



CITY OF CAPE TOWN
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STAD KAAPSTAD

Using Geo-Spatial Information in Decision Making

Alderman Belinda Walker, 25th June 2015

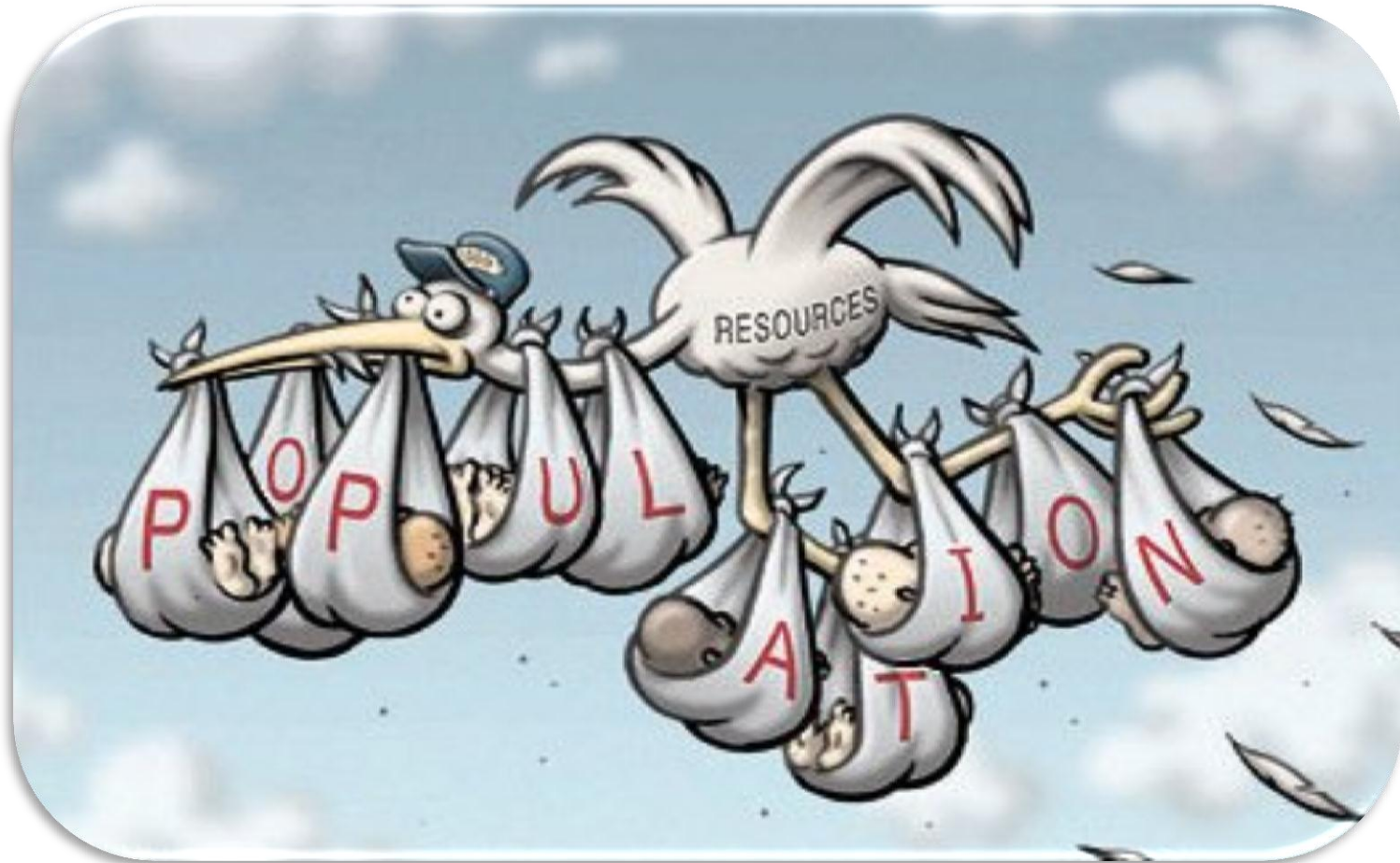
Making progress possible. **Together.**

INTRODUCTION

The context and the challenges

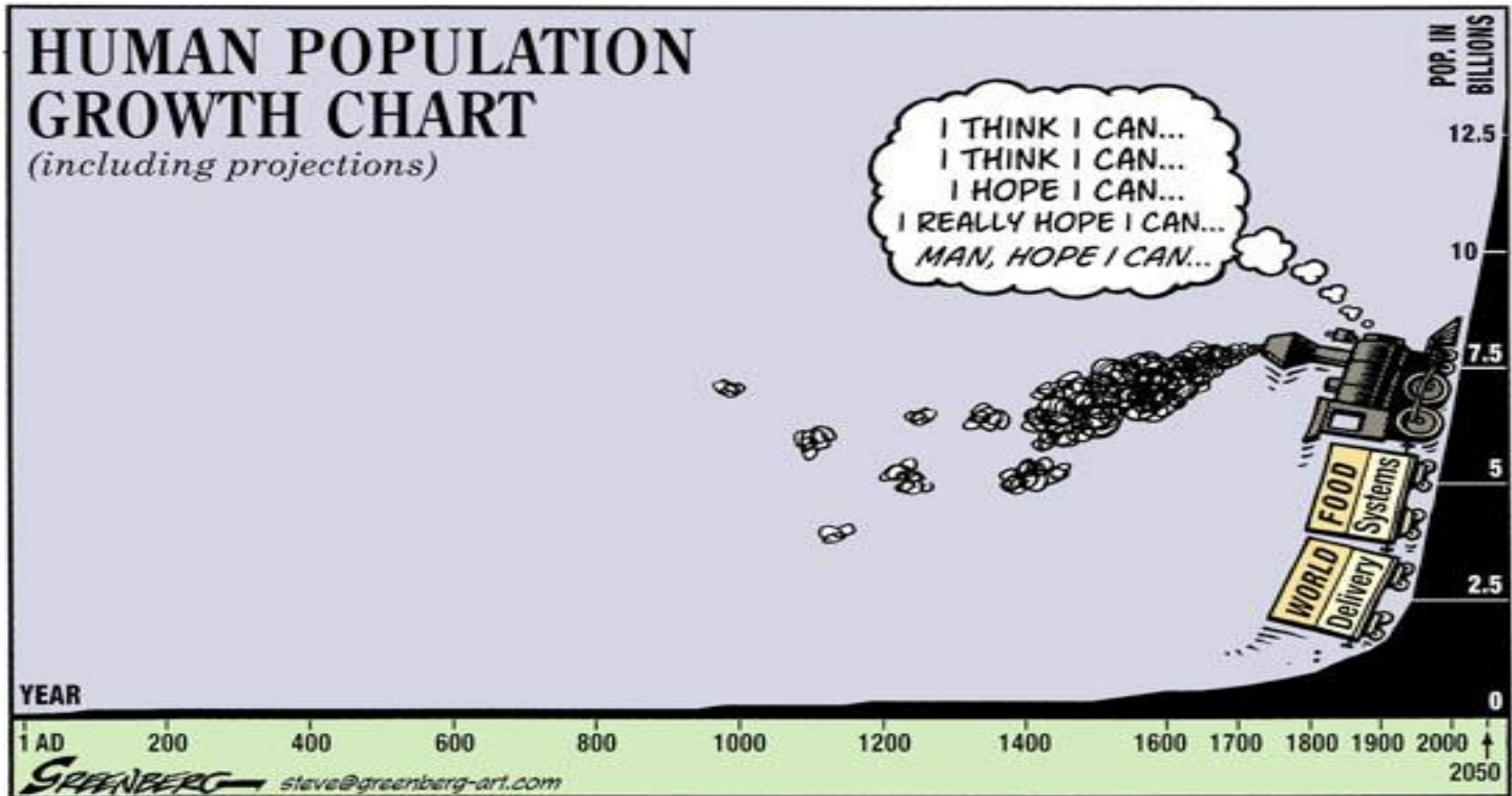
Context: Stressed Planet

- The Challenge: Growing Populations



Context: Stressed Planet

- The Challenge: Rising Expectations



Context: Stressed Planet

- The Challenge: Increasingly scarce resources



GIS

**What is GIS?
Why is it required?**

