



Teaching Sociology of Communities – Technology and Communities

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Unit 8 of 12:

Technologies and communities



SOC3COM Sociology of Communities Bendigo, Winter Semester, 2016

Clay Shirky <<http://keentalks.com/how-internet-will-one-day-transform-government/>>

Chris Urmson http://www.ted.com/talks/chris_urmson_how_a_driverless_car_sees_the_road >

Defining technology

- ▶ The application of (scientific?) knowledge for practical purposes

- Much broader than usually understood
- Includes *techniques*, skills

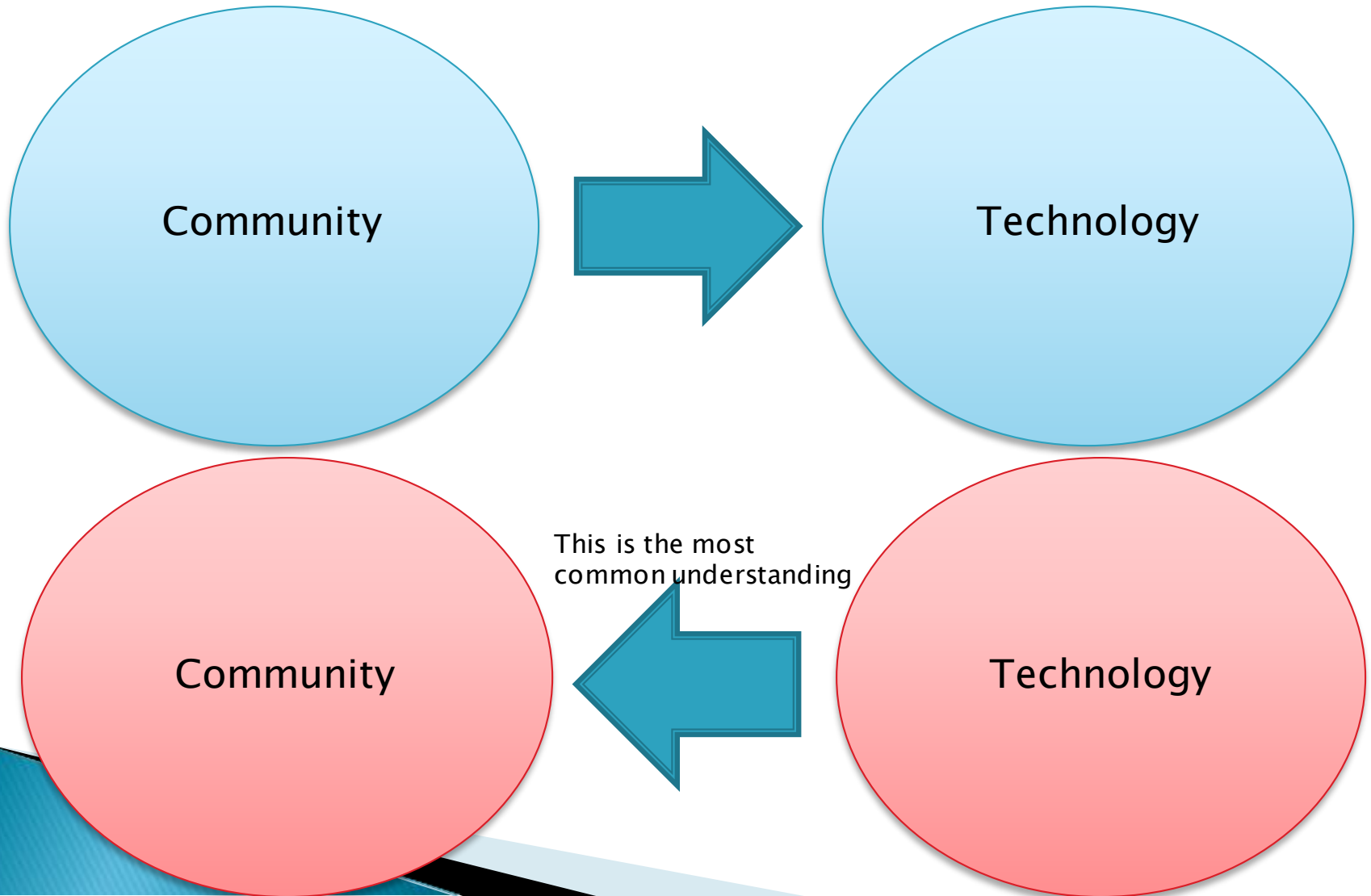
Technologies
are always
socially
located

- ▶ Notes to self:

