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Smart Education Smart City Urban Sprawl

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Article 1

The Development Towards the Smart City and Smart Education

By Karl Skaar

A Smart City utilizes and integrates multiple information and communication technology (ICT) and the Internet of Things (IoT) solutions securely to develop and manage a city's key areas. These areas can be all from city governance, citizens' services, energy management, waste management, water management urban mobility, education, industry development, welfare and health care and other community services. This requires the city to be smart across all sectors and in cooperation with relevant stakeholders internally and externally.



Photo: Karl Skaar

Cities are home to more than half of the world's population, and they are expected to add another 2.5 billion new residents by 2050. They face increasing environmental pressures and infrastructure needs—and growing demands from residents to deliver a better quality of life and to do so at a sustainable cost. Smart technologies can help cities meet these challenges, and they are already enabling the next wave of public investment. It all starts with data. Cities, in all their complexity and scope, generate oceans of it. Finding the insights in all that data helps municipal governments respond to fluid situations, allocate resources wisely, and plan for the future. Furthermore, putting real-time information into the hands of individuals and companies empowers them to make better decisions and play a more active role in shaping the city's overall performance. As cities get smarter, they become more livable and more responsive—and today we are seeing only a glimpse of what technology could eventually do in the urban environment. [1]

What is a Smart City

A smart city is an urban development vision to improve the lives of the citizens by being open, connected, sustainable and innovative. Smart application, utilization, and integration of new technology, sectors, and services is vital to benefit the most crucial piece in the puzzle: the citizen.

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Illustration: MARTINA PAUKOVA in MIT technology review

A smart city uses different types of electronic data collection sensors to supply information which is used to manage assets and resources efficiently. This includes data collected from citizens, devices, and assets that are processed and analyzed to monitor and control traffic and transportation systems, power plants, water supply networks, waste management, law enforcement, information systems, schools, libraries, hospitals, and other community services. The smart city concept integrates information and communication technology (ICT), and various physical devices connected to the network (the Internet of things or IoT) to optimize the efficiency of city operations and services and link to citizens. Smart city technology allows city officials to interact directly with both community and city infrastructure and to monitor what is happening in the town and how the city is evolving.

Smart cities add digital intelligence to existing urban systems, making it possible to do more with less. Connected applications put real-time, transparent information into the hands of users to help them make better choices. These tools can save lives, prevent crime, and reduce the disease burden. They can save time, reduce waste, and even help boost social connectedness. When cities function more efficiently, they also become more productive places to do business. Smart towns may disrupt some industries even as they present substantial market opportunities. Customer needs will force a reevaluation of current products and services to meet higher expectations of quality, cost, and efficiency in everything from mobility to healthcare. Smart city solutions will shift value across the landscape of cities and throughout value chains. Companies looking to enter intelligent city markets will need different skill sets, creative financing models, and a sharper focus on civic engagement.[1]

Examples of Developing Towards the Smart City Idea

We will give you some examples of cities that develop towards the Smart City Idea. We could range between the cities and use measures that describe one city more developed than another. However, we are giving you some examples of different towns and different approaches.

Toronto

On Toronto's waterfront (Canada), where the eastern part of the city meets Lake Ontario, is a patchwork of cement and dirt. It's home to plumbing and electrical supply shops, parking lots, winter boat storage, and a hulking silo built in 1943 to store soybeans—a relic of the area's history as a shipping port. Torontonians describe the site as blighted, underutilized, and contaminated. Alphabet's Sidewalk Labs wants to transform it into one of the world's most innovative city neighborhoods. It will, in the company's vision, be a place where driverless shuttle buses replace private cars; traffic lights track the flow of pedestrians, bicyclists, and vehicles; robots transport mail and garbage via underground tunnels; and modular buildings can be expanded to accommodate growing companies and families. [3]