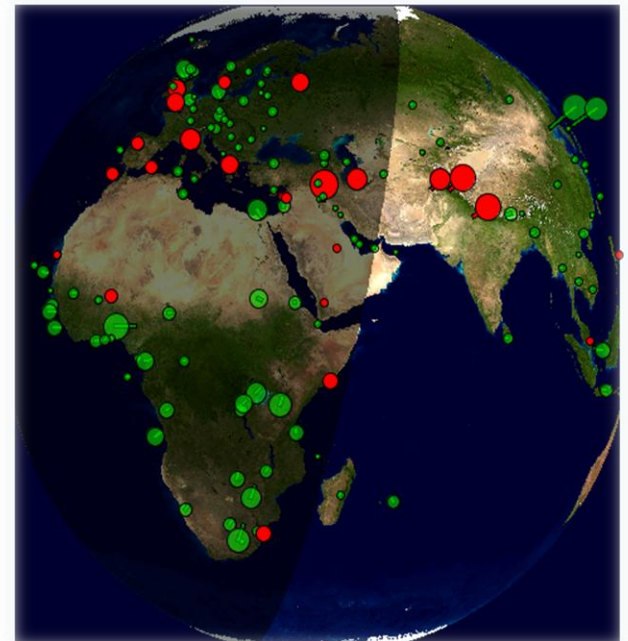
Geographic Information Systems – ‘GIS’

GIS is fundamentally about the following:

**1) Knowing
what is where?**

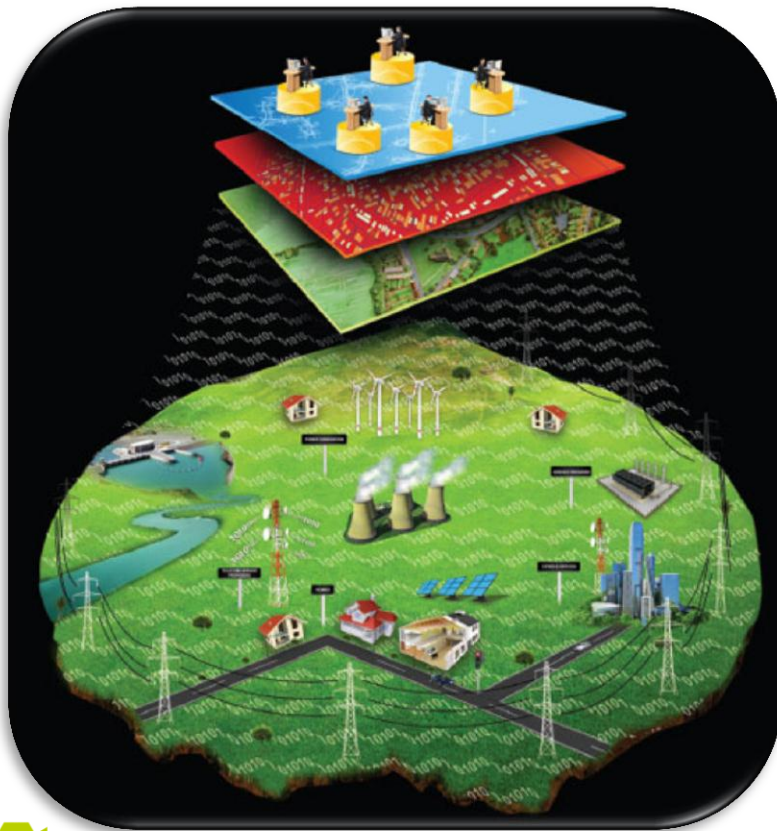


2) Mapping the real world

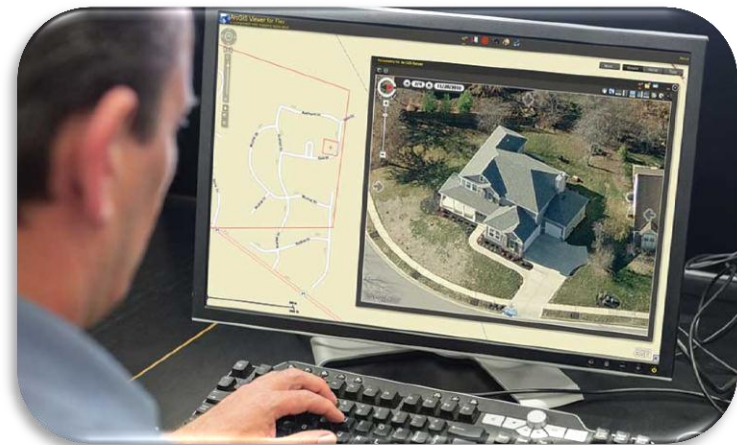


Geographic Information Systems – ‘GIS’

3) Understanding relationships
in this world



4) How people use technology –
To gain power or to empower?



MAPPING

Where we were...

The Advent of Mapping: Phase 1

Basic, early mapping, but not enough data...



Mapping: Phase 2

Growing Amounts of Data & Specialized Personnel ...



