



TECHNOLOGY TRENDS 2014

an ekerk trend report



TECHNOLOGY 2014: INTRO

We live in a world where technology changes and improves so drastically that weekly new developments and progress can be seen in every conceivable area.

At ekerk we realized that consumer–technologies play a big role in how local congregations and spiritual leaders do their work, and how they communicate with each other. If one isn't focussed on this on a daily level, it's a challenge to stay abreast of all the new developments, and how it may or may not affect your normal existence.

We have therefore decided, as part of our regular trend reports, to do an annual overview of emerging technologies, as well as discuss the possible practical implications and applications of these new technologies.

This then is our technology overview for 2014 — happy reading!

0 TO 5 YEARS



tablets



message apps



internet video

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Communications tools don't get socially interesting until they get technologically boring.

[Clay Shirky]

Every emerging technology is initially seen as a “nice-to-have” before ripening and being accepted and embraced by the masses.

This was also the case with tablet computers. What was initially seen as a luxury has become indispensable for any business person, student or consumer media-consumer of any kind. The tablet PC has outgrown its infancy, and is now counted as a full-fledged tool of communication and creativity.

The rise in popularity of these types of hardware has lowered the hurdle between ordinary people and progressive technology, and we see an increase in the different demographic- and income-groups who become active on the internet.

This phenomenon has also moved digital communications from the desktop or workplace to any possible conceivable sphere of our lives. Stay on the lookout for ever improving products such as Apple’s own iPad and the Samsung Galaxy Tab.

The tablet PC is indeed here to stay.

Read more: http://en.wikipedia.org/wiki/Tablet_computer

Possible result:

Productivity doesn’t only happen in front of the computer at your desk. The same amount of productivity (if not more) can happen on a tablet computer anywhere, anytime.

Potential applications:

Does your congregation have a tablet-friendly website? Nowadays, work ‘happens’ anywhere. We need to be able to discern when to work, and when to spend time with family and friends... We need to learn how to ‘switch off’ work when appropriate. On the other hand, tablets can also aid in leisure and relaxation. This means that TV and other programs can be watched on the tablet computer without the need for a TV screen.

On the social media front, we're still amazed at how Facebook, Twitter and similar social media platforms have changed our worlds.

However, we did not anticipate that simple mobile applications only sending short text messages between users, will challenge the giants of social media. Research shows that students and teenagers are now closing their Facebook profiles in favor of alternative ways to stay in touch with their social circles, like WhatsApp, SnapChat and WeChat.

These text applications have the advantage that each user's mobile phone number should be known by you before you can communicate with them. This makes these types of platforms much more personal, relevant and direct — something that the mass approach of Facebook has always lacked.

Locally WhatsApp is the application of choice while SnapChat in North America and WeChat in Europe experience more momentum.

Read more: <http://bit.ly/1gAL0Df>

Possible result:

The days of sending text messages or emails and wait a long time for an answer are over. There is now an immediate line of communication that's personal.

Potential applications:

How can the local church use direct messages to people to help in times of need? The line of communication between church and member and have actually fallen away. They are directly linked to each other via the immediacy of the instant message. The art, then, is how to do it in a healthy way and to not spam or overwhelm the people with whom you are communicating with too many message. How is the essential communicated? What is the essential that the person WANTS TO hear? How can the church help people learn direct messaging etiquette? This means that there's a direct line of communication, which also has privacy. When called one need to answer immediately — that deprives the person of privacy. However, direct messages retains the line of urgency while the receiver has more privacy concerning the reply. How do we communicate better while saying less?

With the use of high-speed internet connections and omnipresent applications and devices, we find that we're more inclined to consume online media that were previously beyond our reach.

Visual imagery is currently the media type of choice for online consumers. They even prefer this above text. Video, at this stage, is third in row as consumers' preferred medium of online communication, but it is expected to pass text in the order of popularity within the next three years and to become the most consumed type of online media.

This would mean that we can expect static graphics first, then video, and lastly text as chosen communication medium on the web.

Video producers are becoming increasingly popular to communicate organisations' messages through this visual medium in order to meet the expectations of a growing online audience.

Read more: <http://www.theguardian.com/media-network/ebuzzing-partner-zone/the-unstoppable-rise-of-online-video>

Possible result:

We are moving deeper and deeper into a visual world.

Potential applications:

How can the local church learn the art of telling a story via a visual medium?
How can the church help people to live their own lives as a story with Jesus?

5 TO 10 YEARS



wearable tech



fibre optics



3D printing



online learning

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Any sufficiently advanced technology is equivalent to magic.

[Sir Arthur C. Clarke]

We're all used to holding our computers and cell phones in our hands, but the days of this technical awkwardness is officially counted. The latest technological development implies that you will remain wirelessly technologically connected through a device that you will wear on your person.