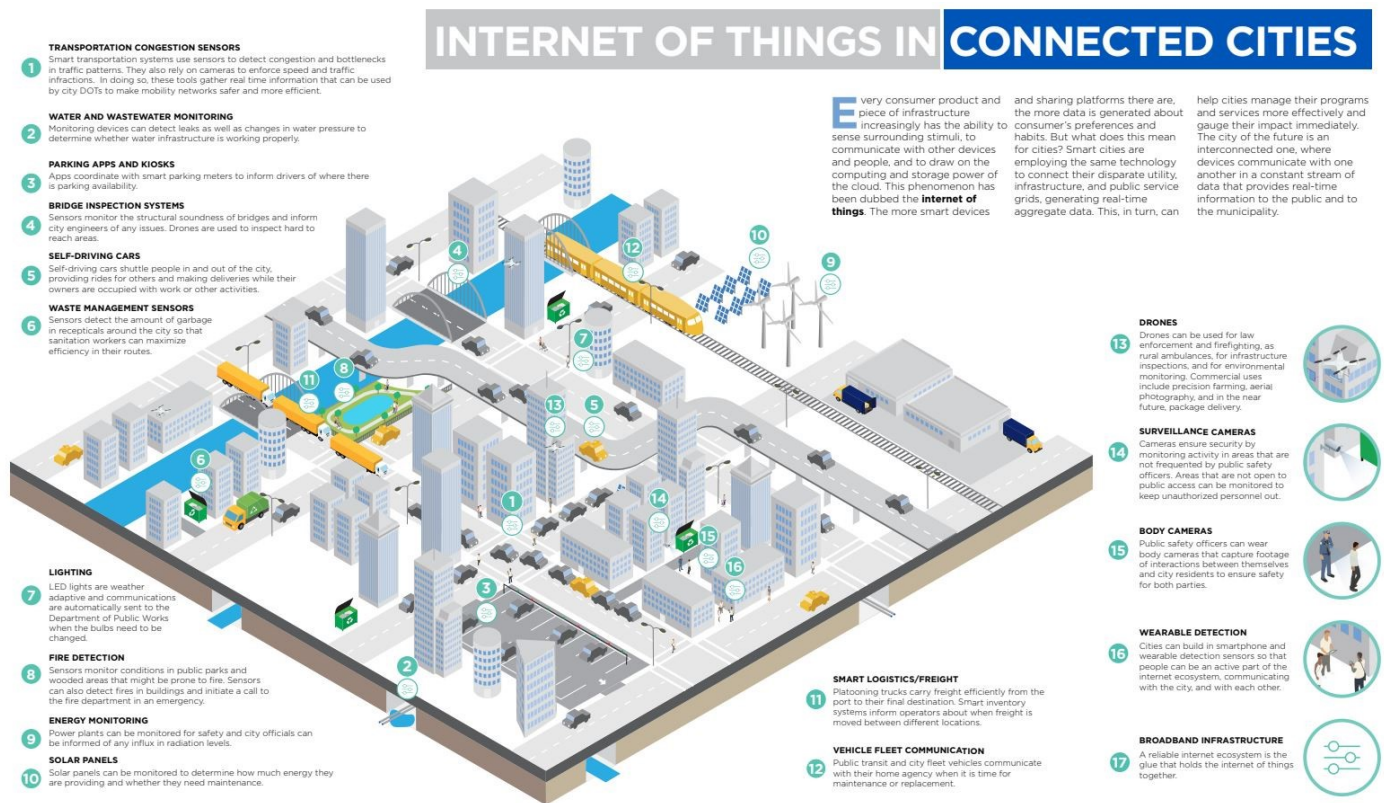


Illustration: National League of Cities

Chicago

The Chicago (USA) Technology Plan highlights many initiatives within five broad strategies that together will enable Chicago to realize its vision of becoming the city where technology fuels opportunity, inclusion, engagement, and innovation. Two of these strategies are foundational—enabling Chicago's residents and businesses to be digitally-connected and engaged. Three growth strategies then build on this foundation of technological strength. Together, these five technology-focused strategies provide the path to solidifying Chicago's place as one of the world's leading cities.

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This Smart Collaborative collects pilots in the city [2]:

- A key positioning report on what steps the Smart Chicago Collaborative would like to take in the area of digital inclusion.
- A central hub for coordinating technology training across departments and delegate agencies that have received federal funding
- A loose network of more than 250 places in the city where Internet and computer access, digital skills training, and online learning resources are available free of charge
- Trained health information specialists are placed in clinics in low-income areas to help patients connect to their medical records and find reliable information about their conditions.

Oslo

The vision for Oslo (Norway) is to make it a smarter, greener, more inclusive and creative city for all citizens – a smart city that innovates with the citizens' interest and well-being at the core. There is a wide range of smart city projects in the town, from testing electrical buses, zero-emission construction sites and retrofitting existing buildings to developing circle-based waste management and green energy systems. Any citizen-oriented services that can be digitalized will be digitalized and the needs of the citizens are the guiding principles for development. The vision for Oslo is to make it a smarter, greener, more inclusive and creative city for all citizens – a smart city that innovates with the citizens' interest and well-being at the core. [4]



Oslo has a wide range of smart technology projects, such as hydrogen and electrical buses. (Photo: Krister Sørbø/City of Oslo)

Melbourne

Smart Cities in Australia will mainly refer to existing cities – integrating and retrofitting smart and sustainable solutions. Melbourne (Australia) – The installation of smart sensor technology and BigBelly bins in Melbourne is aimed at reducing the overflow of waste in street bins. Once the containers hit 70% capacity, they send an alert to a control center to facilitate emptying. The SmartGuide parking system in the city helps in detecting occupancy status of parking spaces and directing drivers to available bays. Through an open data platform, you can view real-time city data. [5]

Melbourne



Illustration: Melbourne 2030: Sustainable and Smart Cities

Tel Aviv

Tel Aviv (Israel), the Nonstop City, considers engagement a fundamental value in implementing Smart City principles. It actively involves residents in the urban experience and urban development, while emphasizing involvement in decisionmaking processes and wisdom of the crowd as a means for smart municipal management in the new age. DigiTel is a personalized web and mobile communication platform which provides residents with individually tailored, location-specific, life situation-based information and services. The platform facilitates a direct and holistic connection between the city and its residents, from alerting residents to neighborhood roadworks to sending targeted reminders for school registration and offering discounts which facilitate access to the many cultural events taking place in the city. The information is delivered by push via different channels, including personal emails, text messages, and a personal resident account. [6]



Photo: Tel Aviv Smart City

New Delhi

The Indian Government launched the Smart Cities Mission on 25 June 2015. This represented and continued to embody an ambitious urban renewal and retrofitting program to develop 100 cities across the country, making them the citizen and environmentally friendly, economically stable and sustainable for future populations. The objective of the Smart Cities Mission is to promote cities that provide core infrastructure and give a decent quality of life to its citizens, a clean and sustainable environment and application of 'Smart' Solutions. The focus is on the sustainable and inclusive development, and the idea is to look at compact areas, create a replicable model which will act as a lighthouse to other aspiring cities. The Smart Cities Mission of the Government is a bold, new initiative. It is meant to set examples that can be replicated both within and outside the Smart City, catalyzing the creation of similar Smart Cities in various regions and parts of the country.



