated. This in an overall environment of liberty."

In understanding the future one must be totally focused on and aware of the changing needs of the customer (example: Nike has apparently outsourced virtually everything so that no responsibilities will distract management from a total focus on the customer).

Future-Proof Statements of Relevance

Innovative ideas should be followed through and executed on {example: university students who thought about the Uber concept a couple of years ago (only without the payment functionality) but never executed on the idea}.

Brand new industries and business models surfacing and outperforming many traditional enterprises

Strategic, tactical, operational, resource, market, customer service and other planning efforts are never-ending, continuous processes

Educate, develop, coach, mentor, equip & train

Traditional structures become obstacles

Business requirements

Examples

Flexibility to integrate renewables and DER

Installed a comprehensive process optimization solution to reduce its minimum load to less than 40% of the nominal output increasing the flexibility of the thermal plant

Supply reliable power

FINGRID

Implemented a centralised asset management solution, big data analytics and spatial analytics platform to enable predictive maintenance, save costs and boost reliability.

Cost reduction

enel

e·on

Traded energy through a new market place using blockchain technology, removing the central broker and reducing the cost of power procurement.

Source: Adapted from Deloitte

Business requirements

Examples

Customer centricity

LO3 ENERGY

In partnership with Siemens launched Brooklyn Microgrid which uses blockchain technology to enable peer-to-peer energy sale

Customer engagement

CenterPoint Energy

Use high speed predictive analytics to transform its customer service strategy from reactive to proactive and provides personalised experience to customers