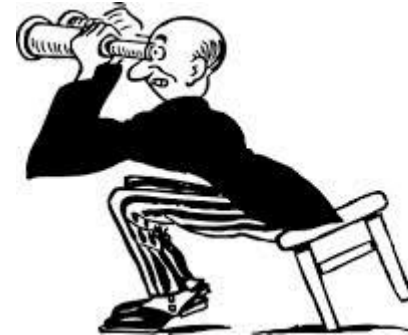
Mapping: Phase 3

Buried under the Data...

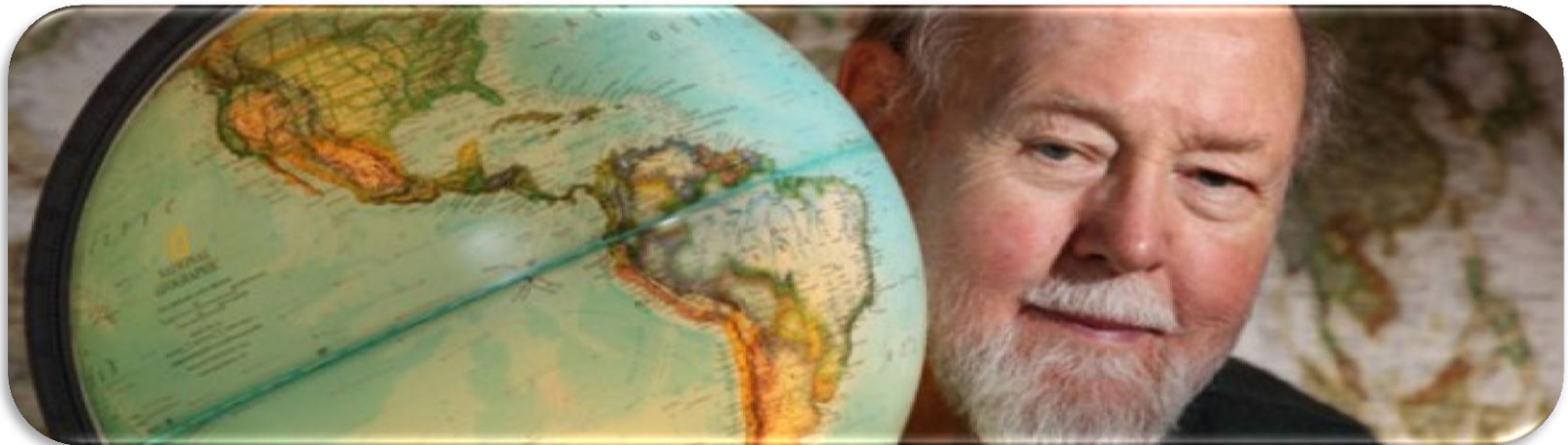


Need for Computer Mapping... Locate Roger Tomlinson!

- Roger Tomlinson is known as the 'Father of GIS'



- 1960's : Director of Regional Planning, Dept. of Forestry and Rural Development, Govt. of Canada, where he initiated planned and directed the development of the [Canada Geographic Information System](#), the first computerised GIS in the world.



TECHNOLOGY

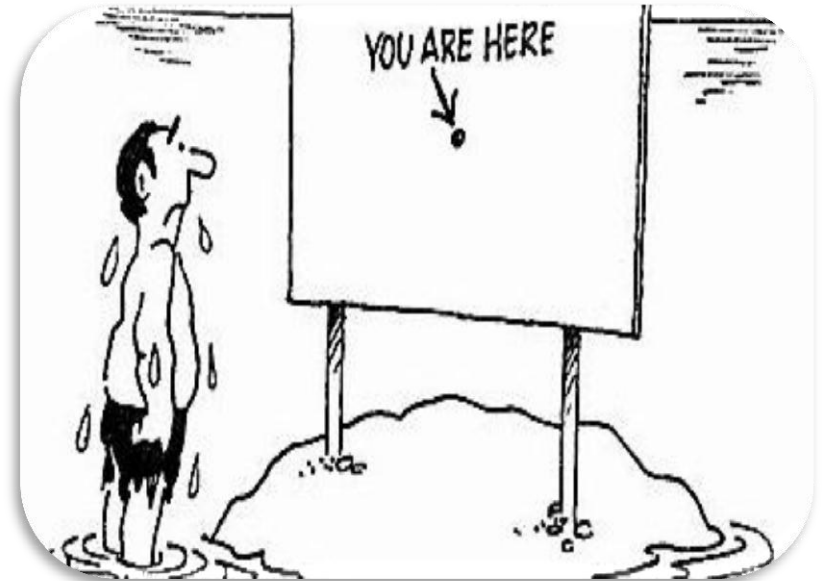
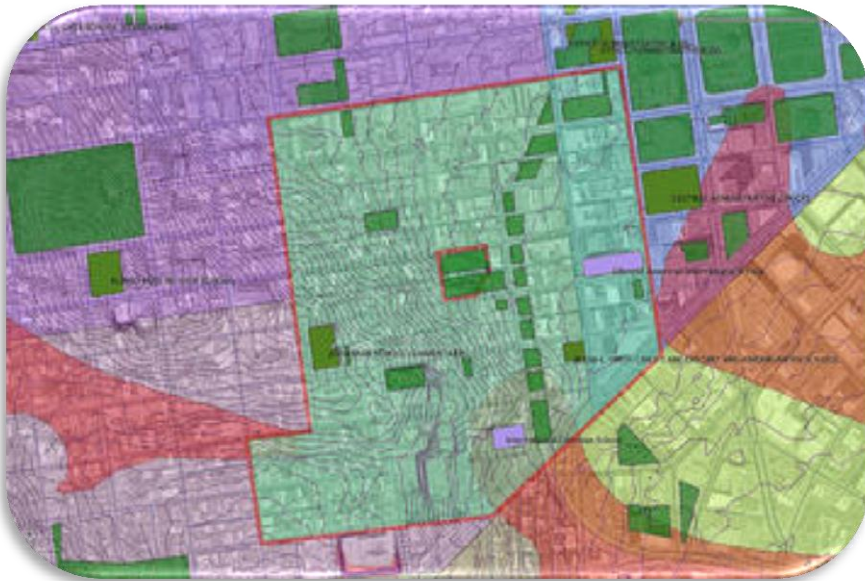
**How GIS technology
developed & where we
are...**



Phase 1 – Basic GIS Technology

People:

