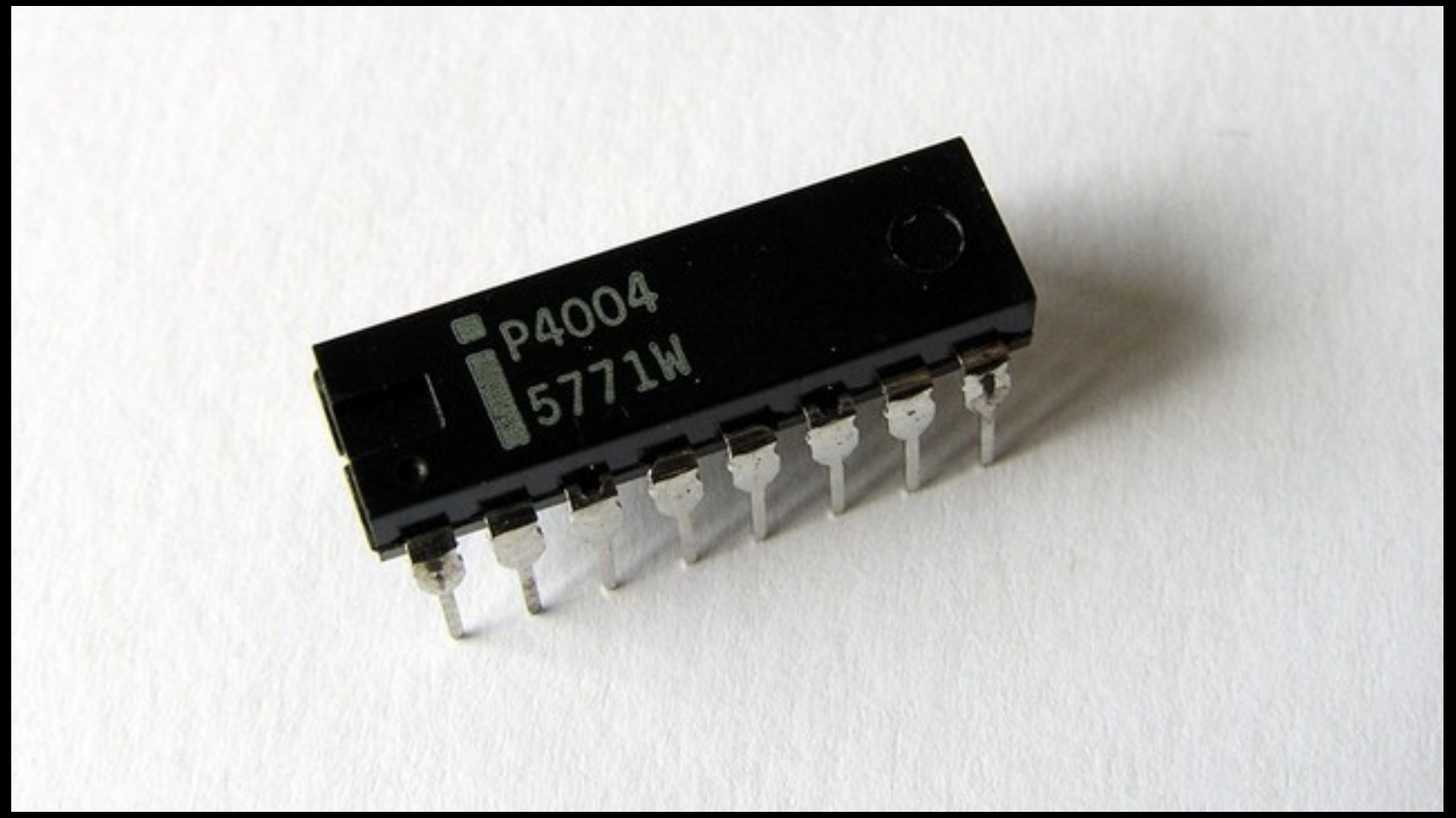
the **global** region

rollin stanley
Urban strategy
City of Calgary

pnwer
july 16


IUT
384M

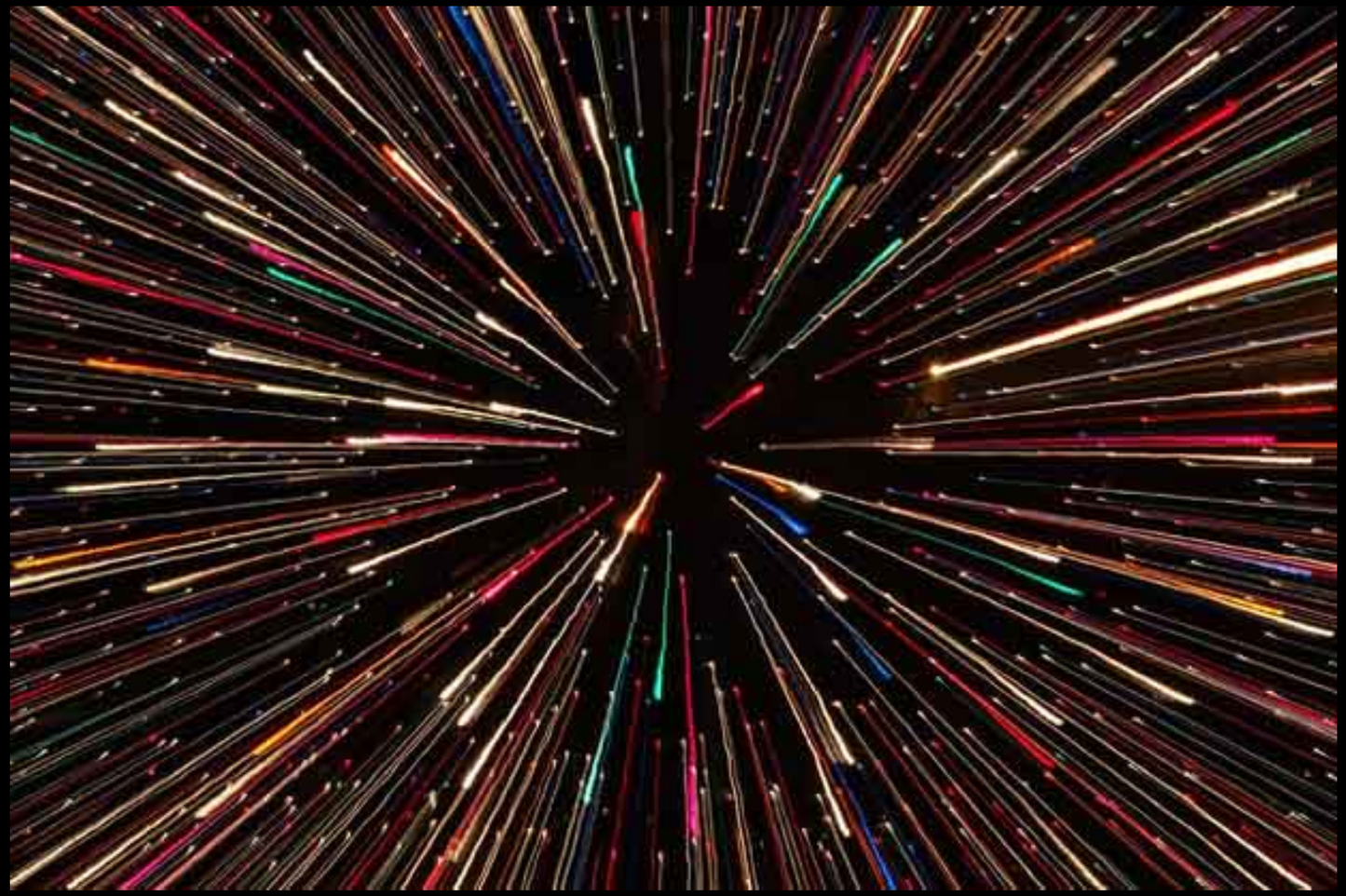


first commercial microprocessor chip - 2,300 transistors

