**Demographics (Sean)**

What is Hamiltons current population?

Hamilton has seen an average yearly increase in populous of 2610.2475 (estimate) people between the years 2006 – 2018.

Using the yearly populous average, the population of Hamilton (2020) is estimated to be 166,131.495 people.

The Hamilton population by year is listed below.

2006: 129,588

2013: 141,612

2018: 160,911

(S1)

What nationalities are present in Hamilton?

|  |  |  |
| --- | --- | --- |
| Ethnic groups for people in Hamilton City and New Zealand, 2018 Census | | |
| Category | Hamilton City (%) | New Zealand (%) |
| European | 63.6 | 70.2 |
| Maori | 23.7 | 16.5 |
| Pacific peoples | 6.1 | 8.1 |
| Asian | 18.5 | 15.1 |
| Middle Eastern/Latin American/African | 2.2 | 1.5 |
| Other ethnicity | 1.2 | 1.2 |

(S1)

What hobbyist collectives are present in Hamilton?

What income brackets are present in Hamilton?

In 2018 49.6% of Hamilton people where employed full-time whilst 5.6% of people where unemployed. The remaining 44.8% are assumed to be working part time or are not in the labor force (disability, retirement etc.)

|  |  |  |  |
| --- | --- | --- | --- |
| Work and labor force status for people in Hamilton City, 2006–18 Censuses | | | |
| Category | 2006 (%) | 2013 (%) | 2018 (%) |
| Employed full-time | 50 | 47 | 49.6 |
| Employed part-time | 14.7 | 13.9 | 13.9 |
| Unemployed | 4.7 | 6.4 | 5.6 |
| Not in the labor force | 30.6 | 32.7 | 30.8 |

(S1)

What age groups are present in Hamilton?

|  |  |  |
| --- | --- | --- |
| Age and sex of people in Hamilton City, 2018 Census | | |
| Category | Male (%) | Female (%) |
| 0-4 years | 7.5 | 6.9 |
| 5-9 years | 8 | 7.1 |
| 10-14 years | 6.9 | 6.5 |
| 15-19 years | 7.5 | 7 |
| 20-24 years | 9.4 | 8.7 |
| 25-29 years | 8.9 | 8.6 |
| 30-34 years | 7.6 | 7.7 |
| 35-39 years | 6.7 | 6.7 |
| 40-44 years | 6.1 | 6.1 |
| 45-49 years | 6.2 | 6.2 |
| 50-54 years | 5.4 | 5.6 |
| 55-59 years | 5 | 5.4 |
| 60-64 years | 4.2 | 4.7 |
| 65-69 years | 3.6 | 3.8 |
| 70-74 years | 2.8 | 3.1 |
| 75-79 years | 1.9 | 2.4 |
| 80-84 years | 1.2 | 1.6 |
| 85 years and over | 1.1 | 2 |

(S1)

What is Hamiltons student capita?

Student populous?

|  |  |  |
| --- | --- | --- |
| Study participation, Hamilton City compared with New Zealand | | |
| Category | Hamilton City (%) | New Zealand (%) |
| Full-time study | 24.7 | 21.3 |
| Part-time study | 3.5 | 3.2 |

(S1)

**Technology (Nithin)**

Technology (Nithin)

1.What is the quality and current state of Hamilton’s CBD WIFI infrastructure?

• Free WIFI throughout the CBD (Council, n.d.)

2.What makes a smart city?

A smart city is an [urban area](https://en.wikipedia.org/wiki/Urban_area) that uses different types of electronic [Internet of things](https://en.wikipedia.org/wiki/Internet_of_things) (IoT) sensors to [collect data](https://en.wikipedia.org/wiki/Data_collection). Insights gained from that [data](https://en.wikipedia.org/wiki/Data) are used to manage assets, resources and services efficiently; in return, that data is used improve the operations across the city.

The creation, integration, and adoption of smart city capabilities requires a unique set of frameworks to realize the focus areas of opportunity and innovation central to smart city projects. The frameworks can be divided into 5 main dimensions which include numerous related categories of smart city development.