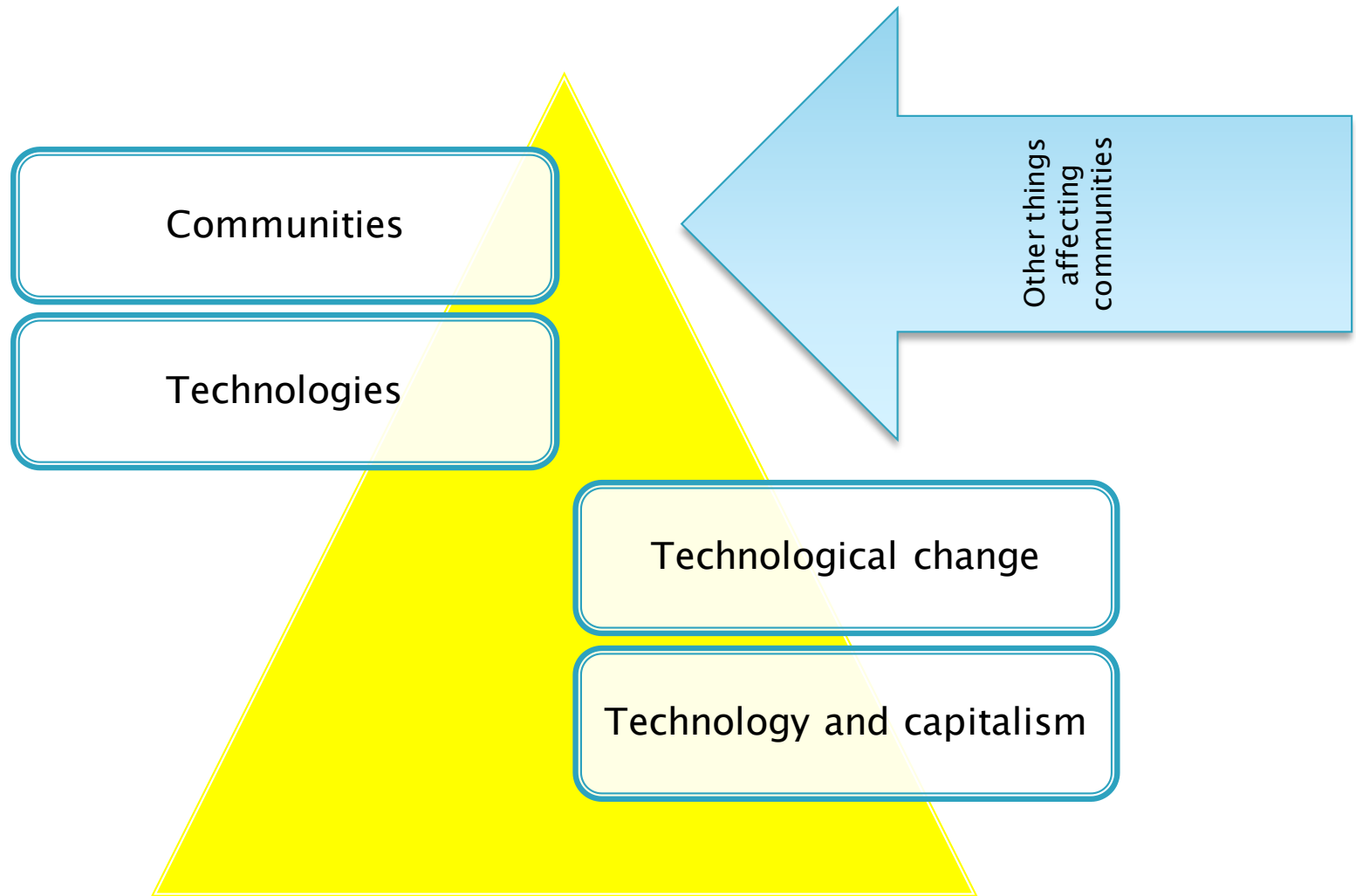
- Scientific = western point of view
- Adzes, boomerangs, firestick farming are technologies as are digital forms
- Might mean machines or equipment
- Includes spectacular (rockets) to mundane (ball-point pen,)
- A material-rich modern world embeds diverse technologies
- Oil-gas (energy) and oil (plastics, fertilisers etc) underpin most modern technologies

Community and technology –

What influences what?



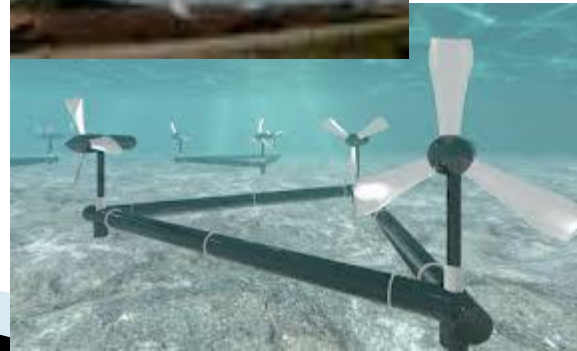
Technology effects multiple/complex



Windmills as technology

Alain de Botton (2009) *The Pleasures and Sorrows of Work*

- Energy source
- Local construction
- Dutch paintings and PR
- By water or wind?
- Communities grow



1757

Groenendijkse Molen

Warrior for SA wind power

Julian Swallow

September 11, 2012
1:00AM

A+ A-  



REpower Australia's Chris Judd wants investment certainty. Picture: Chris Mangan

SA WIND farm opposition is driven by political ideology dressed up as a grassroots movement, says the man who building the state's largest.

REpower Australia chief executive Chris Judd, who is in charge of the \$1.3 billion Ceres wind farm project on the Yorke Peninsula, was responding to a decision last month by the Goyder Regional Council to deny planning approval for TRUenergy's \$300 million Stony Gap project.

The council cited noise-related health concerns for its decision.

Mr Judd said the decision was a concern for South Australian wind farm developers, and he was pleased TRUenergy had decided to appeal.

"It's masked as a grassroots concern," he said. "There are other interests at play; there is a lot of politics and a lot of self-interest.