Skylake chip - 1.75 billion transistors

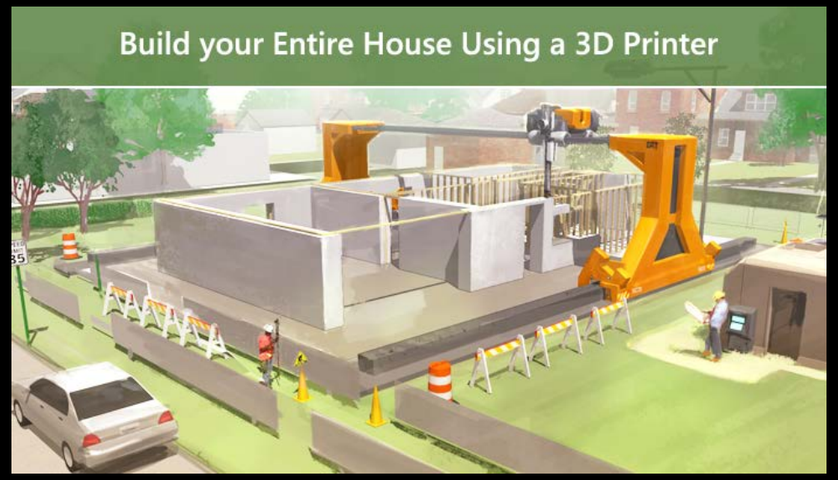
500,000 would fit on a single 4004 transistor

deliver 400,000 x the computing muscle



if cars progressed at the same rate, the fastest would travel at 67,061,662 miles per hour