Photo: Hindustan Times

Accordingly, the purpose of the Smart Cities Mission is to drive economic growth and improve the quality of life of people by enabling local area development and harnessing technology, especially technology that leads to Smart outcomes. Area-based development will transform existing areas (retrofit and redevelop), including slums, into better-planned ones, thereby improving the livability of the whole City. New areas (greenfield) will be developed around cities to accommodate the expanding population in urban areas. Application of Smart Solutions will enable cities to use technology, information, and data to improve infrastructure and services. Comprehensive development in this way will enhance quality of life, create employment and enhance incomes for all, especially the poor and the disadvantaged, leading to inclusive Cities. [7]

Abidjan

Africa is the next frontier for innovation in the smart cities arena. Smart City Africa is a business matchmaking, knowledge-transfer, and funding program dedicated to the advancement of Africa's smart city strategy. With a young and growing population, a rising middle

class, rapidly expanding urban centers and the fastest mobile subscriber and smartphone adoption in the world, Africa is well positioned to develop smart cities that can boost employment, economic momentum, and innovation. Smart City Africa is an event in February 2019 focusing on the urbanization of Cote D'Ivoire, francophone Africa's biggest economy and the world's largest cacao exporter with a population of 24 million. The elements the event will focus on is construction, digital services, education, energy, food, health, manufacturing, marketing, financial services, public organization, transport, water, and waste. [8]

Smart Learning in a Smart City

In the perspective of lifelong learning, life-wide learning and learning society, learning environments have expanded from schools to a more broader space, and even to the whole city. School, family, community, workplace, and museum can be regarded as typical learning environments in a smart city. Cooperation between universities and technology companies in smart cities could help in knowledge transfer and in developing new syllabuses for training and producing the human resources needed for an innovation-based economy.

Digital technology changes the way education is provided to students. Digitization of schooling allows units of learning to be offered as an independent service. This includes being able to use and reuse digital content in many settings and bundled to support different learning outcomes. With digital technologies and the Internet becoming increasingly integrated into learning, the demand for smart education has grown steadily, especially in smart city scenarios. As the need for life-long learning is on the rise, smart learning environments in cities should be equipped to meet people's demands. Smart learning/education is also one of the critical applications of smart cities.

Coupled with the 'smart city', the idea of the 'smart school' is emerging in imaginings of the future of education. Various commercial, governmental and civil society organizations now envisage education as a highly coded, software-mediated and data-driven social institution. Such spaces are to be governed through computational processes written in computer code and tracked through big data.

It has specifically documented two interrelated ways in which education is being reconfigured within smart city imaginaries. First, smart schools are to become programmable educational spaces in which many aspects of administration, leadership, spatial organization, student management, communication and even pedagogy itself are to be governed by processes programmed in code. They are fabricated spaces in-the-making that are undergirded by a dense infrastructural mosaic of standards, coded devices, data, discourses and techniques – all products of the technical expertise of programmers, data scientists, computational urbanists and their advocates, located in expert settings such as IBM as well as in government offices and civil society organizations – that will ultimately make educational institutions and processes more programmable and in that process shape the capacities and conduct of the people who move through them. Reconceived as data platforms, such schools are being positioned as responsible for educating the smart city by acting upon the competencies, conduct and even the cognition of its future citizens. [9]

Second, new programs focusing on learning to code, data literacy and civic coding – such as those enacted by Nesta, Glasgow Future Makers and MK: Smart Urban Data School – are positioning young people as apprentice data experts and computational urbanists. By equipping young people with the relevant data literacies and coding skills, these smart city initiatives seek to encourage them to occupy the forms of conduct that are appropriate for participation in coded urban infrastructures, thus

responsibilizing them as data analysts, digital makers and civic coders who will design the technologies that will enable the city, as a digital governor, to interact with its citizens and to learn about their activities and behaviours in real-time. It is in this sense that the process of educating the smart city has a double meaning: on the one hand, it involves educating people to become smart citizens who can contribute to the design of digital urban infrastructures and devices, and on the other, it also involves the use of such devices and infrastructures to enable the city itself to learn about all those individuals that inhabit it, and, as an increasingly sentient learning environment, to reshape itself around their forms of behaviour and action.



Photo: rawpixel.com

Programmable pedagogies are being prototyped in the classroom through the introduction of learning analytics and cognitive computing tutors. In addition, as young people, in particular, are encouraged to learn to code and become sufficiently data literate to create new digital interfaces to the city, they are becoming responsible for constructing new programmable pedagogies on behalf of the urban digital governor and in accordance with the global standards that regulate smart cities development itself. By making new civic apps and interfaces with city services, they become laboratory technicians of the smart city, enabling it to function optimally. The programmable pedagogies of smart schools extend beyond the classroom into the everyday public pedagogies of urban life, where digitally enacted big data systems constantly regulate and govern people's conduct according to the standards and social codes of conduct that are written into the lines of code that constitute them. Citizens themselves are to play a part in the design of such systems as apprentice computational urbanists and in scripting the programmable pedagogies that will realize new forms of active computational conduct in smart cities.[9]

Through such a technology of schooling, students are increasingly being positioned as data objects whose learning lives are to be tracked and monitored through their data points for the purposes of enacting behavioral modification techniques. The smart school is a laboratory for experimental forms of digital government where the sociotechnical imaginaries and expertise of computational urbanists and civic coders are to be projected from a distance into the city, both through monitoring young people's data points and through educating them to become active and responsible citizens with appropriate skills to compute the future of the city.

The task of governing the future city is partly to be achieved through computational experiments in schooling the smart city and its citizens.

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Karl Skaar

Is a highly successful professional, with a high degree of entrepreneurial flair. Among the many different roles, he is the chief editor of the Lucubrate Magazine.

Review Useful Life, Depending on the Outcom

By Peter Welch, Georgia, CEO GlobalCfo.LLC

What do all these statements have in common and for that matter what do all financial accounting standards have in common. They all make the presumption that the information contained therein is accurate, transparent, faithfully representational and directly comparable against other entities. But why is that important? Financial statements provide the information necessary for all stakeholders and potential investors to make crucial financial decisions, do I invest or do I sell.