1. Technology framework

* Digital: A service oriented infrastructure is required to connect individuals and devices in a smart city. These include innovation services and communication infrastructure.
* Intelligent: Cognitive technologies, such as [artificial intelligence](https://en.wikipedia.org/wiki/Artificial_intelligence) and [machine learning](https://en.wikipedia.org/wiki/Machine_learning), can be trained on the data generated by connected city devices to identify patterns.
* Ubiquitous: A ubiquitous city provides access to public services through any connected device.
* Wired: The physical components of IT systems are crucial to early-stage smart city development. Wired infrastructure is required to support the IoT and wireless technologies central to more interconnected living.[[38]](https://en.wikipedia.org/wiki/Smart_city#cite_note-38) A wired city environment provides general access to continually updated digital and physical infrastructure.
* Hybrid: A hybrid city is the combination of a physical conurbation and a [virtual city](https://en.wikipedia.org/wiki/Virtual_city) related to the physical space. This relationship can be one of virtual design or the presence of a critical mass of virtual community participants in a physical urban space.
* Information city: The multiplicity of interactive devices in a smart city generates a large quantity of data.

1. Human framework

Smart city initiatives have measurable positive impacts on the quality of life of its citizens and visitors. The human framework of a smart city - its economy, knowledge networks, and human support systems - is an important indicator of its success.

* Creativity: Arts and culture initiatives are common focus areas in smart city planning. Innovation is associated with intellectual curiosity and creativeness, and various projects have demonstrated that knowledge workers participate in a diverse mix of cultural and artistic activities.
* Learning: Since mobility is a key area of Smart city development, building a capable workforce through education initiatives is necessary. A city's learning capacity includes its education system, including available workforce training and support, and its cultural development and exchange.
* Humanity: Numerous Smart city programs focus on soft infrastructure development, like increasing access to voluntary organizations and designated safe zones. This focus on social and relational capital means diversity, inclusion, and ubiquitous access to public services is worked in to city planning.
* Knowledge: The development of a [knowledge economy](https://en.wikipedia.org/wiki/Knowledge_economy) is central to Smart city projects[ Smart cities seeking to be hubs of economic activity in emerging tech and service sectors stress the value of innovation in city development.

1. Institutional framework

Creating and working in a common basis who are interested in IT to improve the quality of life. They will be coordinating with each other and the government to make the improvement.

1. Energy framework

Smart cities use data and technology to create efficiencies, improve sustainability, create economic development, and enhance quality of life factors for people living and working in the city. It also means that the city has a smarter energy infrastructure. A smart city is powered by "smart connections" for various items such as street lighting, [smart buildings](https://en.wikipedia.org/wiki/Building_automation), [distributed energy resources](https://en.wikipedia.org/wiki/Distributed_generation) (DER), [data analytics](https://en.wikipedia.org/wiki/Data_analysis), and smart transportation. Amongst these things, energy is paramount; this is why utility companies play a key role in smart cities.

1. Data Management framework

Smart cities employ a combination of data collection, processing, and disseminating technologies in conjunction with networking and computing technologies and data security and privacy measures encouraging the application of innovation to promote the overall quality of life for its citizens and covering dimensions that include: utilities, health, transportation, entertainment and government services.

3.What varieties of transport are present in Hamilton?

Car, bus, train and flight

4.What are virtual tours, how are they beneficial?

Imagine walking into the location (a restaurant, a store or any other space) for the first time. You have a look around. You take a step closer to the objects you see. You pass through the rooms. Now imagine doing all that on the screen of your computer or a smartphone — this is called a virtual tour.

# **How a virtual tour is made**

A complete 360° tour consists of several panoramic images which are edited and seamlessly connected into a single piece. (journey, n.d.)

**Benefits**

### 1. Save Time

When you're listing a new property for sale, you might end up receiving hundreds of phone calls from potential clients. Meeting each of them can be time-consuming. On top of that, some are just curious and have no intention to buy.

With a [virtual tour](https://www.designblendz.com/services/matterport), customers can see the property on their laptops or smartphones. Those who are really interested will call and ask for more information. This will free up your time, so you'll be able to focus on other aspects of your business.

### 2. Cut Costs

Driving back and forth to meet potential clients and show them properties can cost you a fortune. Just think about how much money you'll spend on gas!

The worst part is that you have no guarantee that they will buy. Perhaps they don't like the hallway. Or they discover that the neighborhood doesn't suit their lifestyle.

Virtual house tours help eliminate these issues. Your only job is to upload the tour on your site so that customers can check the property in advance.

### 3. Get More Website Traffic

This cutting-edge technology can drive massive traffic to your website. As a result, you'll attract more clients.