the tallest building would now reach half way to the moon



is 3D printing the most disruptive technology today

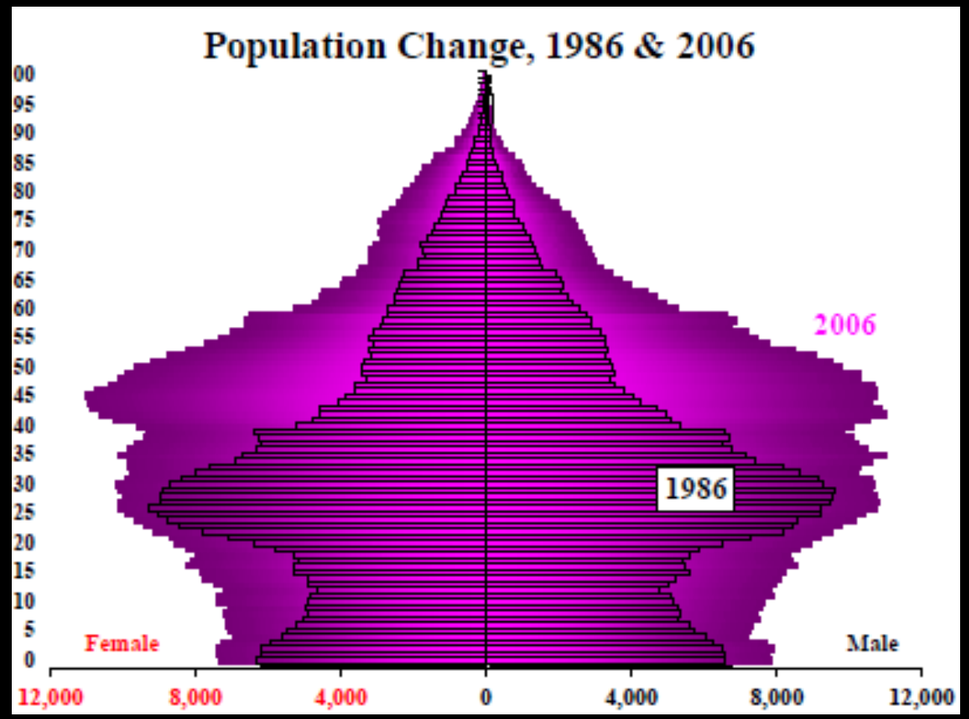
global population shift

population dome - calgary

1986 - typical resident = late 20s

2030 - mid 40s +

1,600% increase in seniors - 2050



ratio of working aged adults to seniors - calgary

	2011	2019	2029	2039
ratio	6.1	4.0	3.1	2.7

58% drop in 30 yrs

by 2050

usa will need 35 million more workers than natural growth gives

japan 17

europe 80

canada 1 by 2020 restricted foreign temp workers

global economic centre is shifting to emerging markets

making things cheap is not the most important thing anymore

trend is to making things smart

Calgary

innovation


INTERSTATE
NEW MEXICO
25
SOUTH
Albuquerque

rochester ny was the place for optical imaging

Kodak 1982 employed 62,000

today = 7,000

high tech job creation

5 to 1 3 x multiplier effect of manufacturing

GM 79,000 employees
facebook 2,500 multiplier = 53,000 new jobs
130,000 related services
$12 billion in salaries & benefits

10% of USA jobs are innovation sector

manufacturing at its height was 30%

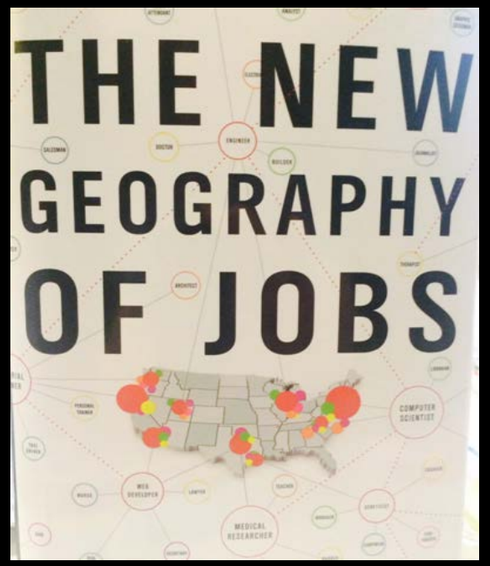
67% of the 27 million jobs created in 20 yrs are innovation jobs

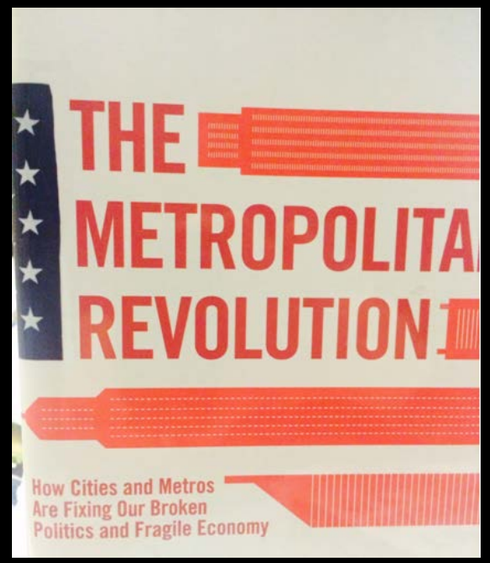
USA software jobs > 562 %

life sciences jobs > 300 %

where does the pacific northwest fit into all this?

does our innovation sector design innovation?