- Limited Numbers
- Highly specialized
- Self taught



Phase 2 – Growing GIS Technology



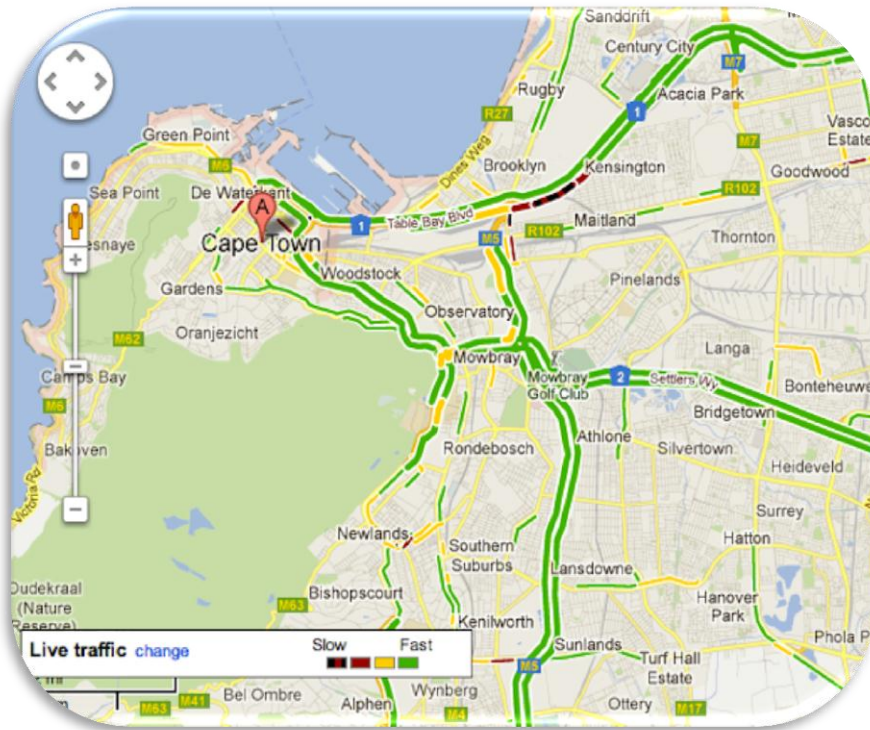
- Increased Data
- Growing numbers of GIS Skills
- Increased number of courses available; not teaching oneself



Phase 3 – Growing GIS Technology



- Increased use of GIS through Google Earth, GIS on Smart Devices





Phase 3 – Growing GIS Technology

- Need: Sophisticated IT and GIS-skilled people



Phase 3 – Growing GIS Technology



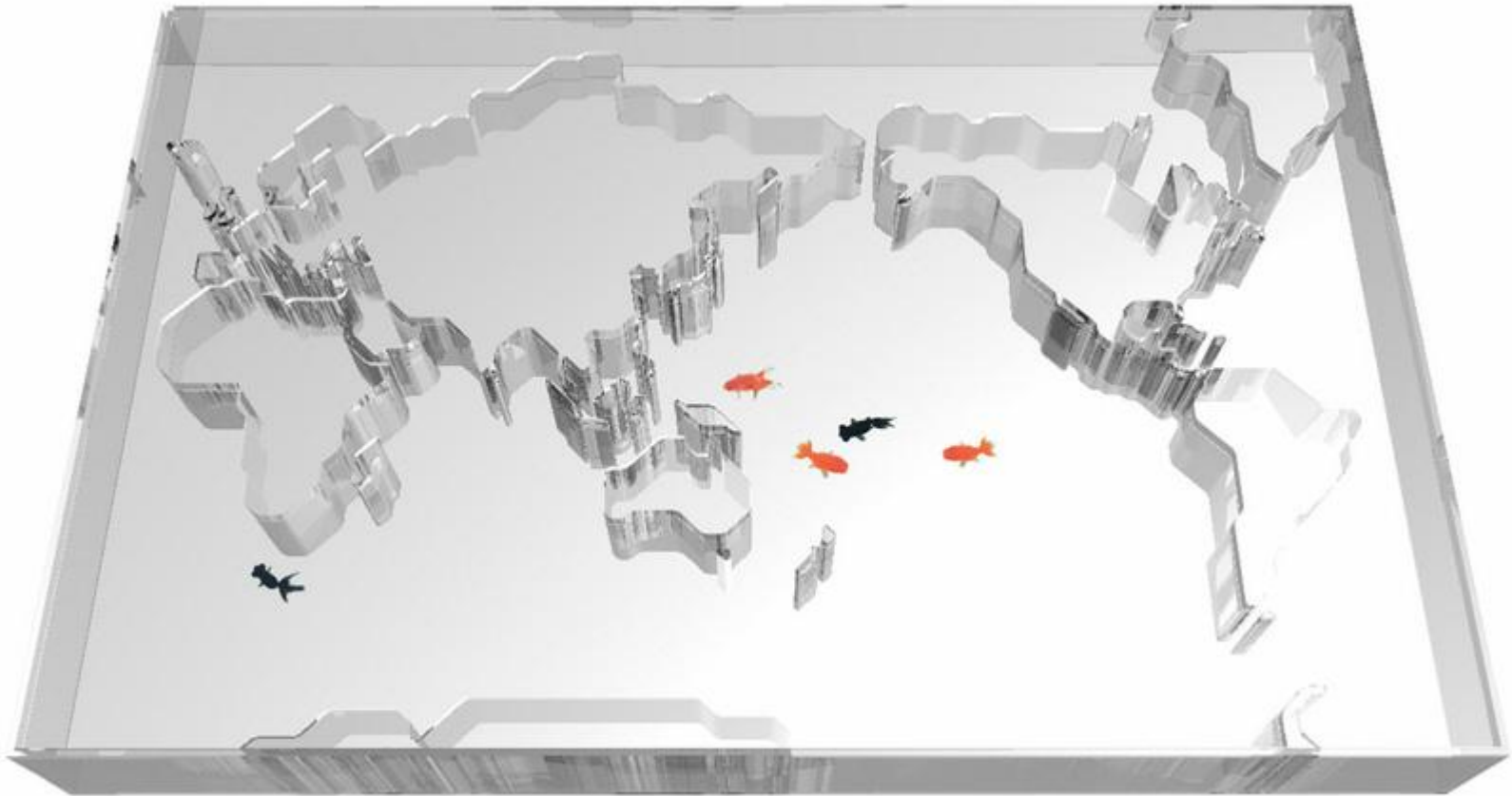
- Increasing number of young GIS-skilled people; a significant number of which are Female



GIS: People and Technology



- GIS enables people to use technology to gain power...



GIS: People and Technology



Pardon My Planet

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LEE

WHERE IT ALL WENT WRONG...

OK, IT'S SETTLED. THE WOMEN WILL BE IN CHARGE OF NAVIGATING THE HUNT. SO NOW LET'S VOTE ON WHICH GROUP WILL BE IN CHARGE OF THE WEAPONS...