"We absolutely believe there is no scientific basis for the reasons for not approving that development."

Wind in today's world



Manawatu, New Zealand wind farm
<http://www.youtube.com/watch?v=ZaDCiW5yjrM>

Wiki- list of wind farms in Australia
http://en.wikipedia.org/wiki/List_of_wind_farms_in_Australia

<http://www.adelaidenow.com.au/business/sa-business-journal/warrior-for-sa-wind-power/story-e6fredel-1226468098228>

\$200 million wind farm opens in Western Australia's mid west

Updated 27 Sep 2013, 1:30pm

The state's newest wind farm has been officially opened in the Mid West.

The \$200 million Mumbida Wind Farm, based 40 kilometres south of Geraldton, is made up of 22 wind turbines.

All of the energy generated from the turbines has been purchased by the Water Corporation to offset the energy requirements of a desalination plant near Bunbury.

The 55 megawatt project is expected to last for 20 years.

Energy Minister Mike Nahan says the farm is helping WA move towards its renewable energy requirements.

"It's one of the state's largest wind farms and which will be one of many into the future to tap into the wind resources of the area," he said.

"There's a renewable energy target that all state and public and private retailers agreed to move towards 20 per cent renewable by the year 2020.

"That's actually right now a policy more like 25 per cent by 2020. And we've adopted it and are pursuing it."



PHOTO: The Water Corporation has purchased all of the energy generated from the Mumbida wind farm to offset requirements at a desalination plant near Bunbury. (Submitted)

MAP: Geraldton 6530



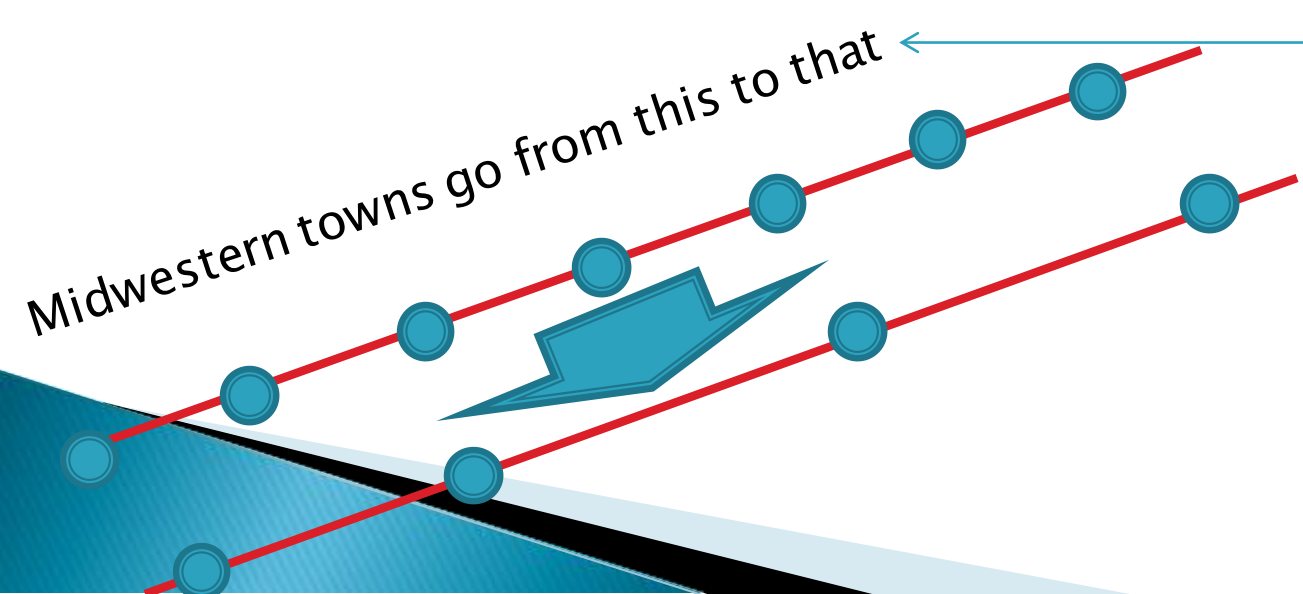
The Technological Society Ellul 1964

- ▶ Argument: technology seen as servant of humanity, but overthrows anything opposing the *internal logic* of its development
- ▶ Modern society must step outside the *process rationality* of the ‘technological imperative’
- ▶ This is *opposite* ‘silver bullet’ policies and commerce for community and environment
- ▶ Efficiency of *technique* destroys sacred and communal

‘Think globally, act locally’



The US train story and midwest communities



Food freezing technology



1882 SS *Dunedin*, Port Chalmers–98 days
1879 *Strathleven* meat not so good
1876 *Northam* from Aust to UK–machinery
broke down