The most recent examples include goggles with built-in screens, clothes with sensory ability, and watches that show you almost everything but the time. Of course, all these devices connect to the internet, and you can easily stay updated with what's going on on your phone and computer.

Thusfar, the main purpose of these devices was 'notification' based, which means they only notify you of any new developments, but the ability to also be creative with your new glasses or wristwatch is coming fast.

Look for new products like Google Glass, Android Smart Watch, Pebble and the long-awaited Apple iWatch, to make their appearance locally soon.

Read more: <http://mashable.com/category/wearable-tech/>

Possible implication:

We hear more and more people talking about the 'always connected consumer'. Wearable tech is the 'walking-the-talk' of this. Each person will be directly connected to the internet and this trend will manifest your day-to-day life.

Potential applications:

People will be able to watch a video during a sermon without the need for a projector. The days of "I come to church for answers." will disappear even faster still. Everyone will be permanently connected to the internet which means that they will answer their own questions via the internet. The question is whether each of the of the people that consume the church's news and information would like to receive and access it via the wearable tech. What this implies is that if we're connected to the Internet via the devices, then information no longer find us, but the consumer has the power and potential to search for and find whatever he/she wishes. Will the church communicate relevant information for which the consumer is searching?

If you thought your 4MB Telkom ADSL internet line was the ultimate in digital communication, then you need to seriously reconsider your standards. The idea of sending data through an electronic cable is as old as the hills, and is being replaced worldwide with data transmission via optical connections. In short, it means that the data is physically transported by a highly sensitive light beam, via an optical cable, from the source to the screen.

Data transmission via optical cables is faster, more stable, and has the potential to increase your existing Internet speed and capacity up to 500%. Where a standard SA ADSL line transports data at between 2 and 10Mbps, the average optical cable kicks connections back with anything from 20 to 30Mbps. Some of the more immediate consequences of having data available at faster speeds, include:

Increased internet traffic + More video-based content + Faster and more immediate communication + Cheaper online products and services

It could also mean the end of otherwise offline service providers, which could ultimately be out of business, because their online competitors can now provide a faster and cheaper product or service.

Read more: <http://www.sciencedaily.com/releases/2013/06/130627142406.htm>

Possible implication:

The excuse of a slow internet connection will no longer be a valid one. It could also possibly mean that TV will be phased out so that consumers have more choice and control over when they want to see what, via the internet. Work and business will also happen at a greater speed.

Potential applications:

The local congregation will no longer have an excuse for not providing everyone with free and fast internet. Ministry should increasingly use videos because speed is no longer a problem. If local congregations don't already allow staff to work from home, then this should be seriously considered. With this level of internet speed anything can be uploaded or downloaded to or from the internet faster than it would take to physically download or upload it (all electronically of course). Meetings can be done via the internet and people can 'attend' from the comfort of their own homes in the presence of their family. Business will be conducted quicker which means faster transactions etc. Will the church keep up, or will we stay stuck at dial up internet speed?

5 TO 10 YEAR: FIBRE OPTICS

We're all familiar with the laser printer on your desk that prints all your necessary documents as and when you need it.

But try to imagine a device that doesn't print on paper, but is more like an automatic sculptor that can produce any three-dimensional object at the touch of a button. All you need is the liquid used to form the solidified object, and the specific digital blueprint.

Even though this sounds like a technological development that's still many years away, 3D printers have actually already been in commercial use for a good couple of years.

They're used in companies to produce and replace parts and components, to design new products and prototypes, and to produce prototypes that makes the research process of any product line faster and more effective.

Domestically, the 3D printer can be used to fix clothing, to quickly adjust your dishwasher yourself, and even to help children to design and develop their own products, to 'print' the parts, and then to assemble it.

Read more: http://en.wikipedia.org/wiki/3D_printing & <http://3dprintingsystems.co.za/>

Possible result:

The possibilities are endless!

Potential applications:

Everything is replaceable with a 3D printer. Every person has the potential to replace anything from the comfort of their own home. We are making a shift back to the time when everyone worked with their hands, when everyone learned a specific craft. This application is the intermingling of the computer, the internet and handiwork. Everyone is a designer.

Rising fees at tertiary institutions makes it increasingly difficult for young people to acquire high quality teaching. The internet has also shrunk our world in the sense that all important information is knowable, and every expert reachable.

These factors, with some of the other trends in this report, creates a perfect opportunity for the birth of the online learning phenomenon.

Platforms such as SlideShare, SkillShare, GoToWebinar and others make it easy for ordinary internet users to act as either tutors or learners.

In general, online learning experiences are more focused on a specific topic, more affordable, easier to obtain and fine to share with others in your social network.

This application is used especially in the form of large-scale correspondence, online conferences, staff training, press releases and even a host of others.