the power of regions

internet of things

25 billion things use the internet vs 5 billion people

communication between machines & people
the new industrial revolution

critical to regional collaboration

10 million sold the first weekend

$650 ea - $250+ profit

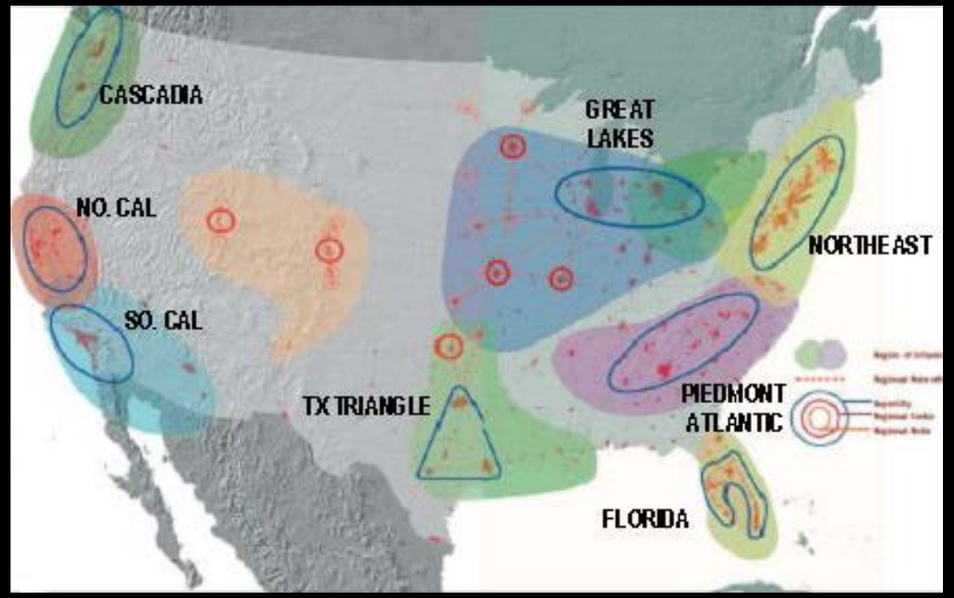
factories spend $5.00

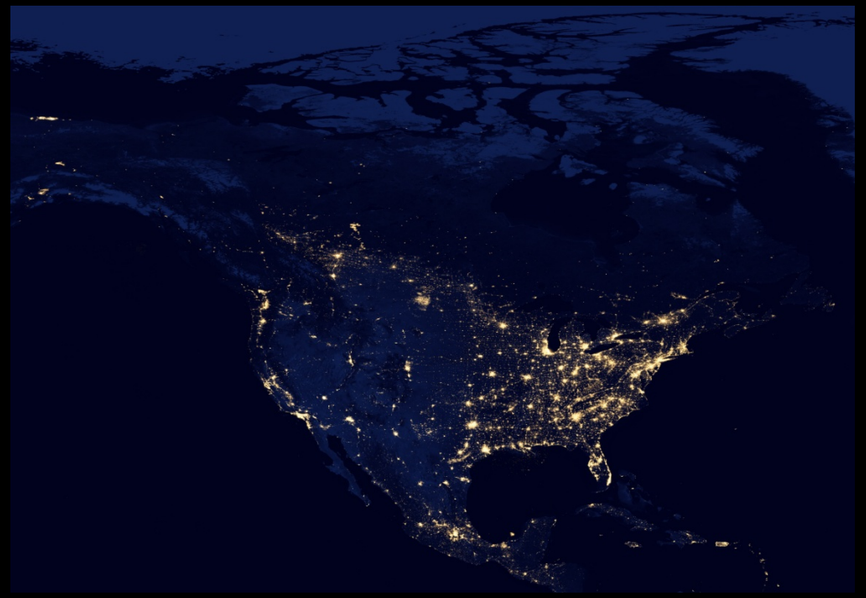
72% of revenue = iphone & ipad


ups
Worldwide Services