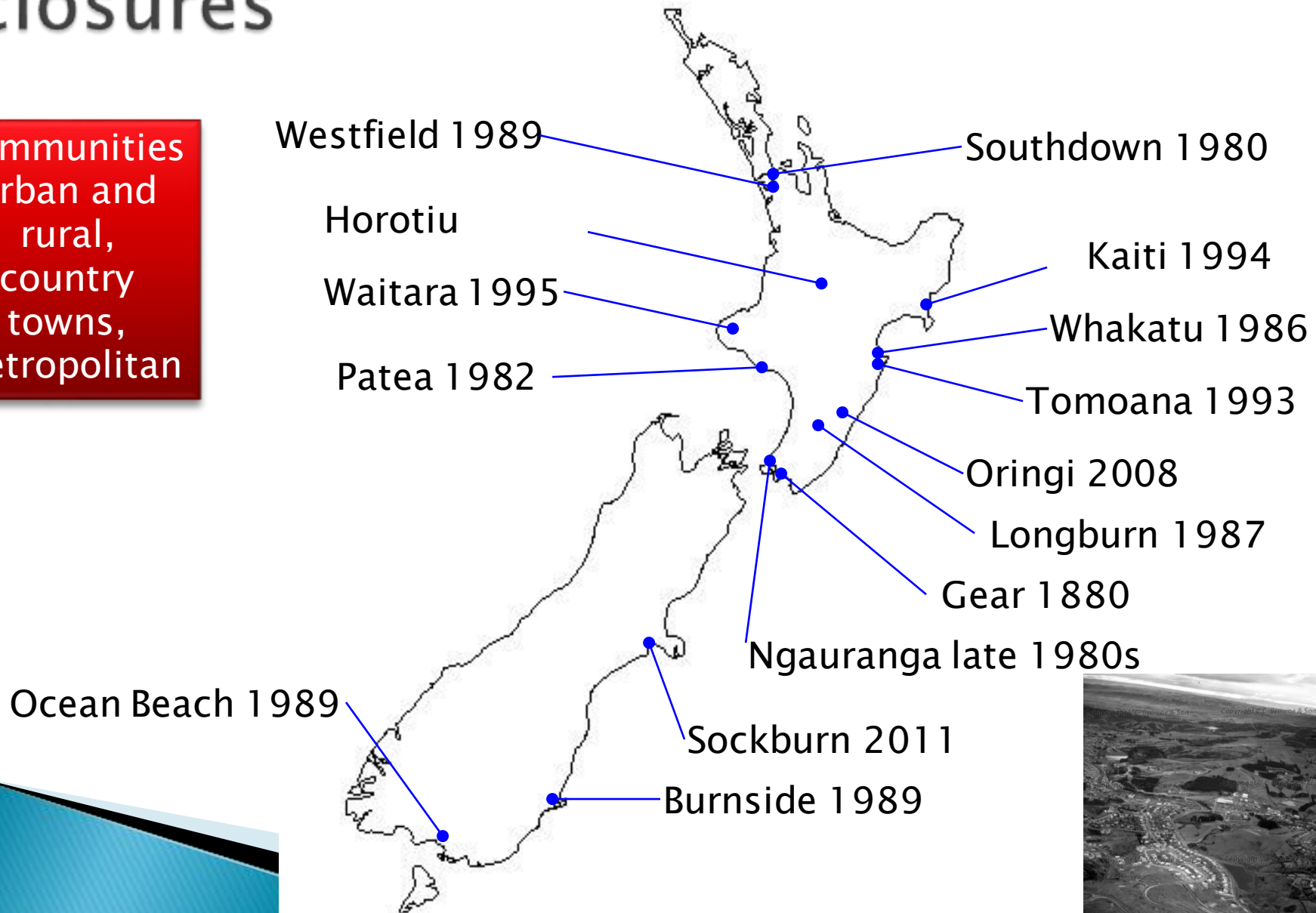


Settler
communities
grew in
number and
size



New Zealand freezing works 1980s closures

Communities
urban and
rural,
country
towns,
metropolitan



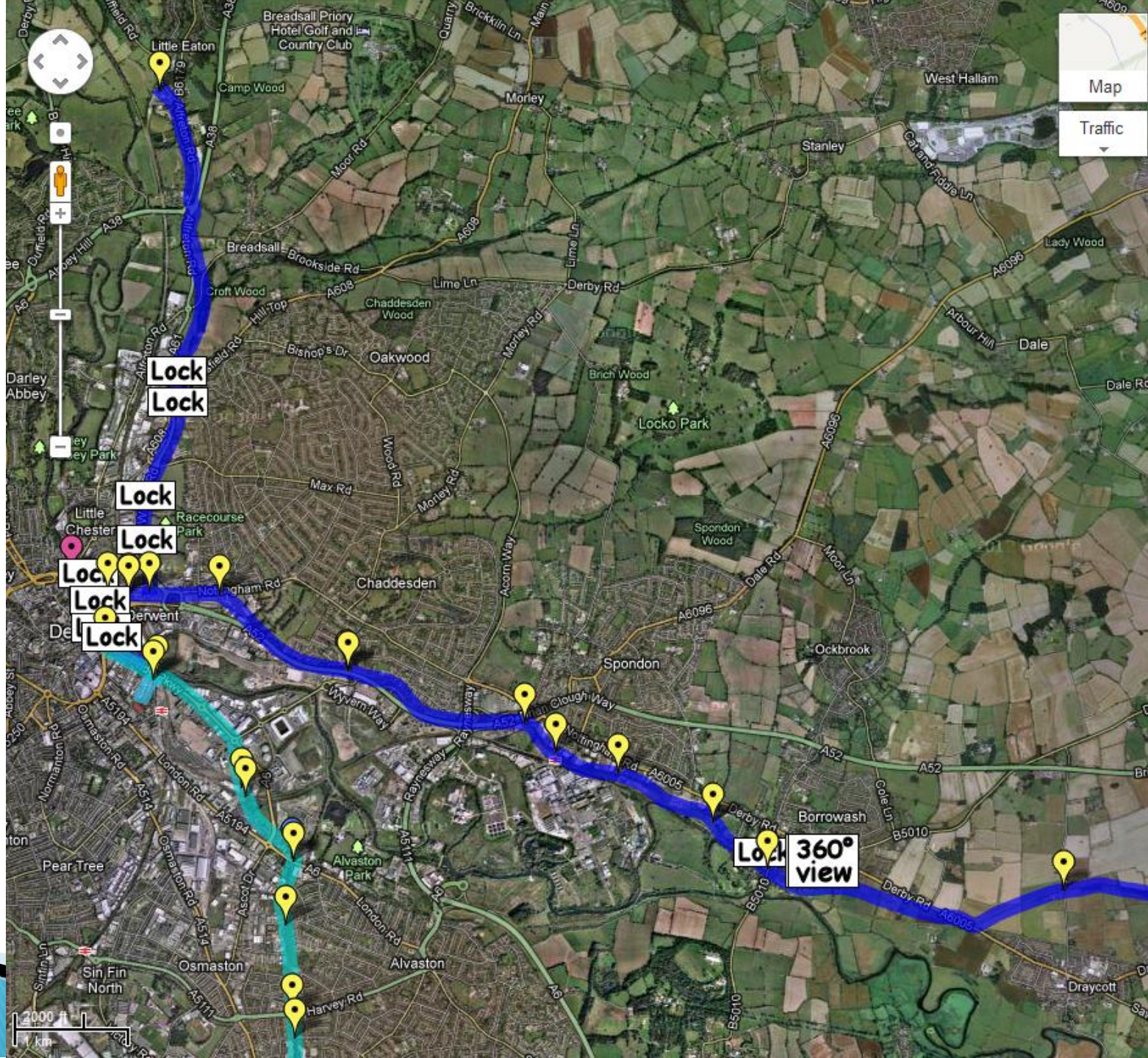
Water and communities

- ▶ Look at canals...
- ▶ Historically: stopped to ford river
- ▶ Irrigation technology – dams, canals and races
- ▶ Water
 - Agriculture, horticulture
 - Drinking/washing ‘domestic use’
 - Extractive industries
 - Processing or ‘wet’ industries

–how much
–how you get it there
–what cost
–what quality
–climate context
–what certainty
–competition for use
–politics of use

Derby,
England
Canal
restoration

Wedgwood
and early
industrial
use of
canals





Derby,
England



Derby,
England