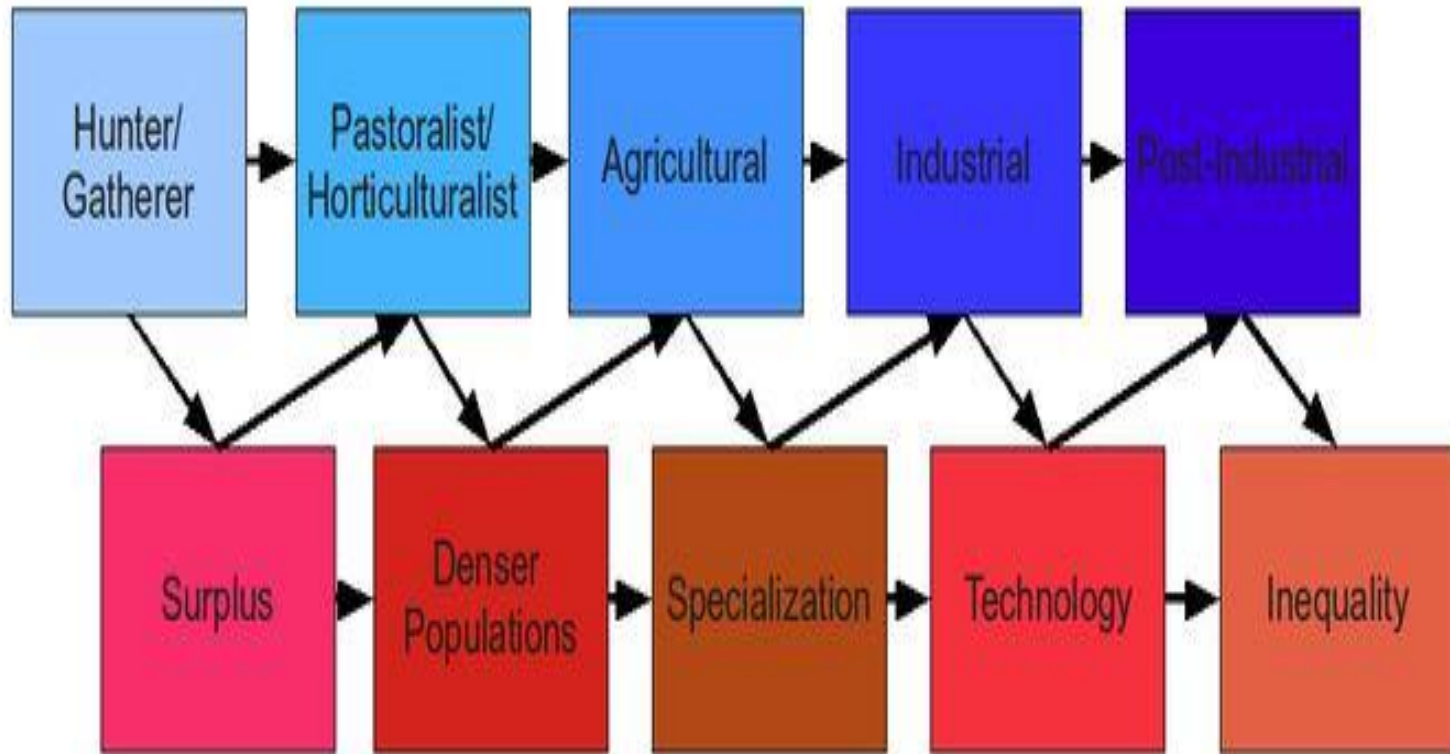
GIS: People and Technology

- Can GIS also enable people to use technology in order to give power and empower...?