Low Emission
Hybrid Electric Vehicle
666143

regional | metro economies

where real growth occurs
regional | international links
about symmetries



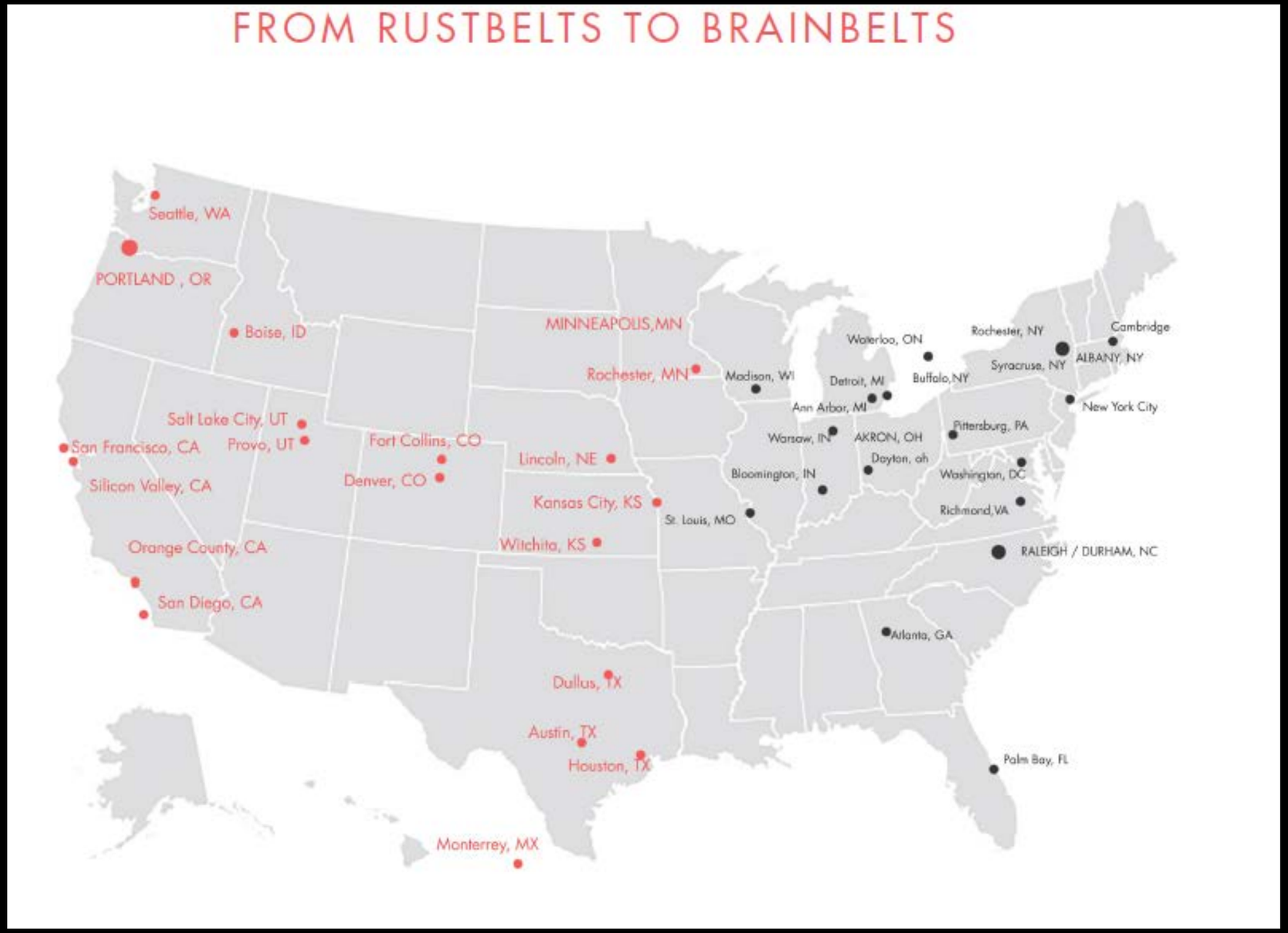


regional | metro economies

how can the region succeed
direct foreign investment

Calgary

brainbelts



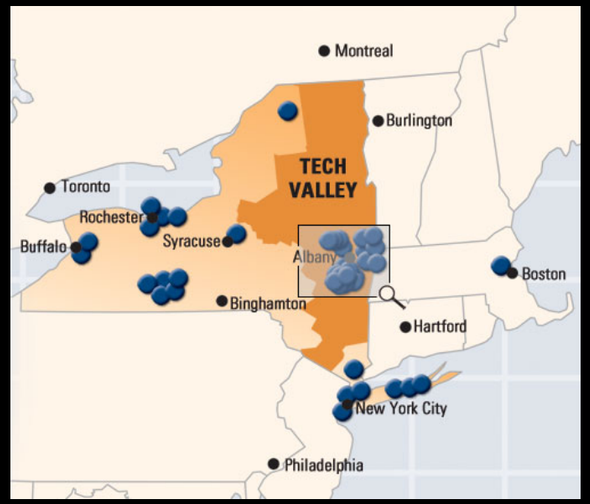
brainbelts

contributors
- universities, companies doing research
- government

connector