Photo: Tim Gouw



Accounting Series – article No: 16

Accounting Theory – Advanced Part 6

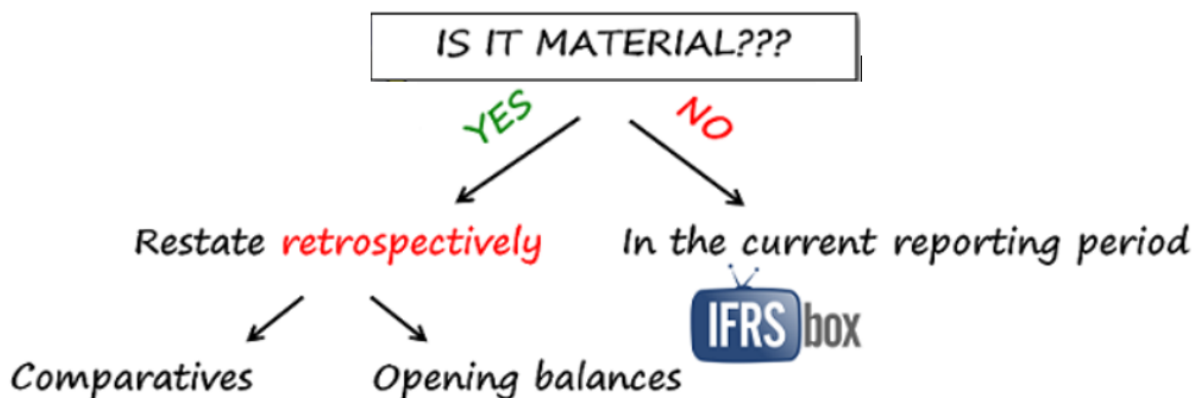
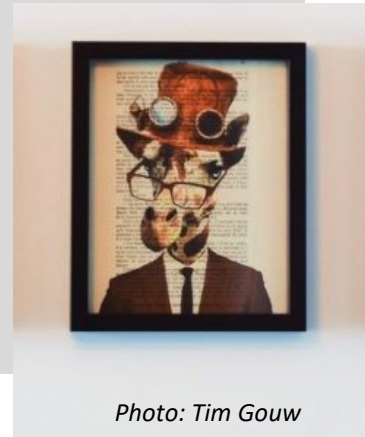
An Adjustment that has the Effect of Increasing Management's Compensation

Materiality continued:

- v) a transaction or adjustment that masks a change in earnings or other trends;
- vi) a transaction or adjustment that concerns a segment, or other portion, of the undertaking's business that has been identified as playing a significant role in the undertaking's operations or profitability;

- vii) a transaction or adjustment that affects an undertaking's compliance with loan covenants or other contractual requirements;
- viii) **a transaction or adjustment that has the effect of increasing management's compensation, for example by satisfying requirements for the award of bonuses;**
- ix) changes in laws and regulations;
- x) non-compliance with laws and regulations;
- xi) fines against the undertaking;
- xii) legal cases;
- xiii) deterioration in relationships with individual or groups of key suppliers, clients or employees; and
- xiv) dependency on a particular supplier, client or employee.

FRS Workbook 2017 IAS 8



To wrap up IAS 8, we have a situation where at times it is ambiguous and open to management discretion between selecting whether they are dealing with changing estimates i.e. depreciation,

IASB A *change in accounting estimate* is an adjustment of the carrying amount of an asset or a liability

or the correction of an error, or changes to the policies and procedures manual. As referenced above any changes to policies and procedures fall within a very narrow range of acceptability.

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Transparency and Faithful Representation

Accounting policies are designed to ensure that financial statements, fully comply with, and reflect the transparency and faithful representation of all IFRSs.

per IASB definitions (para 5):

The following terms are used in this Standard with the meanings specified:

Accounting policies are the specific principles, bases, conventions, rules, and practices applied by an entity in preparing and presenting financial statements.

You may recall last week:

A change in accounting policy can be established by the following tests. The accounting policies chosen by an entity should reflect transactions and events through:

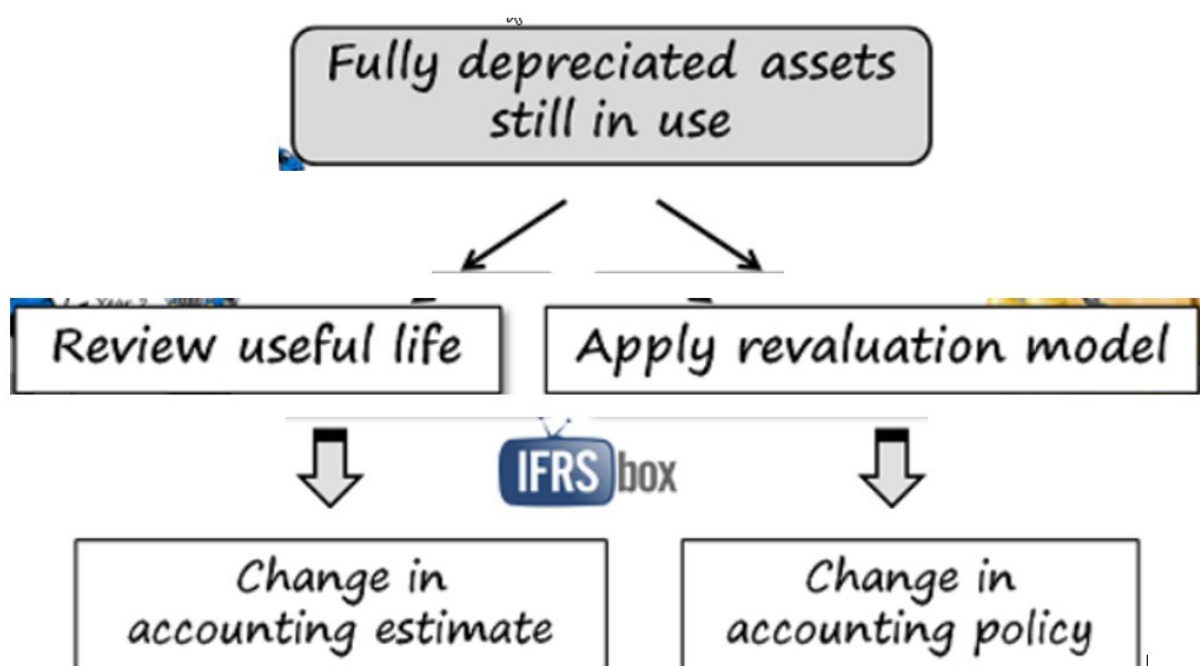
- recognition e.g. capitalising or writing off certain types of expenditure);
- measurement (e.g. measuring non-current assets at cost or valuation); and
- presentation e.g. classification of costs as cost of sales or administrative expenses)