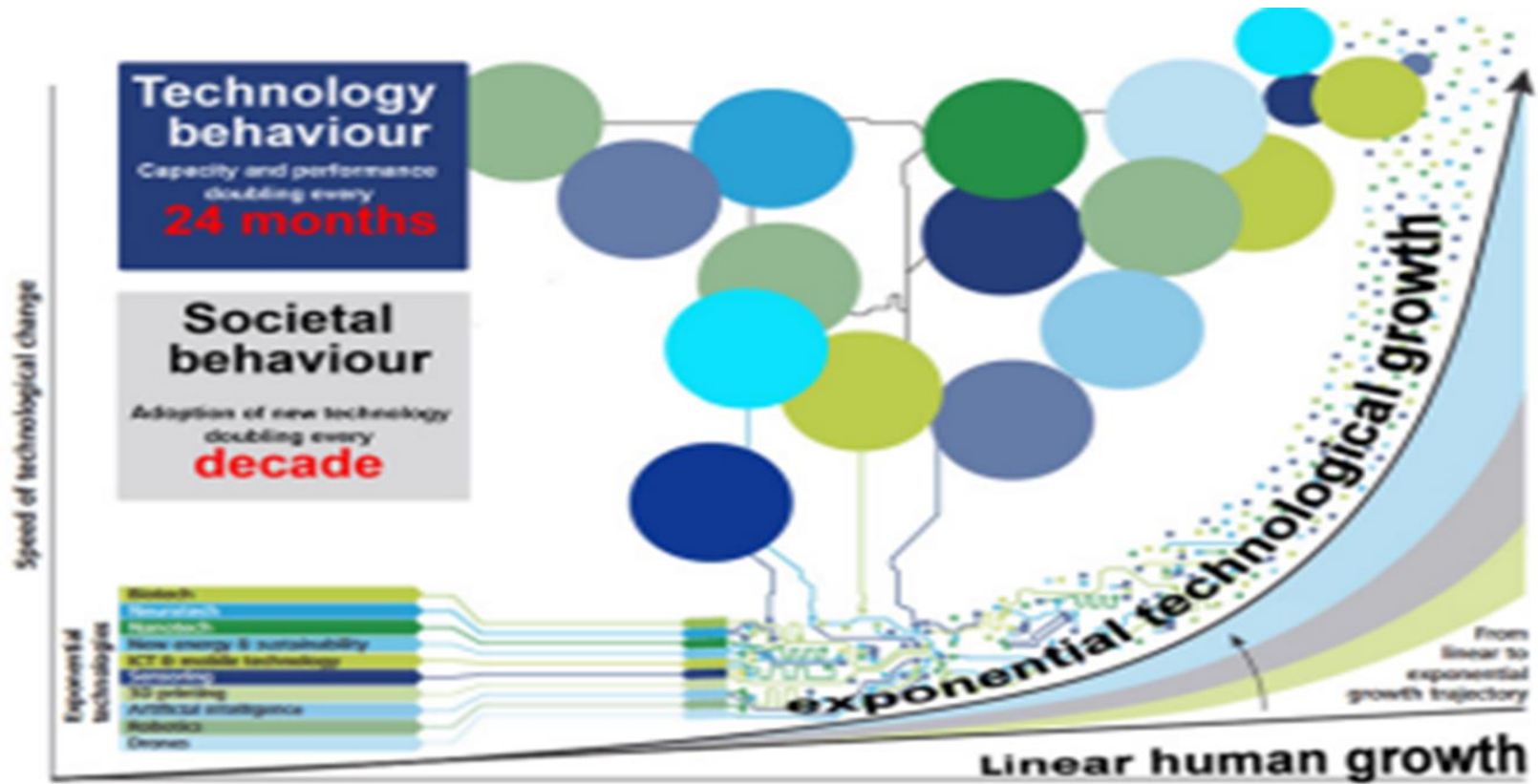**Value added services**

conEdison

Online market platform where consumers can procure energy efficient appliances for their homes. They can apply for utility rebates through this channel
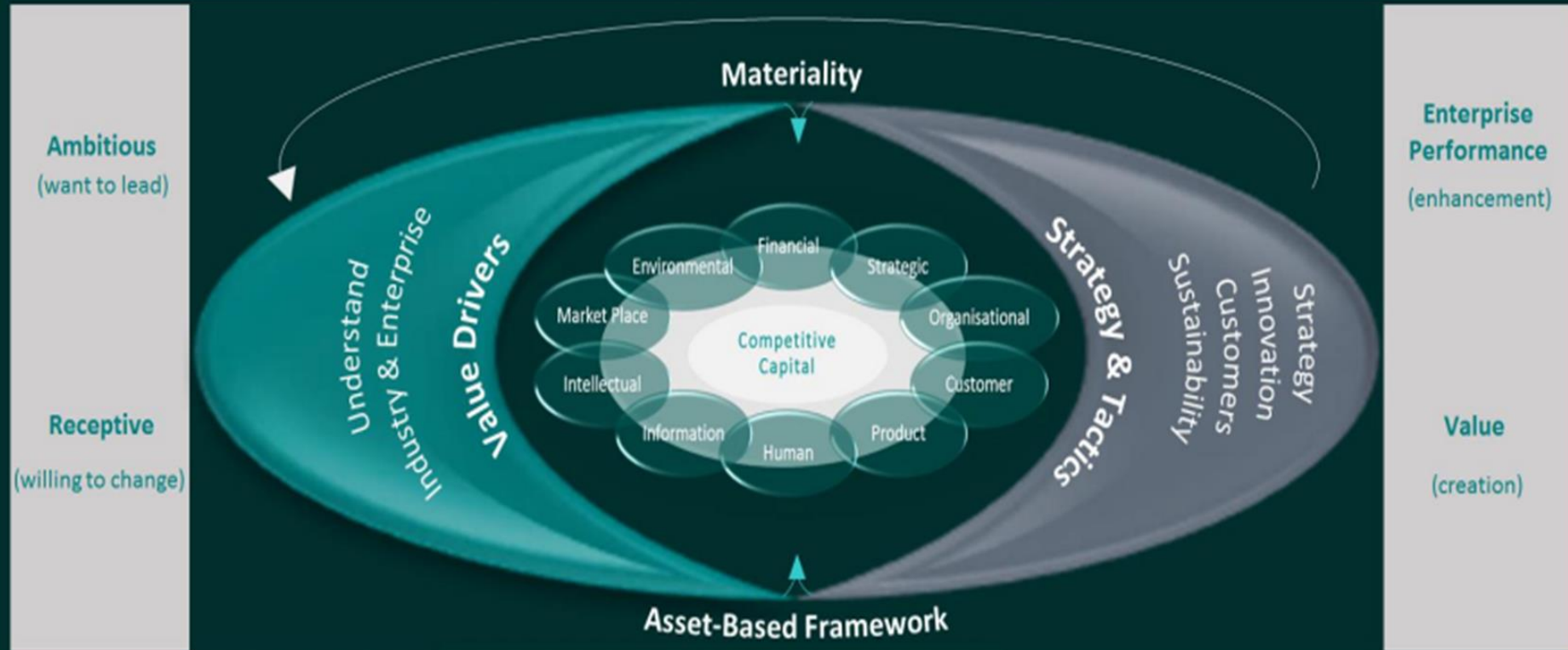
Source: Adapted from Deloitte

Source: Adapted from Deloitte – IR 4 challenges and solutions for the digital transformation and use of exponential technologies

Concluding Remarks

- Stay as we are is not an option.
- The ability to perform will define the business boundaries in the future.
- The Future-Proof journey is about allocating resources toward interventions that will create value for the municipal distribution business but also contribute to the change required in the industry.
- Employ the best, look after the employees, invest in their development, and this approach will directly contribute to your ability to deliver in line with the future requirements.
- Create physical and virtual environments that reflect your future workplace strategy.
- Manage connectivity and a sense of belonging, irrespective of where employees are based.

Concluding Remarks

- Define and establish metrics specific to Future-Proof interventions.
- Establish a flexible but robust project management approach and structures around all key activities.
- There is no "one size fit all" solution to become Future-Proof – research and learn from others. However, you must design your own Future-Proof journey map.
- Know where you are, benchmark, and map out where you want to be.
- Without substantial investment in technology, you will not survive in the future.
- Current disputes and differences within the industry is not assisting Future-Proof objectives.
- Future-Proof will not happen by default.

THANK YOU