Leaders in this area include the TED Conference, MIT and Harvard University.

Read more: <http://elearningindustry.com/top-10-e-learning-statistics-for-2014-you-need-to-know>

Possible result:

Anything can be taught or learned via the internet.

Potential applications:

Where do people go for answers today? The internet. This also means that people all over the world receive education in the comfort of their own homes. This offers the opportunity to work full time while also receiving an education. Does the church teach people significantly enough regarding the Word of God for this to serve as an education? How can the local church embrace internet learning experiences to enable people all over the world to hear the Good News?

10 TO 15 YEARS

 wireless power

 drones

 bio technology

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The real danger is not that computers will begin to think like men,
but that men will begin to think like computers.

[Sydney J. Harris]

If any electronic device did not have to make provision for a battery, it could include up to 200% more processing power.

This means that your phone and your computer would have been much faster and more powerful if it didn't have a battery that needed to be charged constantly. In the absence of an always emptying battery we will finally be rid of the inconvenience and embarrassment of having a flat phone or computer, just when we need it most!

The technological invention that will bring this reality into being is wireless electricity — the phenomenon where electricity can be sent around inside airwaves just like wireless internet, and where any device that is within the reach of the signal will be propelled by it.

Wireless power transmission will have to be as common as mobile phone signal for this technology to be viable at all.

Either way, once we no longer need to charge our devices, there will be significantly more time, power, space, and capacity available to achieve faster, bigger and more meaningful things with the technology in our hands.

Read more: <http://edition.cnn.com/2014/03/14/tech/innovation/wireless-electricity/>

Possible result:

We'll have more time to be connected. This, of course, has the potential for both good and evil.

Potential applications:

What does a local ministry look like when people are even more permanently connected to the internet? Maybe the question should rather be how the local church can help consumers to make more meaningful use of this time, power and space without neglecting their relationship with Jesus and with one another.

A drone is a remote-controlled miniature helicopter, submarine, car, airplane or robot, with a variety of functions on board.

These drones are used with great success in various sectors, and more and more organisations find new applications for this seemingly simple technological innovation every day. Drones first made their appearance on the public radar when scientists attached cameras to the drones in order to photograph things and places impossible to reach previously.

A short while later a multitude of extra applications for drones saw the light.

Nowadays, the most common use of commercial drones involves communication, reconnaissance, photography and videography, and (somewhat more controversial) applications by military and private organisations where drones are armed to achieve greater strike power over long distances and rough terrain.

Drones are fully integrated commercially and the popular AirDrone 2.0 is already available locally at an affordable price.

Read more: <http://www.theguardian.com/world/drones> & <http://ardrone2.parrot.com/>

Possible result:

Fewer people will be used to perform mundane tasks such as delivery etc. The time between a purchase and product delivery will also be reduced.

Potential applications:

If drones are used to deliver products, delivery will happen significantly quicker. So the delay between purchase and delivery is shrinking. This means we are living in an even faster world. How does the local church help people not to get caught up in the race and the rapid 'running away' of technology, but to embrace it in a healthy way to embrace and to use it to make life easier?

It's one thing to have your internet connected device on your arm or in your hand, but it's a completely different situation when the internet is roaring through your veins, or communicating directly to the synapses in your brain!

Although we're accustomed to certain types of technology that transcend the bio-boundaries of our bodies (think of pacemakers and ID chips for pets), we still need to do some serious growing before we can allow broadband connections on such an intimate level as part of our beings with any degree of responsibility.

Possible applications for embedded bio-tech will, quite predictably, have payoffs in the medical field primarily. Imagine that your main physical parameters such as blood pressure, heart rate and oxygen consumption are constantly monitored by software connected to your doctor's office, and that you receive a quick emergency text message if any of these levels functions higher or lower than the norm!

Although this technology is still decades from any commercial viability, we can already observe the necessary building blocks that will eventually enable it in our current reality.

Read more: <http://www.bio.org/articles/what-biotechnology>

Possible implication:

The health of mankind will improve exponentially faster.

Potential applications:

We hear more and more that higher expected longevity put pressure on people's pension savings. We believe the church can and should play a role in preparing people for this issue, and helping where appropriate. The Church need to ask herself and redefine the role she will and should play in society. Inside an era where everything important can be known, and where our health improves, what role can the church play in such a society?

It is our wish that you'll find your way in this sea of technological development.

Although it is never compulsory to accept and implement every new development, congregations and ministries will suffer damage if we decide to withdraw ourselves completely from technology.

The Lord works wonderfully through the ingenuity of developers and entrepreneurs, so make sure you stay informed about how technology brings your world closer to the Kingdom of God!

TECHNOLOGY 2014: CLOSING

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Thanks for reading!