If at least one of these criteria is changed, then there is a change in accounting policy. **IAS 8 requires a change in an accounting policy to be accounted for retrospectively** whereas a **change in an accounting estimate is normally recognized in the current period (and there is no requirement for retrospective application).**



Photo: Tim Gouw

Illustration: Emile Woolf International Ltd, Essential IFRS 2017



Thus, depending on the outcome, we are directed to:

Errors: apply retrospectively (material errors)

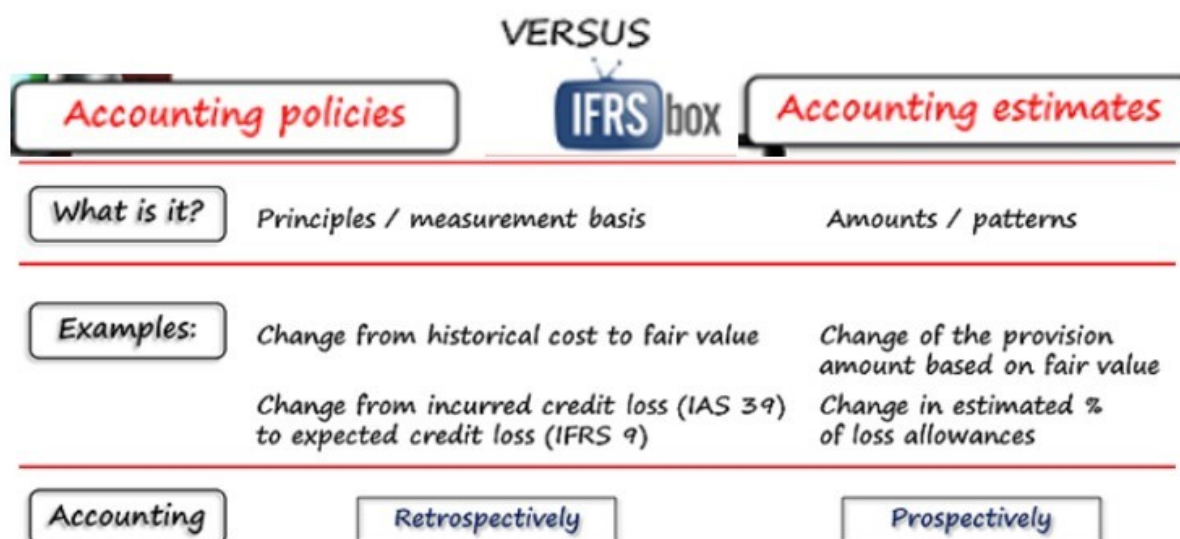
Consider this above example (viii). Remember, Financial Shenanigans previously discussed.

a transaction or adjustment that has the effect of increasing management's compensation, for example by satisfying requirements for the award of bonuses

IFRS Workbook 2017 IAS 8

Estimates: apply prospectively

Accounting Policies: apply retroactively



Let's now consider "IAS 10 Events after the Reporting Period"

We are also going to introduce the concept of a going concern. Up until now, all these articles have stressed the importance of the Framework along with faithful representation, transparency, and comparability. We have discussed the balance sheet, primarily assets, in great detail addressing the issue that all assets have to possess "future economic value". If in any way that is impaired, something we have discussed, then the asset needs to be written down with the incremental value being charged to the income statement. Or in other words, both assets and liabilities and equity are reduced.

Photo: Tim Gouw



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Adjusting Events and Non-adjusting Events

We have started addressing IASs, such as IAS 1 on financial statement presentation, IAS 2 on inventories, and IAS 7 on cash flow statements. And of course just recently IAS 8. What do all these statements have in common and for that matter what do all financial accounting standards have in common. They all make the presumption that the information contained therein is accurate, transparent, faithfully representational and directly comparable against other entities. But why is that important? Financial statements provide the information necessary for all stakeholders and potential investors to make crucial financial decisions, do I invest or do I sell. Such implicit informational content is absolutely critical in the mergers and acquisitions field, particularly across borders. The going concern concept simply states that an investor can rely on financial statement information to make decisions. Such decisions are based on the presumption that all things being equal the next fiscal year and the following will be fairly comparable to the current fiscal year. Obviously, things do change but it is reasonable to rely on continued net income that going forward will not be widely divergent from current results. So what does all this have to do with IAS 10 or Events after the Reporting Period? Let's consider how the IASB addresses such events.

Relative to the IASB para 3:

3. The following terms are used in this Standard with the meanings specified:

Events after the reporting period are those events, favorable and unfavorable, that occur between the end of the reporting period and the date when the financial statements are authorized for issue. Two types of events can be identified:

- a those that provide evidence of conditions that existed at the end of the reporting period (adjusting events after the reporting period)] and
- b those that are indicative of conditions that arose after the reporting period (non-adjusting events after the reporting period)