Erie Canal 1825



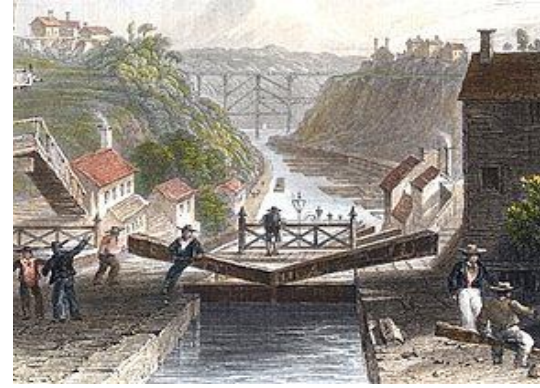
Linked New York to Great Lakes

Erie Canal

built 1817-25

Many new communities in west NY,
and regions further west

- Nearly 600k, rising 180m; \$7 million cost
- 1st transport system not requiring portage
- Faster than boxcars pulled by animals
- Cut transport costs by 95% (enlarged 1839-62)
- Black Rock and Buffalo town competed to be end-point
- Leaks fixed with newly invented underwater cement



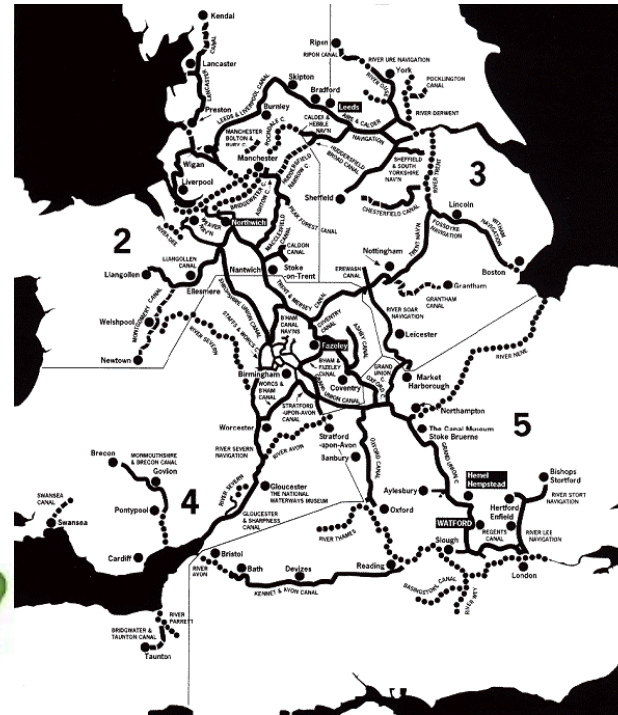
Lockport 1839

At Rexford, 1 of 32 aqueducts



Canals as modernising technology

'In times past, towns, villages and cities were founded by the water, on rivers and on the hills next to rivers. For reasons of trade and communication, and defence.'