- vision

environment
- physical environment

commercialization



ny tech valley

global leader in polymer research & applications

employing 88,000 in 1,300 companies > tire industry

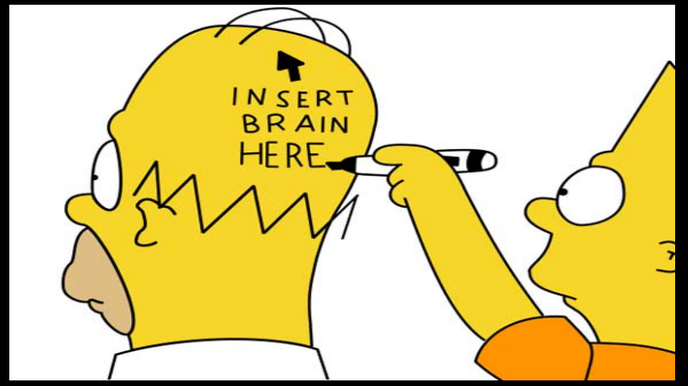
this is the future engineer and leader of society


ZOMBIE PUB CRAWL
THE WORLD'S GREATEST UNDEAD PARTY
KANSAS CITY: 10.4.14 | MINNEAPOLIS: 10.11.14
MINNEAPOLIS, MN
SATURDAY, OCTOBER 11 | THIS EVENT IS 21+