Property listings with virtual tours receive over 40 percent more clicks compared to those using images. More clicks translate into higher traffic stats and increased sales. Additionally, your real estate website will rank better in search results.

### 4. Reduce Your Bounce Rate

The [bounce rate](https://support.google.com/analytics/answer/1009409?hl=en) represents the number of visitors who leave a website after seeing just one page. Besides posting quality content, you can use virtual tours to keep visitors engaged.

In general, virtual tours take at least one minute. This means that people will spend more time on your site. As a result, your bounce rate will drop.

Low bounce rates result in more traffic and improved search engine rankings. They also help increase customer retention and boost your online exposure.

### 5. Get Social Media Love

An eye-catching virtual tour is more likely to go viral. People will share it on social networks and tell their friends about it.

The search engines use [social media signals as a ranking factor](https://www.socialmediaexaminer.com/7-ways-to-improve-your-search-rank-with-social-media/). If your website content goes viral on social networks, it will reflect positively on its rankings. Basically, you'll get more traffic and appear higher in search results.

### 6. Get Quality Backlinks

Every time someone shares your virtual house tours online, your site receives a backlink. This not only increases traffic but also helps establish your authority online.

[Quality backlinks](https://www.business2community.com/seo/5-benefits-backlinks-addition-seo-0893363#GbWYo245fdF4tUtF.97) are a key ranking signal. They can increase brand awareness, strengthen your reputation, and drive traffic for years to come.

### 7. Stand Out from the Crowd

The more traffic and links you get, the more people will find out about your site. Virtual house tours can give you a competitive edge and make your business stand out. They will add that "wow" factor to your listings.

On top of that, customers will trust you more than they trust the competition. Some might even congratulate you for coming up with such a great idea!

### 8. Increased Convenience

When you're showcasing a property, you first need to make sure the house is in pristine condition. But, it can be a hassle to call a cleaning agency or ask the homeowners to clean every time the phone rings.

With virtual tours, you can show off the property in its very best condition. Moreover, you can highlight its key features to entice people into buying.

### 9. Provide a Realistic Experience

Virtual tours are like a permanent open house. Potential clients can access the tour 24/7 from their office or while on the road.

This technology helps create an instant sense of ownership. Those who take the tour can easily imagine themselves living in that house.

### 10. No Technical Skills Needed

Nowadays, there are [companies that create virtual tours](https://www.designblendz.com/services/real-estate-marketing) in every industry. Your only job is to send photos, videos, and floor plans for the property. They will put everything together and design a stunning tour.

A professional will also add background music and narration to improve customer experience. Once his job is done, he will upload the tour on your site. Later, he can make adjustments or add extras based on your instructions. (design blend, n.d.)

5.What infrastructural innovations are currently present and could be implemented?

**Present Infrastructural innovations**

CORE NETWORK INFRASTRUCTURE

* Water
* Waste Water
* Storm water
* Transport

COMMUNITY INFRASTRUCTURE

* Parks and green spaces

Community and events (Council, n.d.)

How well is Hamiltons CBD being advertised? (websites, other media)

What technological innovations are already present in the CBD?

Where can interactive technology be utilized within a city?

**Rules and regulations (Graeme)**

What building and resource consents are currently in effect, what and restrictions and issues do they present?

Land use

Subdivision

Requires public consultation to allow for any objections to be made (G1)

How is parking currently policed?

Hamilton City Council Parking Wardens, private entities such as Wilson Parking New Zealand that manage a number of privately owned car parking lots in the CBD

What restrictions are in effect regarding planned events? (venue capacities, noise, proximities etc.)

A event permit is required if a event is to be held in a public place in the city. This includes events in Parks and Open Spaces which are not regular sporting fixtures to ensure the event has first priority when using this area and that the activity is conducted in accordance with all current bylaws.

Some or all of the following are required when planning a event

Temporary road closure

Resource consent ( Events and Temporary Activities are also required to comply with the provisions in the Hamilton City Council District Plan to ensure that they are managed and located appropriately. If the proposed event does not comply with all of the provisions, Resource Consent may be required.)

Building consent (for temporary structures such as marquees or stages

Event Permit Schedule of Proposed Food Vendors

Stalls, craft and trading permits

Liquor Licence (G2)

What current and future examples of legislation effect Hamilton and New Zealand's emissions outputs?

Emissions Trading Scheme

Climate Change Response (Zero Carbon) Amendment Act (G3)

**Global (Kieran)**

What popular technologies are used globally that could be adapted and implemented within the Hamilton CBD?