British canal system late 18thC both enabled and fed off the industrial revolution



The construction of the modern canal irrigation system in the Punjab by the British was a great feat of engineering and administration and the best use of the soil and water. The British canal irrigation system brought a change in the social and economic lives of the people of the Western Punjab... and brought a sense of urban life with modern amenities for the people (Muhammad 2011, pp. 65, 71).

Canals as globalising technology



Suez
1859–69



Panama
1914



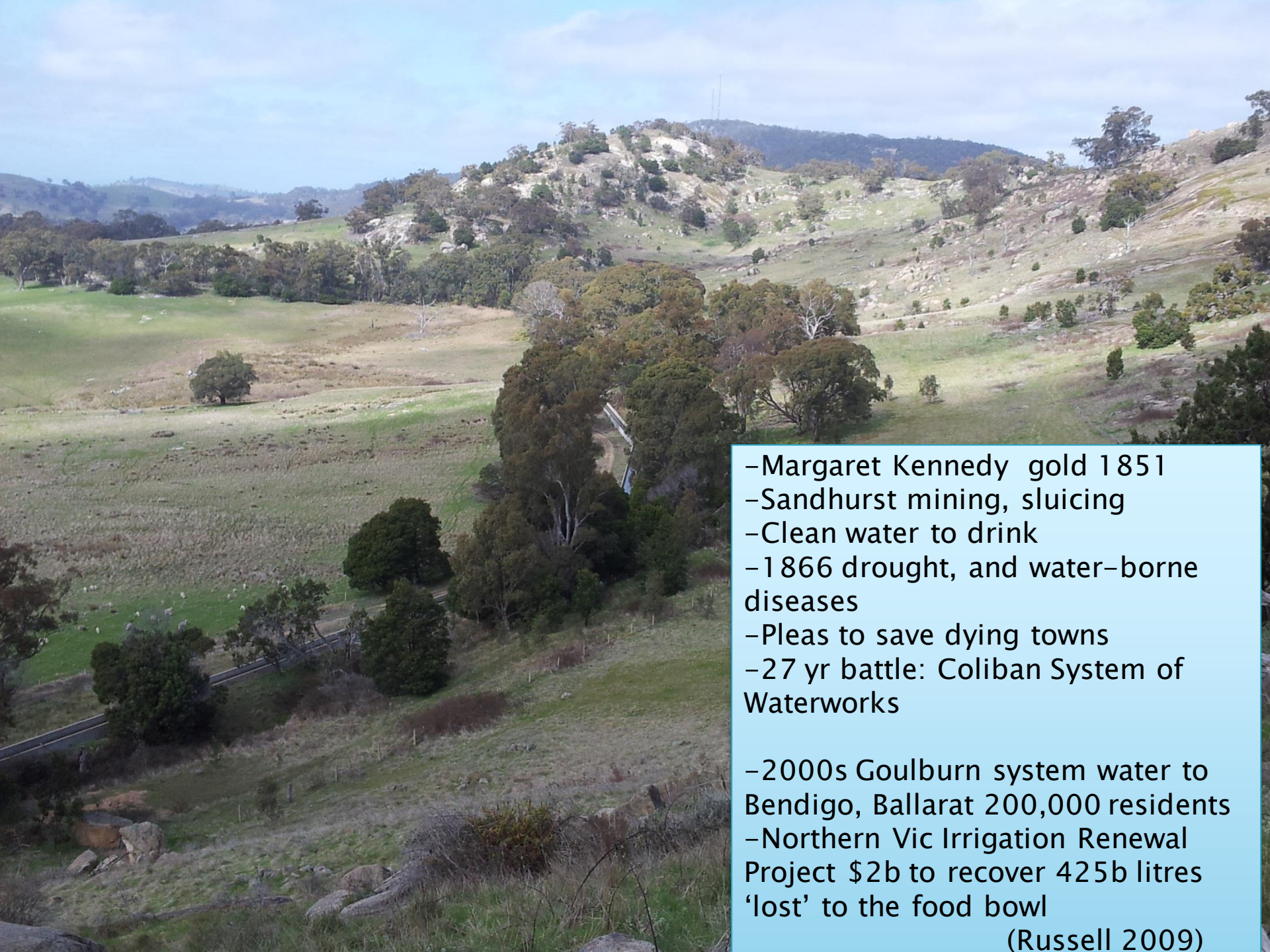






Greater Shepparton
Aquamoves
Art Gallery
Factory Sales
KidsTown Playground
MoovingArt