conclusion

4 types of future regions

brainbelt



low tech

City of Buffalo

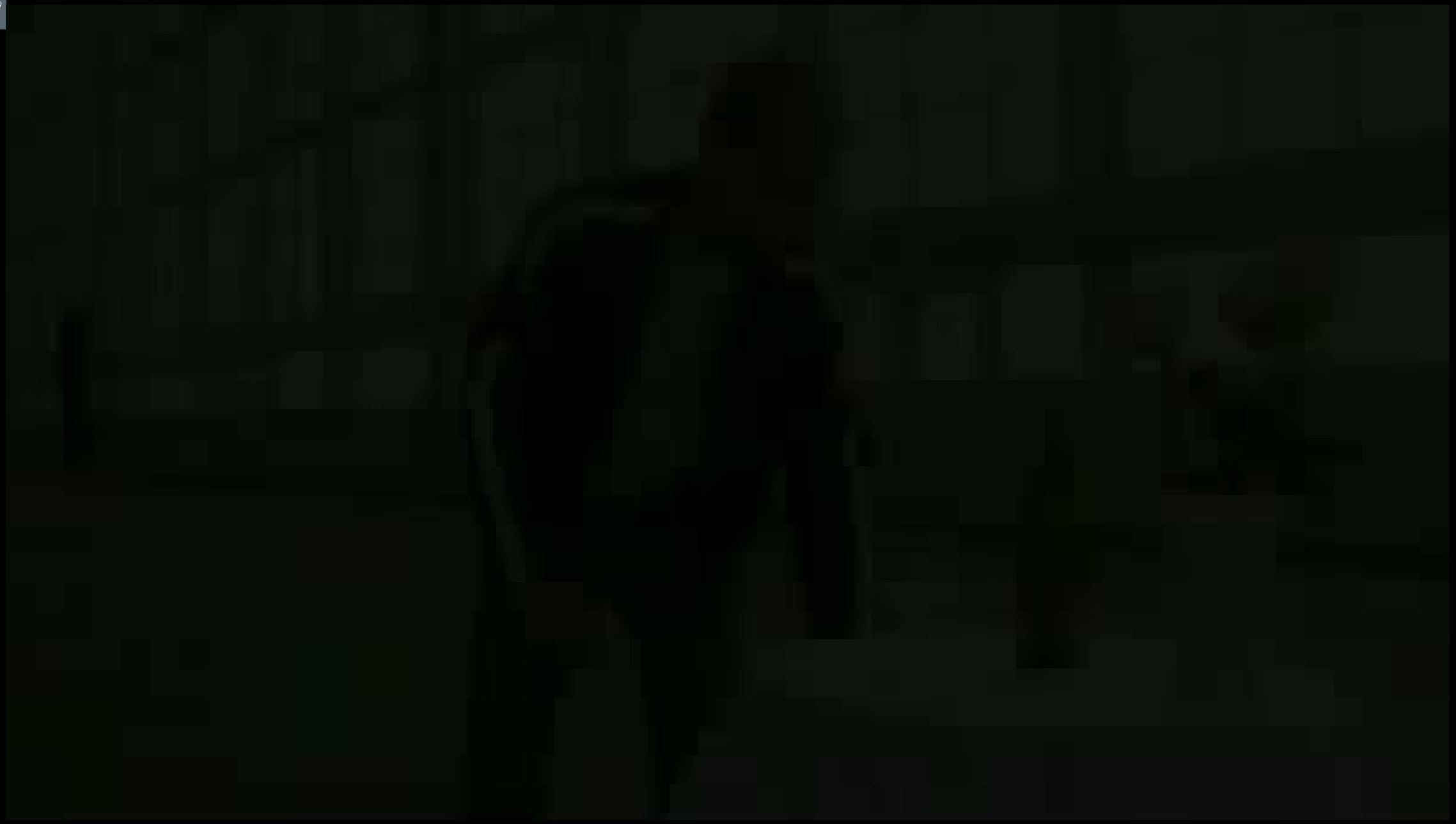
undecided

City of Phoenix

energy

Calgary

can the northwest lead in new construction technologies?



railroad tracks

The US standard railroad gauge is 4 feet, 8.5 inches. An odd number.

Why was that gauge used? Because that's the way they built them in England and English expatriates built the US railroads.

The English used that gauge because the first rail lines were built by the same people who built the pre-railroad tramways and that's the gauge they used.

Why did 'they' use that gauge? Because the people who built the tramways used the jigs and tools used for building wagons, which used that wheel spacing.

Why did the wagons have such odd wheel spacing? Well, if they tried to use any other spacing, the wagon wheels would break on the old, long distance roads in England , because that's the spacing of the wheel ruts.

So who built those old rutted roads?

Imperial Rome built the first long distance roads in Europe and England for their legions. The roads have been used ever since.

And the ruts in the roads? Roman war chariots formed the initial ruts, which everyone else had to match for fear of destroying their wagon wheels. Therefore the United States standard railroad gauge of 4 feet, 8.5 inches is derived from the original specifications for an Imperial Roman war chariot.

So the next time you are handed a specification / procedure / process and wonder 'What horse's rear came up with it?', you may be exactly right. Imperial Roman army chariots were made just wide enough to accommodate the rear ends of two war horses

The Space Shuttle used two big booster rockets attached to the sides of the fuel tank. Those were rocket boosters made at the factory in Utah. The engineers who designed them would have made them fatter, but the SRB's had to be shipped by train to the launch site two thousand miles away. The railroad line from the factory runs through a tunnel and the SRB's had to fit through that tunnel. The tunnel is slightly wider than the railroad track and the railroad track, as you now know, is about as wide as two horses' behinds.

So, a major Space Shuttle design feature of what is arguably the world's most advanced transportation system was determined over two thousand years ago by the width of a horse's rear end.

Calgary

brainbelts