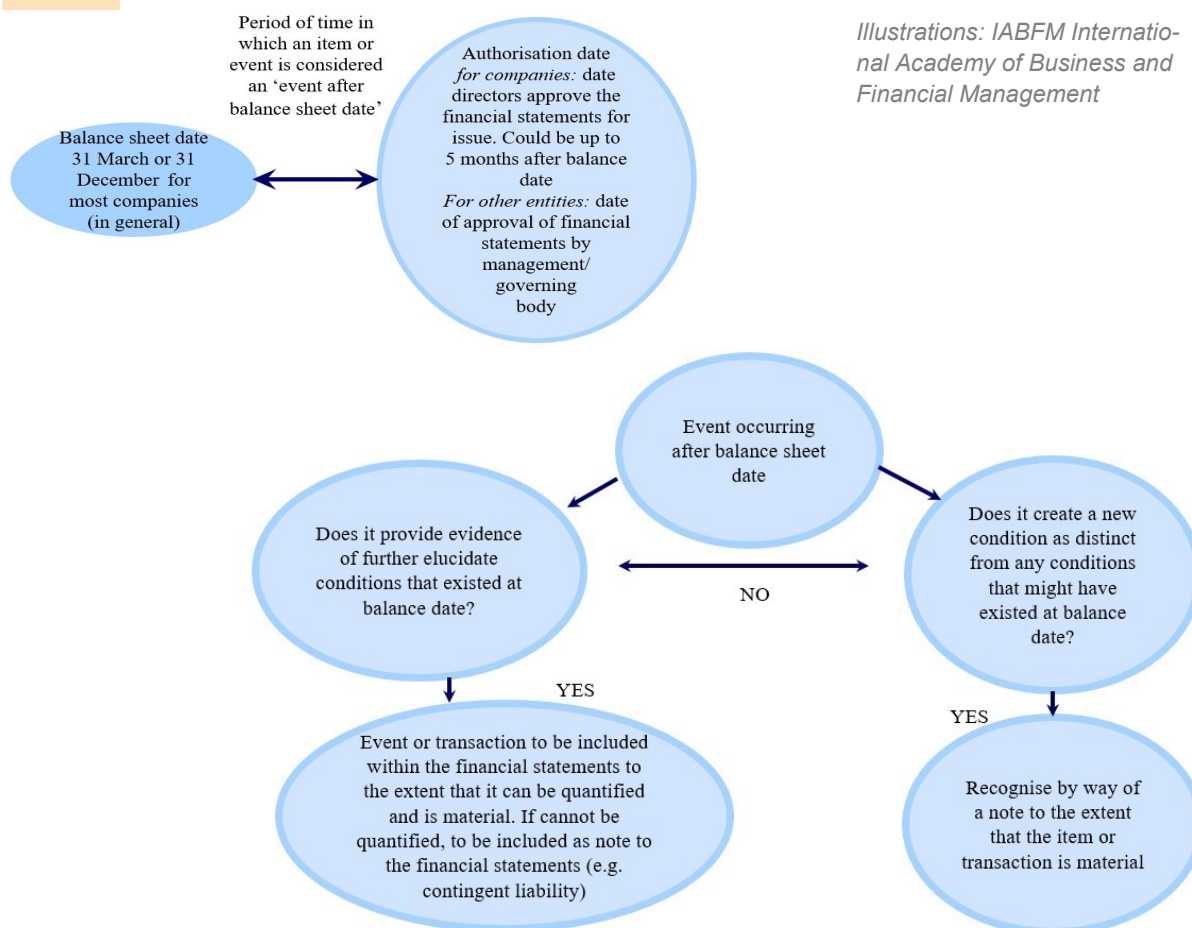
Ordinarily, the reporting period runs from January 1 through December 31, however, there are many entities that have 12 monthly periods ending March 31, June 30 and September 30.

If such an event occurred that questioned the going concern concept and existed at the end of the reporting period then certainly the financial statements would be bound to reflect this information. If on the other hand there was no knowledge of such an event the balance sheet and financial statements would be developed on a normal ongoing basis.



Photo: Tim Gouw

Illustrations: IABFM International Academy of Business and Financial Management



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- IFRS Workbook 2017 IAS 8. The set of books provides a book for every standard. Our acknowledgment to Mr. Prof. Robin Joyce.
- Thanks also to IFRSbox and Silvia for her valuable contribution as a reference source. Ms. Silvia Mahútová runs the website ifrsbox.com dedicated to helping people understand and learn IFRS in an easy way. In 2018, her website has over 130 000 visits per month and from more than 130 countries in the world.
- PricewaterhouseCoopers: This publication (VALUE IFRS Plc.) presents annual financial reports of a **fictional listed company**, and illustrates a model of IFRS financial reporting requirements. All tables/financial statements/notes used are shown without any modification.
- Emile Woolf International Ltd, Essential IFRS 2017. Emile Woolf International is an international global training and publishing provider. Over 100,000 people have studied with us and over 80,000 people have used our textbooks to help them pass Professional examinations.

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Mr. Peter Welch, CEO of GlobalCfo.LLC

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The Lucubrate Magazine Highlights Education and Development

The Lucubrate Magazine highlights education and development. Development in this context can be technological, educational, individual, social or global, and everything related to education. Development can be defined as a process of economic and social advancement in terms of quality of human life. It can be measured in terms of culture, wealth, education, healthcare, and opportunities. Development is complex and difficult to define a term that requires unpicking and deconstructing, not simply taking for granted its meaning at face value.



Photo: Lucubrate

Course and coaching are perhaps powerful tools for individual development. Coaching is not simply sitting down with someone and explaining something to them. It is helping them to develop ways of thinking, prompting them to come to their own conclusions and helping them manipulate the ideas for themselves. This kind of development can come from the coaching and from sources like a magazine. Lucubrate Magazine will contribute for development.

So when you hear the word "development", think about what activities could best benefit you and your life. It might be a training course but is more likely to be any one of a range of other ways of developing, and perhaps reflecting on it afterward.



What does Lucubrate mean?

The word «lucubrate» was used 200-300 years back by the monks when they should study in the night, using lamps or candles. Today the meaning of the word is to write or study, especially at night when you need to use artificial light. The word is also used when someone is producing scholarly written material.

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What you can use in the everyday life

We want to emphasize practical advice and practical knowledge that can be used in everyday life. We want to bring forth new knowledge that can be used by professional practitioners and non-professionals. The reader of the article should find that what he is reading is useful.