1. Smart Kiosks  
Say goodbye to the simple phone box and hello to Intersection, an Alphabet funded company that has developed [Wi-Fi connected kiosks](https://www.technologyreview.com/s/608281/the-startup-behind-nycs-plan-to-replace-phone-booths-with-7500-connected-kiosks/) called ‘Links’. The kiosks are fitted with tablets, USB charging ports, information screens. . . and in case anybody actually needs to make a phone call, they come with keypads too. In London and New York City, governing bodies plan to replace phone boxes with the informative hubs.

2. Lamp post charging points  
German startup Ubitricity is taking standard lamp posts in London and [turning them into electric vehicle (EV) charging ports](https://www.fastcompany.com/40441853/not-everyone-has-a-garage-but-what-if-the-streetlights-were-electric-car-charging-stations%E2%80%AC). Their retrofit system allows for overnight electric car charging without changing city infrastructure, representing an important enabler for both EV adoption and smart city development.

3. AI CCTV  
CCTV cameras are already common, but they are far from infallible. Equip these devices with Artificial Intelligence, however, and suddenly they become precise, intelligent tools for law enforcement and security. AI cameras have been trialed in correctional facilities as part of efforts to stop counterfeit from entering prisons. Computing company NVIDIA, backed by a $4 billion investment from Softbank, are now building [AI cameras for the commercial market](https://disruptionhub.com/artificial-intelligence-metropolis-watching/). By 2020, NVIDIA plans to install over a billion smart cams. On the one hand, smart cameras could help citizens to feel safer by promising higher quality criminal identification. On the other hand, though, they could easily be viewed as overkill.

4. Smart buses  
Add big data analytics to public transport and what do you get? A bright green 30 seater bus. It might sound like a bad joke, but the green machines are very much a reality. In May, popular urban travel app Citymapper set up [a pop up bus route](https://disruptionhub.com/big-data-coming-bus-stop-near/) called CMX1. It was navigated by ‘Sprinter’ buses which used the app’s extensive real time data to pick the quickest and safest routes. Transport has been an early priority for smart city enthusiasts and it’s easy to see why. Congestion, delays and overcrowding have all contributed to the general consensus that public transport can be a nightmare. Citymapper’s Sprinter buses used data from a variety of sources to make smart decisions about journeys to improve customer satisfaction and also the efficiency of inner city travel. Looking forward, all public transport within smart cities will be run in this way. (K1)

What is Hamiltons homeless population in comparison to similar cities?

Initial estimates indicated there were 80 known homeless people in Hamilton’s central city. We now know there are many more. Using the fullest definition of homelessness, it is estimated there may be close to 700 as of 2015. (K2)

Analysis of 2013 Census data by the University of Otago (Amore, 2016) found 20,296 Aucklanders met the definition of homeless. (K3)

In 2018, Tauranga City Council’s by-name count of people sleeping rough and found there were 80 people living on the street in Tauranga. (K4)

At any given time, there are about 60 to 80 rough sleepers in Wellington, but as many as 3000 who are transient or in non-permanent accommodation. (K5)

What makes Hamilton more attractive in comparison to similar cities?

You’ll Get More Bang For Your Buck

Even though Hamilton is expanding rapidly, it is still a much more affordable prospect than [Auckland or Wellington](https://www.numbeo.com/cost-of-living/compare_cities.jsp?country1=New+Zealand&city1=Hamilton&country2=New+Zealand&city2=Auckland). House and land prices are more reasonable, so your money will go further. Whether you are [buying or renting](https://www.eves.co.nz/), you will find a much better deal in “the Tron,” as it’s affectionately known.

It’s The City Of The Future!

By creating a “Smart City”, the council is creating opportunity, which is reflected in the population. Hamilton boats an extremely youthful population. About half of the residents are under 30 years old! This doesn’t just mean great parties (although Hamilton is renowned for its bar and pub scene), it means creative, innovative and driven people looking to start families and set themselves up here.

It’s A Sport-Lover’s Dream

With three international sporting venues, Hamilton is one of the best places for sports-mad types to settle down. Along with the broader Waikato region, Hamilton is mad about rugby. This is especially handy, as it became the new home to the Rugby Sevens series 2018, stealing the event away from Wellington.