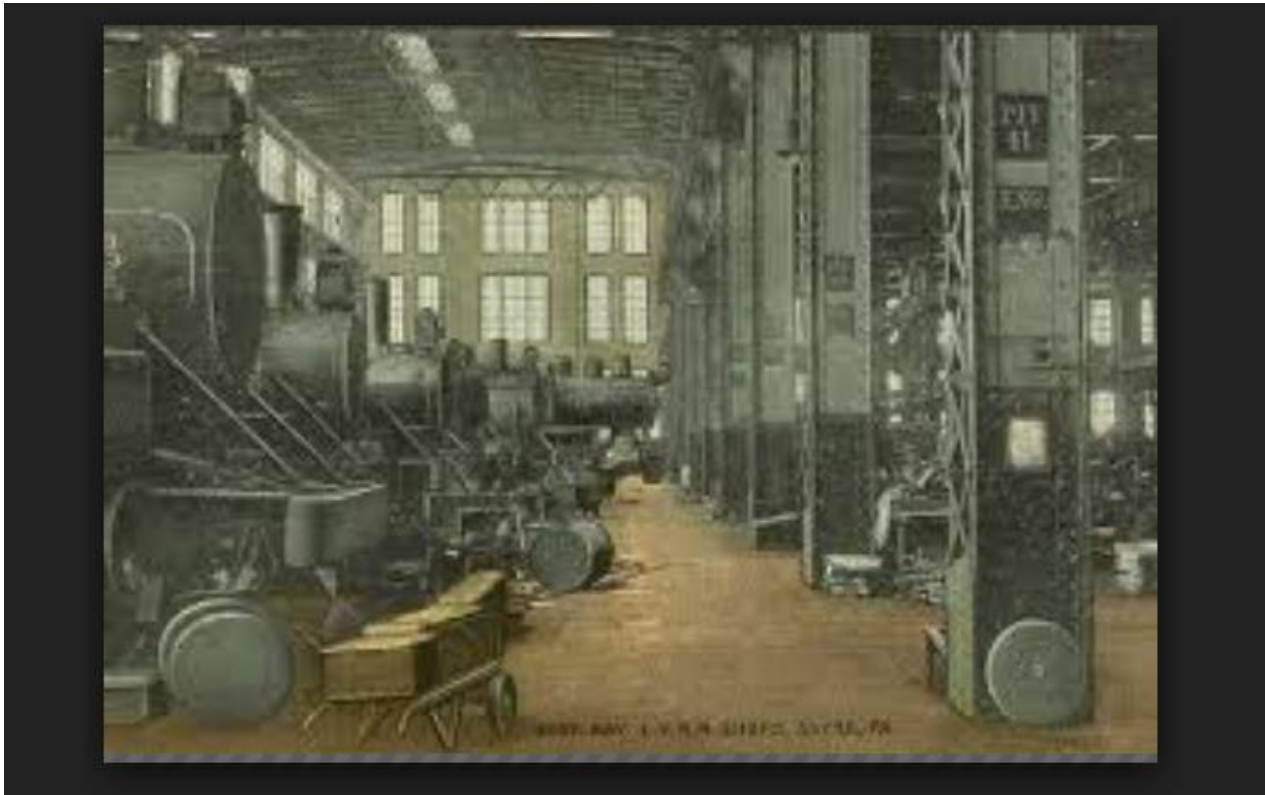
EVOLUTION OF ECONOMIES

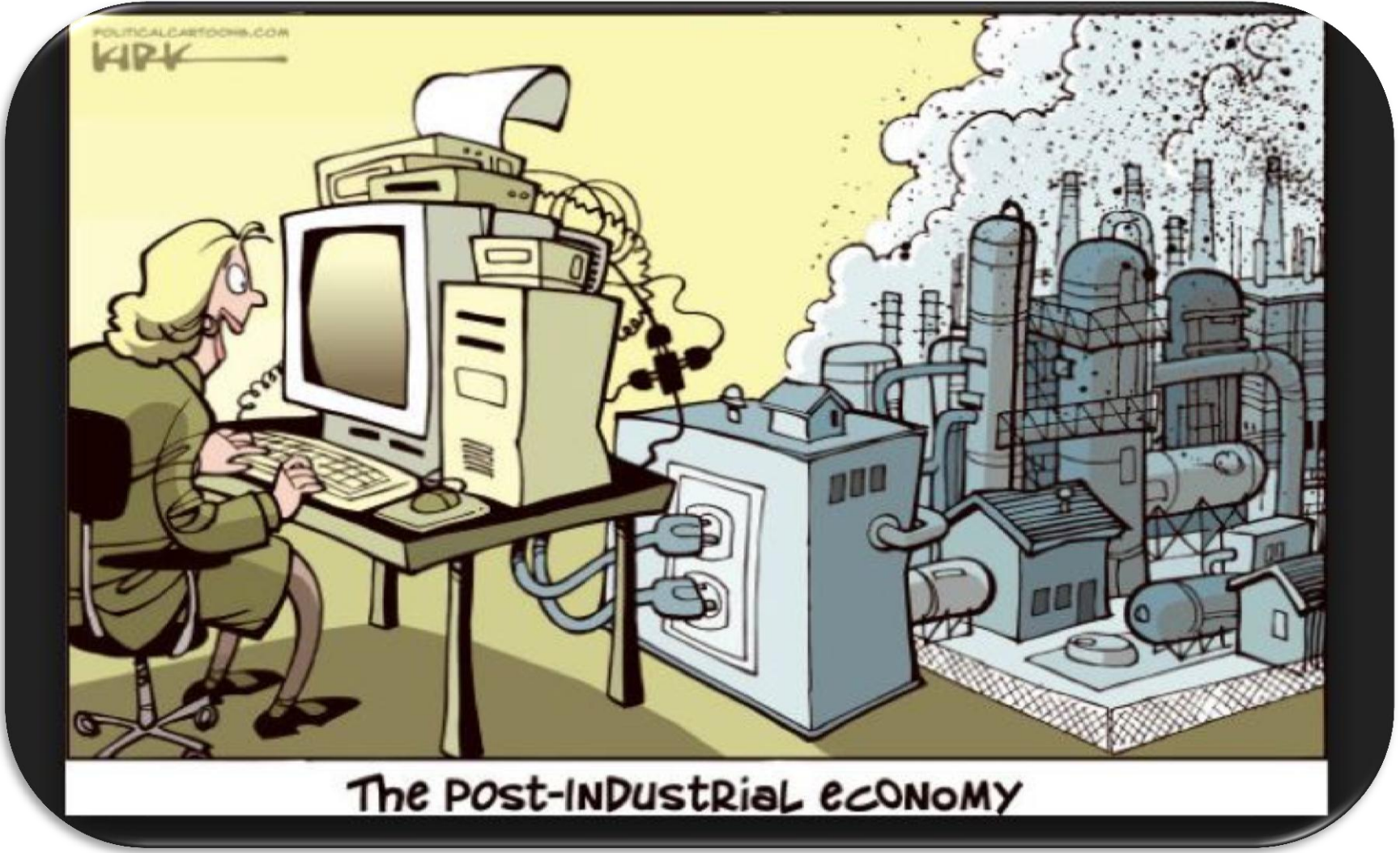
Where are we going?



The Industrial Economy

- Applies to the South African context
- The educated are still leading
- Information technologies are, however, creating a disruptive shift





The Post-INDUSTRIAL economy

Leading to....

The Information/ Knowledge Economy



"IT'S SO STATE-OF-THE-ART THAT BY THE TIME WE'VE READ THE MANUAL
IT WILL BE OBSOLETE"



The Information/ Knowledge Economy

- Social technologies and ubiquitous access to information
- Time → Open-ended, real time