- An article will typically address a topic and discuss it with different approaches.
- An average article contains usually about 5000 characters or 800 words (less than two pages).
- All articles are followed by illustrations and/or pictures.

Prepare for the changes

The world is changing all around us. A skilled population is a key to a country's sustainable development and stability. We know that obtaining a quality education is the foundation for improving people's lives and sustainable development. To contribute to skill people over the next ten years and beyond, we must look ahead, understand the trends and forces that will shape our business in the future and move swiftly to prepare for what has to come. We must get ready for tomorrow today. Lucubrate will make it possible for youth and young adults all over the world to gain skills they can use in the labor market or create their own jobs. Lucubrate will make it possible for every person to have the lifelong learning opportunities to acquire the knowledge and skills they need to fulfill their aspirations and to make it possible to contribute to their societies. We can envisage that the Lucubrate project shall enlighten us.

Today the education is one of the most important indicators and the priority areas of the global social evolution. The human capital formation and human fulfillment for the benefit of individuals and the society implies a particular responsibility of the state in constructing of the education system, focused on result orientation and needs the satisfaction of the community. The quality of education is one of the most reliable indicators of the future development of any nation.



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Towards Urban Sprawl or Densely Populated Cities

Urban sprawl is caused by various demographic, economic, geographic, social and technological factors. These include rising real incomes, individual preferences favoring low-density development, natural barriers to contiguous urban development, and the technological progress in car manufacturing.



Structural change is a key driver of rapid growth: countries diversify into new industries, firms learn new things, people move to new locations. Anything that slows this structural change is also likely to slow growth. Because urbanization is one of the most important enabling parallel processes in rapid growth, making it work well is critical.

What is Urban Sprawl?

There is no common definition of urban sprawl. In this respect, there are clear parallels to the sustainability concept. A common denominator for the majority of the definitions is, however, that urban sprawl is characterized as low-density development and inefficient use of land. A simple definition is excessive spatial growth. Cities must grow to accommodate a growing population but may use more space than is deemed acceptable or reasonable. Land use is therefore often not optimal since it can be more concentrated and compact. [1] Urban sprawl is a result not only of population growth but also of lifestyles that take up more space. Accordingly, urban sprawl has increased even in regions with a declining human population.

Why do we get Urban Sprawl?

Urban sprawl is caused by various demographic, economic, geographic, social and technological factors. These include rising real incomes, individual preferences favoring low-density development, natural barriers to contiguous urban development (e.g. mountains, rivers), and the technological progress in car manufacturing. Certain policies have also implicitly encouraged urban sprawl. We can make a list of drivers towards Urban sprawl:

- Local and international economic conditions can play a crucial role with regard to urban sprawl.
- Socioeconomic factors can affect land development. An important driving force behind urban sprawl may be that there is a tendency that people want to move out of the inner city to more rural areas outside of urban areas.

- Transportation-related factors are prerequisites behind urban sprawl. Train, metro, bus, and car have provided greater freedom and opportunities with regard to localization of individuals, businesses and industry.

The policy and regulatory framework play a major role when it comes to driving forces behind urban sprawl. Maximum density (e.g. building height) restrictions, persistent underpricing of the externalities of car use (due to e.g. the absence of road pricing and too low on-street parking prices) and massive investments in road infrastructure are only a few examples of such policies.



Photo: Pok Rie

Consequences of Urban Sprawl

Urban sprawl has been shown to have significant environmental consequences manifested in higher emissions from road transport and loss of environmental amenities within and at the borders of urban areas. Urban sprawl contributes significantly to the loss of fertile farmland, to soil sealing and to the loss of ecological soil functions. Its effects on biodiversity are very context-specific; discontinuous development patterns may be harmful to biodiversity if they are accompanied by a



Photo: Tom Fisk



Photo: Tom Fisk

fragmentation of the natural habitats surrounding urban areas. Sprawl's economic consequences include significant pressures on local public finance, as it is more expensive to provide public services to more remote, low-density areas, as well as notable time losses due to congestion. Urban sprawl is also associated with social inequality and segregation, as the regulatory mechanisms that maintain low density may severely affect housing affordability. [2]

The increase in built-up areas reduces the size of wildlife habitats and increases landscape fragmentation and the spread of invasive species. Urban sprawl leads to higher greenhouse gas emissions, higher infrastructure costs for transport, water, and electrical power, the loss of open landscapes, and the degradation of various ecosystem services.

Where do we Find Urban Sprawl?

We can find in many different countries. Urban areas in some countries, such as Austria, Canada, Slovenia, and the United States, rank relatively high in multiple dimensions of sprawl. However, in cities in Denmark, France, and several Central European countries, such as Czech Republic, Hungary, Poland and the Slovak Republic have sprawled along most of the same dimensions.[2]

The Guardian are discussing the Urban sprawl in an article in 2017 called, "Where is the world's most sprawling city?" where they point at some larger towns: *"The Strip development, and its cousin the shopping mall are symbols of America's gift to urbanism: sprawl. Los Angeles may be the world's most famously sprawling city but is it the worst culprit? What about Montreal, or Brisbane, both low-density cities in countries with no shortage of space and a strong love of the car?"* [3]



Los Angeles (USA) Photo: Jamie McInall

Cities in a small group of countries consisting of Greece, Japan, Korea and the United Kingdom, are at the bottom of the ranking of multiple indicators of sprawl. This implies a dense and relatively contiguous form of urban development, which entails a more efficient use of land and can contribute to the reduction of emissions from road transport. However, this form of development may also entail a higher exposure of an urban population to air pollution and natural disaster risks. Looking at the evolution of urban sprawl since 1990, it has declined in Australia, Spain, and Switzerland, where urban areas have become much denser and less fragmented. [2]