The Mighty Waikato River

Just because Hamilton is an inland city doesn’t mean you can’t enjoy some water-sports! NZ’s largest river, the Waikato, cuts through the centre of town, providing plenty of outdoor fun for everyone. You can choose to spend your weekends strolling along the shore, or get in amongst it with some more adventuresome activities. Boating, white-baiting, trout fishing, canoeing, jet boating or even parasailing are all popular on the Waikato.

You Are Close To Everything!

Living in Hamilton means you get to base yourself in an exciting city with everything you need. Yet, you are still close enough to easily make trips to other places. Auckland is only a 90-minute drive away, while Tauranga, Rotorua, Raglan and Taupo are all within a few hours. You can have awesome day trips without spending half the time in the car. (K5)

What Hamilton events have international appeal?

“Hamilton and Waikato is now the third largest region behind Auckland and Wellington for conventions, meetings and business events for the year ending March 2017 (MBIE Convention Activity Survey, [Year End March 2017](http://www.mbie.govt.nz/info-services/sectors-industries/tourism/tourism-research-data/convention-research-programme/convention-activity-survey/cas-report-ye-Q1-2017.pdf)). (K6)

Field Days

Super Rugby at Waikato Stadium

International Hobbit Day at Hobbiton (K7)

What is cost and quality of food in comparison to other countries?

Restuarant prices in NZ are 9.42% lower than in the UK

Restuarant prices in NZ are 6.39% lower than in the US

Restuarant prices in NZ are 6.19% lower than in Austria

Restuarant prices in NZ are 47.07% higher than in South Africa

Restuarant prices in NZ are 23.44% higher than in Japan

Grocery Prices in NZ are 28.59% higher than in the UK

Grocery Prices in NZ are 3.74% lower than in the US

Grocery Prices in NZ are 2.85% higher than in Austria

Grocery Prices in NZ are 53.55% higher than in South Africa

Grocery Prices in NZ are 30.68% lower than in Japan (K8)

**Anything else (Team)**

How can we identify and create new tourists' spots?

What current and past efforts and activities have been undertaken or attempted to entice people to the Hamilton CBD?

**Covid (Tim)**

1. What percentage of people live within Hamilton and live with health conditions related to Covid-19
2. What percentage of people within Hamilton now live with permanent conditions caused by the after effects of Covid-19 and how have you accommodated?  
   ***(Disability Services/ Infrastructure?)***  
   ***Our Services,* Our City, Our Council, Our Partner Projects**  
   <https://www.hamilton.govt.nz/our-city/community-development/advisoryservices/Pages/Disability-Advisory-Services.aspx>
3. How has Hamiltons population been affected by the Covid-19 epidemic  
   ***(In regards to: Accessability & Promotional Events)***
4. How has this event effected Hamiltons numerical populus in regards to recent overseas arrivals?  
   ***(How has this impacted the events Hamilton has and will host?)***
5. What precautions and procedures have been put in place because of covid-19 epidemic?   
   ***(Graphics Media – Digital & Physical)***
6. What Covid-19 case monitoring measures are currently in place within Hamilton and or New Zealand?  
   ***(Mobile Apps, Forms/SignIn’s?)***
7. What Financial effects have been forecasted and are currently being experienced due to the Covid-19 epidemic?   
   ***(Reduced spending?, Events, Infrastructure, Housing?)***

**Environmental (team)**

What current attractions and activities are present within Hamilton’s CBD?

Hamilton Museum/Excite

SkyCity Casino/Bowlarama

Pubs and Restaurants

Hoyts Cinemas in Centreplace

River Walkway

What areas are being neglected?

What steps are being taken to conserve energy?

The use of LED lighting on street lights (G4)

What industries are present and favored within Hamilton? (Primary, secondary)

How can the water quality of the Waikato river be improved, what is its current state?

Despite being the most intensively used river in the country, the Waikato's water quality is considered to be excellent compared to other rivers around the world. Not safe for swimming due to high levels of E Coli bacteria present. Water must be treated for drinking purposes due to levels of arsenic originating from the Wairakei Power Station present. (G5)

How can Hamiltons night life be improved?

Is Hamilton a safe place to be?

What educational facilities and institutions are present within Hamilton?

What is the current state and quality of Hamiltons night life?

What geographical qualities are attractive in regard to Hamilton’s location and environment?

What is good about garden place as of present?

How much impact does farming have on the CBD?

When is the Hamilton CBD the most populated?

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