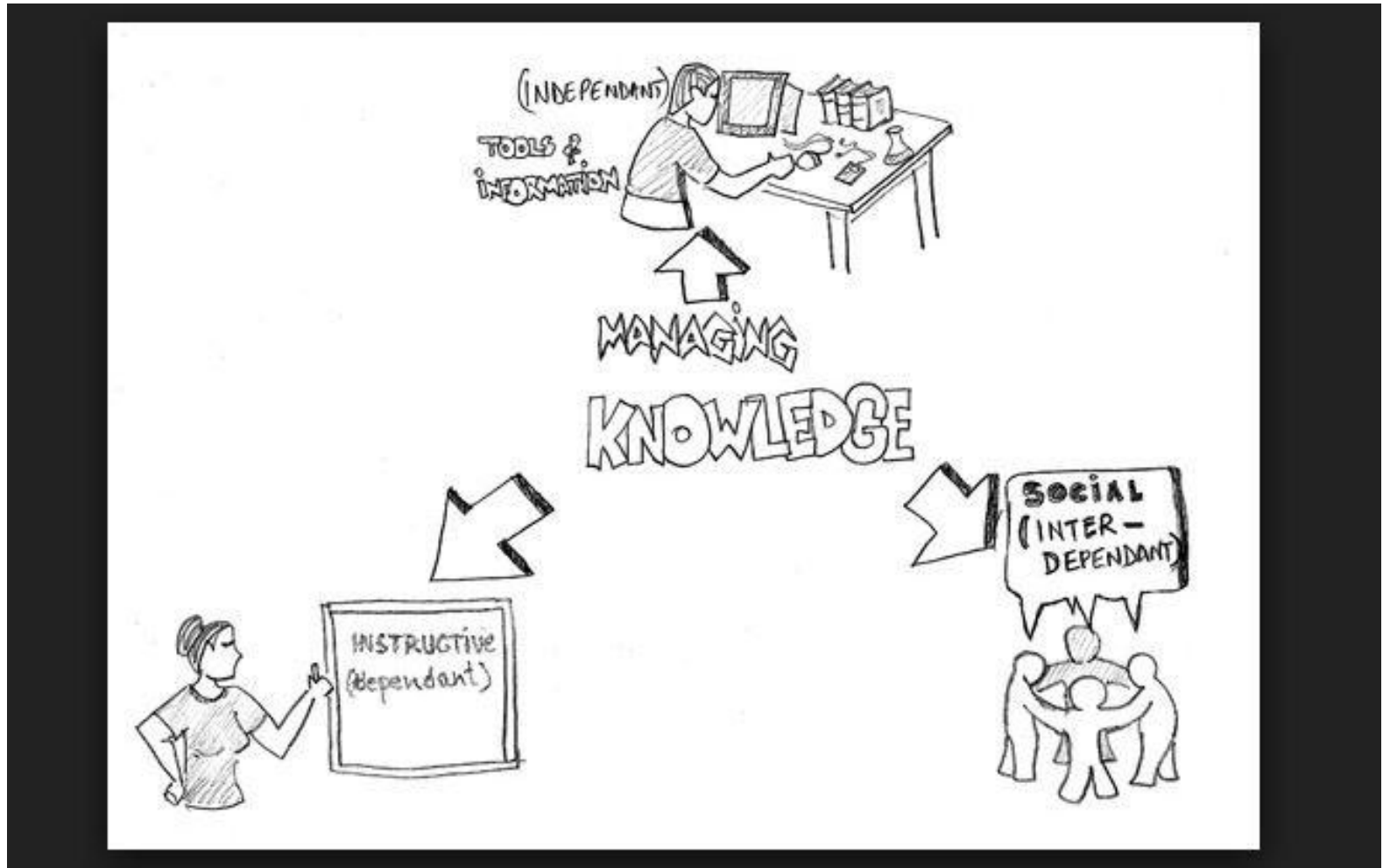


The Information/ Knowledge Economy

- Competitive Advantage: the ability to extract and use Information



The Information/ Knowledge Economy



The Information/ Knowledge Economy



"LAYERS? - WHAT LAYERS?"



TECHNOLOGY

Window for Opportunities?



The Connection Economy

- A willingness to share and collaborate → Cloud Computing
- Time: Virtual



The Connection Economy

- Single Computer, single user
- Single Computer, multiple user
- Global Network of computers (Internet)



Shifting Technologies...

HAROLD'S PLANET by Swerling and Lazar

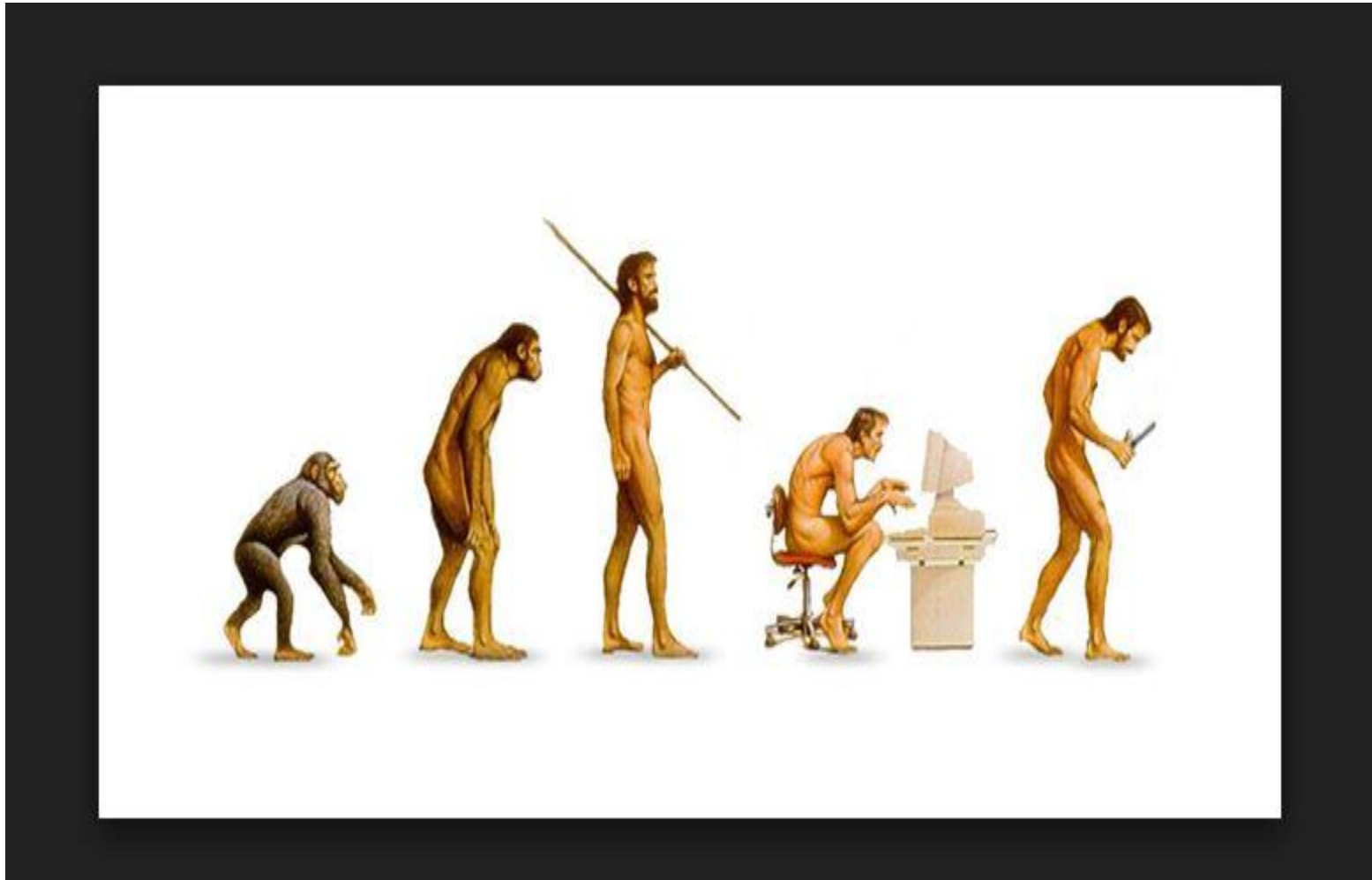
The Evolution of the Computer



haroldspanet.com © 2009



The Evolution of Man?



The Global Information Economy will be Transformed by New Technologies

When your phone, your car and your wristwatch know where you are at all times – who runs your life?



THE POWER OF GIS

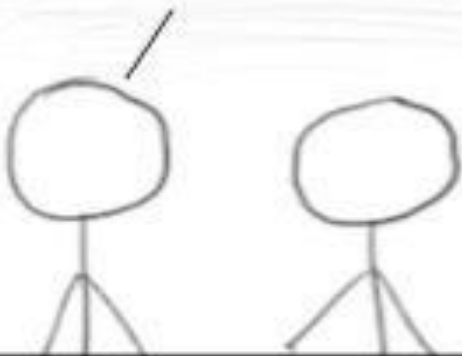
What sort of leadership and workforce does it encourage?