 Visitors Information Centre 12km

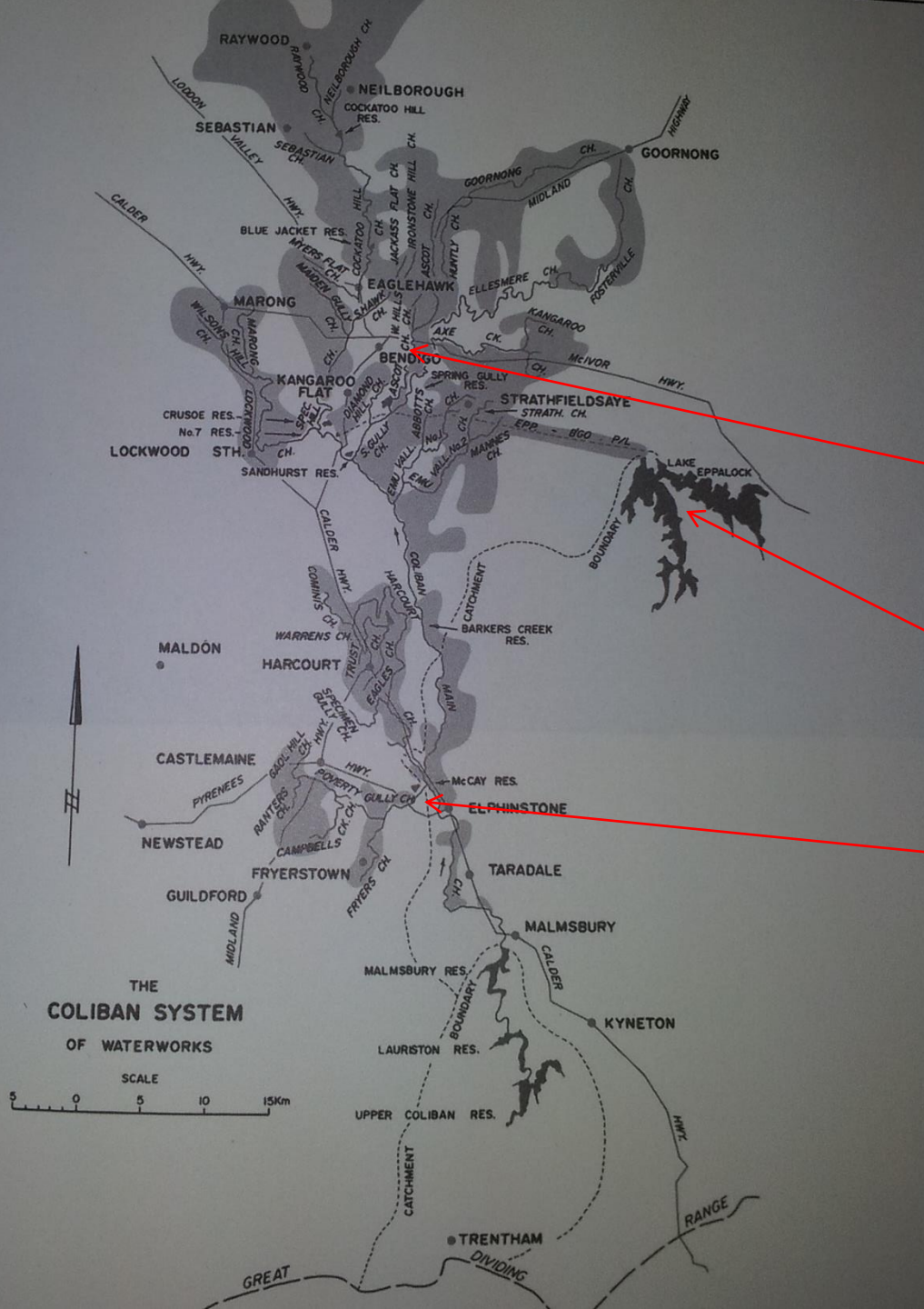


- Margaret Kennedy gold 1851
 - Sandhurst mining, sluicing
 - Clean water to drink
 - 1866 drought, and water-borne diseases
 - Pleas to save dying towns
 - 27 yr battle: Coliban System of Waterworks
 - 2000s Goulburn system water to Bendigo, Ballarat 200,000 residents
 - Northern Vic Irrigation Renewal Project \$2b to recover 425b litres 'lost' to the food bowl
- (Russell 2009)



Constructing
main Coliban
channel c1875

(Russell 2009, p. 128)



► The Coliban System of Waterworks

Bendigo

Lake Eppalock

Mt Barker



What technologies are implicit in this regional picture?

What effects do these technologies have on communities within the area depicted?

What 'off-map' influences are represented?

Applying a sense of changing technological impacts, what 21stC changes might we anticipate?

Re-purposing technologies

▶ Re-purposing

- Prisons
- Factories
- Canals – 2 local crazy ideas
- Mines
- Buildings

▶ Re-signifying technologies

- Environment
- Water, food security
- Post-production

▶ Re-mediating (or not)

- Mining, water, nuclear



Aberfan 1966



Ok Tedi mine New Guinea BHP
–discharge 80m tonnes of waste pa
–environment and livelihood 50,000 people

Cumulative technologies

- ▶ Raymond Williams' thesis that new forms of media to not destroy old ones, but re-position them
 - Penny dreadful, novel, newspaper, magazines
 - Gramophone, radio, television, internet
 - Morse, telephone, mobiles
 - Slates, blackboards, whiteboards, smartboards, tablets
- ▶ Surprising effects
 - Democratisation, commodification, urbanisation
 - Merton: Manifest and latent functions for communities

The 'technological imperative'

- ▶ Applies in many fields – available technology will be used, should be used; if we can we will
- ▶ Attractions: cost, convenience, safety, iconicity
- ▶ Assumes **autonomy** and **inevitability** of technology
- ▶ Cultural traffic:
 - Technology or technique introduced into a culture operates differently from origin
 - May create new cultural forms and processes