Urbanization for Development

Urbanization's contribution to growth comes from two sources: the difference between rural and urban productivity levels and more rapid productivity change in cities. In the early decades of development, when the majority of the population is still rural, the jump from rural to urban employment makes a big contribution to growth. As cities grow larger, the second effect—faster gains in urban productivity—begins to dominate, as it operates on a larger base. For these reasons, making urbanization work well is something that countries that want to grow quickly must learn to do. There are two important parts in making it work. The first challenge is to foster the growth of high-productivity activities that benefit from agglomeration and scale economies in developing country cities. The second involves managing the likely side effects of the economic success of cities—congestion, regional inequality, and high prices of land and housing. Meeting this second challenge is essential for mitigating the divisive impacts of successful economic growth and spreading the benefits of higher economic productivity widely. [4]



Smart Growth

Smart growth initiatives recognize the relationship between development patterns and quality of life. The visual quality of our communities is a basic building block for healthy, vibrant, and beautiful neighborhoods. By applying smart growth strategies, local citizens can fight haphazard sprawl and create communities that reflect their unique character and are a source of pride and inspiration for residents and visitors alike. Scenic America favors growth that is attractive, affordable, accessible, equitable, and good for our environment.

What is Smart growth?

Smart growth is an approach to development that encourages a mix of building types and uses, diverse housing and transportation options, development within existing neighborhoods, and community engagement. The 10 principles below are considered the foundation of a smart growth approach [5].

1. Mix land uses
2. Take advantage of compact design
3. Create a range of housing opportunities and choices
4. Create walkable neighborhoods
5. Foster distinctive, attractive communities with a strong sense of place
6. Preserve open space, farmland, natural beauty, and critical environmental areas
7. Direct development towards existing communities
8. Provide a variety of transportation choices
9. Make development decisions predictable, fair, and cost-effective
10. Encourage community and stakeholder collaboration in development decisions

Education and Urban Sprawl

Public school quality and composition play, and has historically played, a significant role in determining where families choose to live. Enormous disparities in school funding and racial composition have encouraged large numbers to flee from higher density urban areas to low-density sprawl while at the same time discouraging the middle class from settling in cities in the first place.

Urbanization plays a crucial role in impacting social issues of public schooling in urban environments and contributes to the profound social challenges that urban students endure. Urbanization primarily affects social issues of urban schools by increasing racial inequities.

Do you have a comment or do you want to give your feedback on this article? Do you want to write letters to the editor? Please use the link <https://lucu.nkb.no/feedback/>

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THE TVET EXPERT OF THE WEEK

WorldSkills



WorldSkills is the global hub for skills excellence and development. Through international cooperation and development between industry, government, organizations, and institutions, we promote the benefits of and need for skilled professionals through grass-roots community projects, skill competitions, and knowledge exchange. We show how important skills education and training is for youth, industries, and society by challenging young professionals around the world to become the best in the skill of their choice.

WorldSkills is the collective voice for skills excellence and development in vocational, technological and service-oriented careers around the globe. Since 1950 we have raised the awareness among youth, as well as their parents, teachers, and employers, that our future depends on an effective skills training system. Today WorldSkills represents more than 45 skills in over 75 Member countries and regions, all working together with youth, educators, and industries to help prepare the workforce and talent of today for the jobs of the future.

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- Be proactive on skills issues by constantly influencing agendas now.
- Enable networks through word-of-mouth, social media, events, and other outlets.
- Be part of the conversation in policy development in countries.
- Be the authority on skills development and excellence worldwide as a power-hub and information resource.
- Work together with educators, policymakers, industry, and other organizations to redefine the value and improve the attractiveness of skills.
- Advocate the need, value, and results of skilled work and professional training for young people so that industries, regions, and countries will thrive in the global economy. macroeconomic perspective

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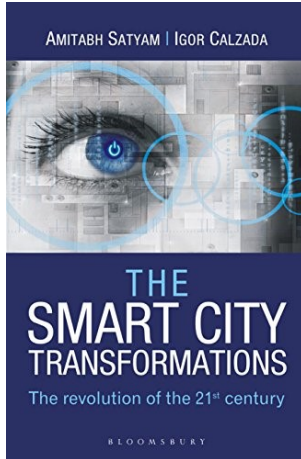
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Book

The Smart City Transformations

By Lesley Murray and Susan Robertson



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highlights education and development

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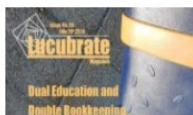
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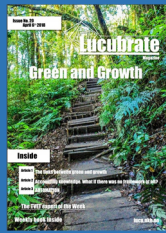
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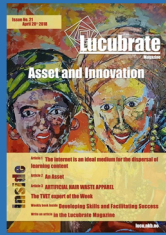
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LUCUBRATE MAGAZINE

The world is changing all around us. A skilled population is the key to a country's sustainable development and stability. We know that obtaining a quality education is the foundation to improving people's lives and sustainable development. To contribute to skill people over the next ten years and beyond, we must look ahead, understand the trends and forces that will shape our business in the future and move swiftly to prepare for what has to come. We must get ready for tomorrow today. We will make it possible for youth and young adults all over the world to gain skills they can use in the labour market or to create their own jobs. We will make it possible for every person to have lifelong learning opportunities to acquire the knowledge and skills they need to fulfil their aspirations and contribute to their societies.

The Lucubrate project started in 2017 by NKB. The aim for the project is to become one of the world leader in knowledge transfer independent of the country you live in. The Lucubrate Magazine is a part of the Lucubrate project.

We recognize the creative power that comes from encouraging collaboration and innovation among a team of knowledgeable experts. This unique energy is our greatest competitive advantage in the world marketplace.

- Our purpose is to bring Quality Education and Skills Everywhere.
- Our mission is to support education for building skills to all kind of businesses to create possibilities for jobs and make a lasting difference to people's lives. Globally. 24/7.
- To be the world leader in knowledge transfer across all borders.

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