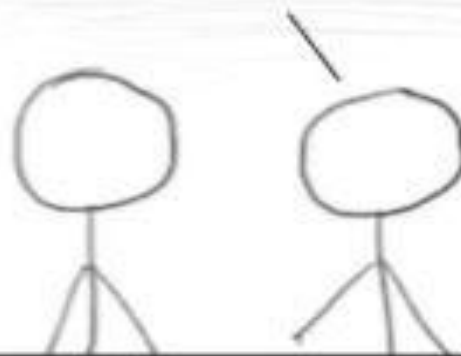




**WHY ARE THEY FIGHTING?
IS IT FOR FOOD? OIL?**



**SOMEONE TRIED TO RUN
A FLASH APP ON AN IPAD.**







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Why do we need GIS..

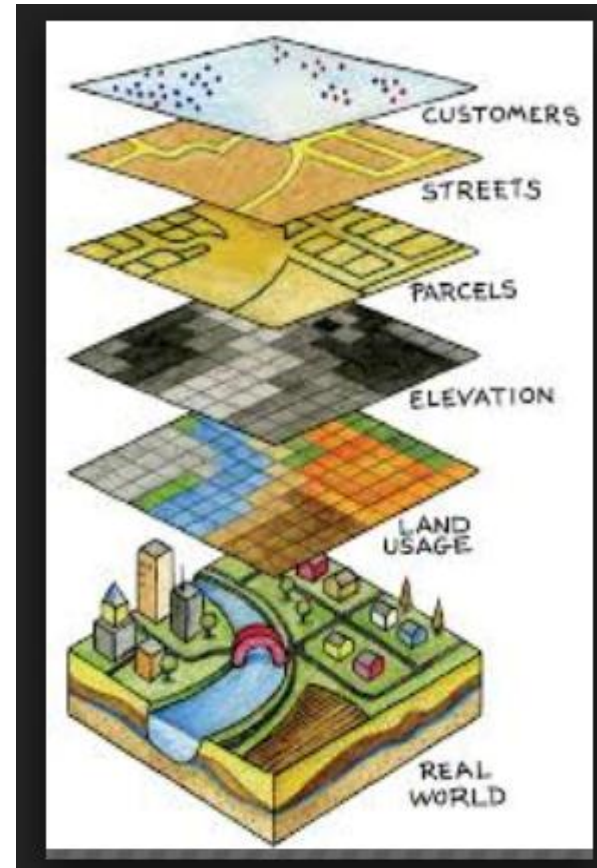
- Strategic Planning
- Urban Development Logistics
- Service Provision



- All of the above impact on:

- Land
- Agriculture
- Water
- Climate
- The economy

In essence



This Planet



Without GIS we may end up like this

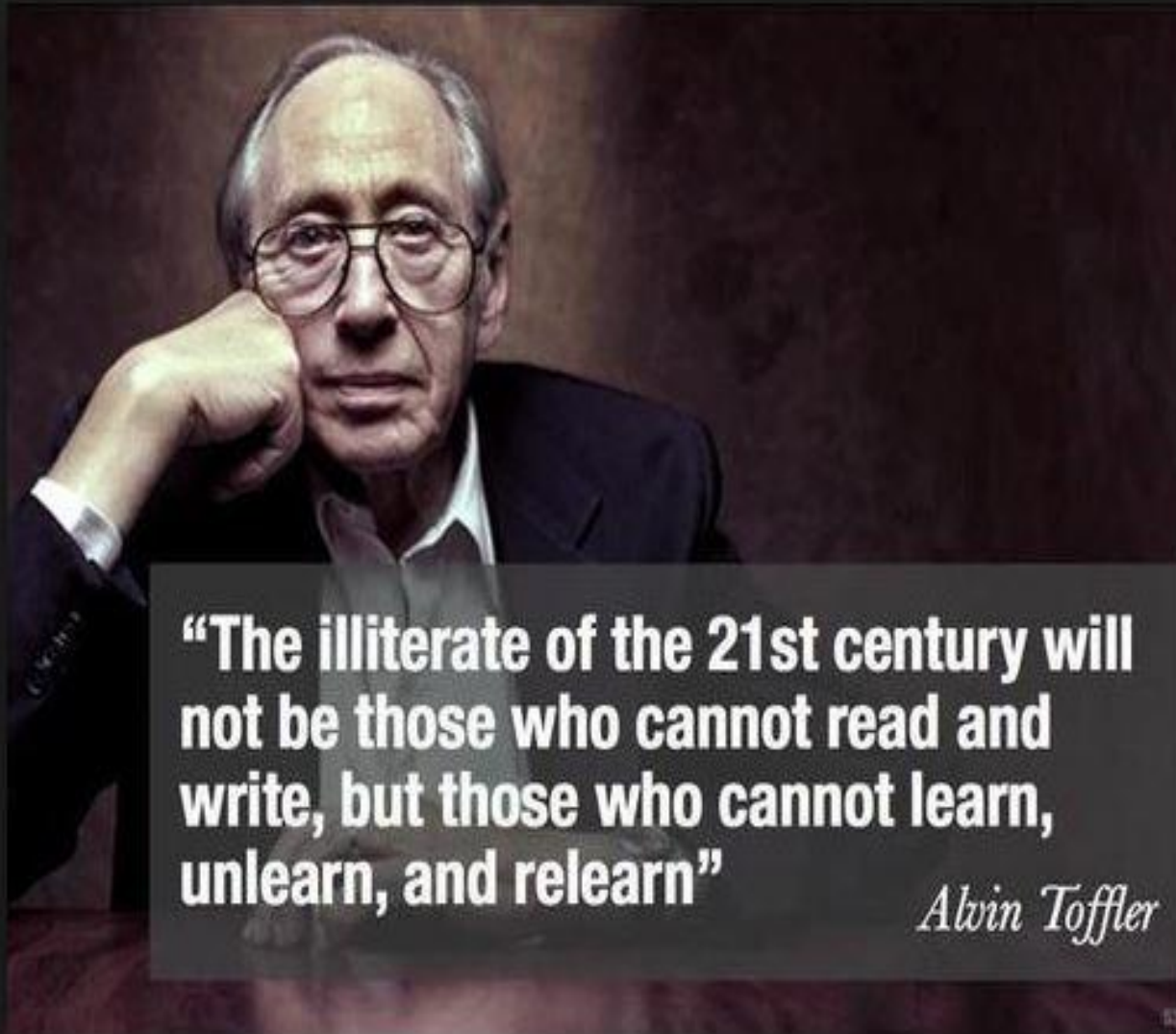


When we would rather be somewhere very different



Although it may not be as different as we had hoped





“The illiterate of the 21st century will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn”

Alvin Toffler





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Thank You

Making progress possible. Together.