To a kid with
a hammer,
everything is
a nail

Tractor as modern technology



Egs of cumulative
technologies, divergent
technologies and
embedded technologies

Horse- power
1
5
24
35
500+





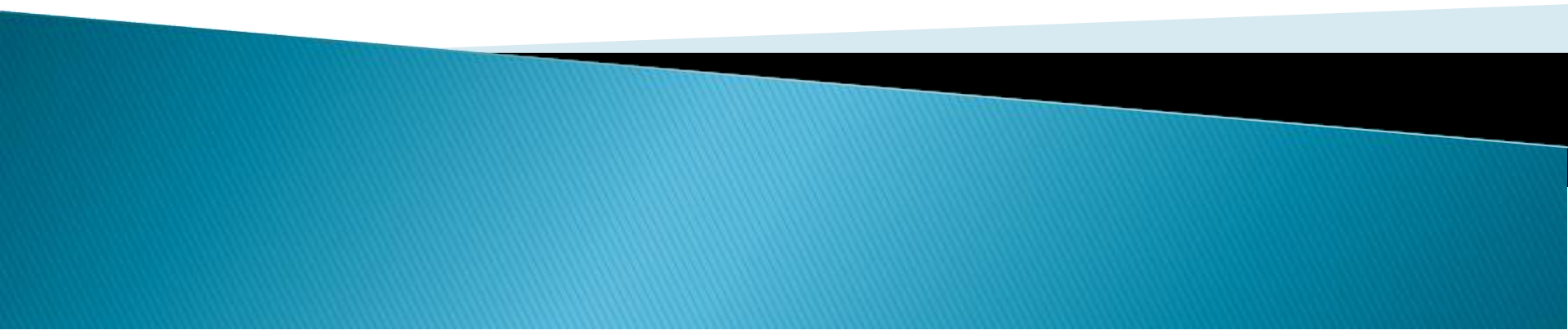
Victoria's train system 1967



Victoria's train system 2012

Looking ahead for the communities you
might live in to two present and continuing
technological changes

What do you see?
What do you think?



Re mining

▶ Mythologies affecting communities

- Believed to be, but not, an autonomous activity
- Fly in fly out: fifi
- Third world extraction
- Huge user of water
- Relationship destruction



▶ Extraction mentality used once, eventually gone

- Implications for
 - Capitalism – affinity? for small businesses and farmers
 - Modernity – using many millions years' energy in couple centuries
 - Until gone – loading co2 into climate change



Question for you –the robot story

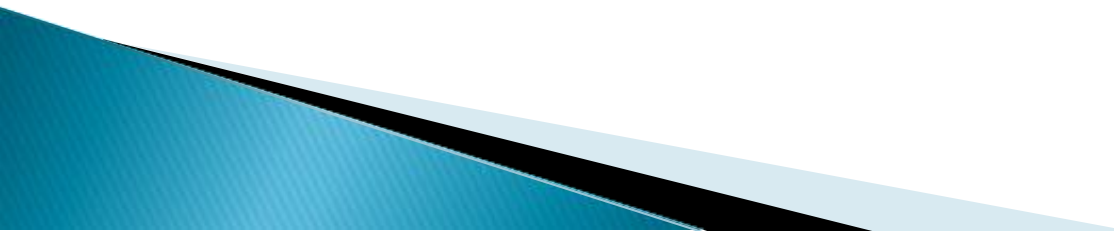
where might this take our local communities?

‘A new wave of robots, far more adept than those now commonly used by automakers and other heavy manufacturers, are replacing workers around the world in both manufacturing and distribution. Factories like the one here in the Netherlands are a striking counterpoint to those used by Apple and other consumer electronics giants, which employ hundreds of thousands of low-skilled workers.’

- What consequences for modern society and Australian communities can you think of?



Conclusion

1. Digital technologies only one kind of technology
 2. Might think of technologies as having a life cycle, at least as far as a given community is concerned
 3. Technologies, capital flows and globality interconnected
 4. New inequalities and sometimes opportunities for given communities from technological change
- 

Pets in Australia... and communities?

- ▶ 'We have 33 million pets in Australia,' Professor Bennett says, so about two-thirds of households, mostly families, have at least one pet. That is one of the highest rates of ownership in the world, but Australia's pet population stopped growing about a decade ago, according to the Australian Companion Animal Council. Australian Bureau of Statistics data show the number of dogs fell almost 10 per cent between 1994 and 2009, while the cat population dropped nearly 20 per cent.
- ▶ Not everyone wants a pet, but research shows most Australians do. Eight in 10 have lived with a pet, and of those who don't, more than half wish they did. So what's going wrong?
- ▶ 'Our changing lifestyles are making it more difficult to own pets,' Professor Bennett says. 'As our society becomes more urbanised, the opportunities for contact with animals are becoming limited. So we need to make it easier for people to own pets or interact with animals in other ways.'
- ▶ Read more: <http://www.theage.com.au/national/education/pet-subject-inspires-some-big-thinking-20120319-1vfjh.html#ixzz1uBDfeZic>
- ▶ **Pet subject inspires some big thinking**
- ▶ **Deb Anderson**
- ▶ *March 20, 2012*