Sydney Metro Ecosystem

Report by coursework students of UTS 94663 Navigating Entrepreneurial Ecosystems and Initiating Change, 2022 cohort

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September 2022

About TD School

TD School (ex Faculty of Transdisciplinary Innovation) is a new pan-university School at UTS, established in 2017 as a nexus for transdisciplinary thought and practice. TD School's mission is to lead transdisciplinary education, research and practice by forging bold partnerships of mutual learning to address complex challenges in creative ways.

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Foreword

This report is part of a series of student-generated series about entrepreneurial ecosystems. Each report is a derivative of their coursework. The subject, 94663 Navigating Entrepreneurial Ecosystems and Initiating Change, is a core subject in the Diploma in Innovation at TD School and a popular elective across other UTS degree programs. The subject was piloted as part of the launch for the Sydney School of Entrepreneurship in 2017[1] and draws on prior research and engagement projects to visualise entrepreneurial ecosystems.[2]

The subject runs for three weeks in July, during which teams of students are tasked with defining and exploring an entrepreneurial ecosystem, understanding its history and visualising its current state. Based on that knowledge, they then develop proposals to advance the ecosystem.

The reports reflect the work that was presented publicly to invited guests and stakeholders in the subject, as well as members of the public who joined the presentations via the publicly available event page.

General Methodology

In partnership with Investment NSW (e.g., Sydney Startup Hub) and Spark Festival, the cohort of ~45 students was given the option to focus on Sydney CBD, Western Sydney, or Nationally. Additionally, one team was based overseas and was free to choose an international city to navigate.

The general method of this study follows our own method of evaluating ecosystems that has evolved over years of experience, in consultation with an Australian wide network of ecosystem researchers. While our process is not yet well documented, it is entirely consistent with the 2018 guide produced by the German Society for International Collaboration,[3] promoted by the Aspen Network of Development Entrepreneurs (ANDE).

In addition to learning about ecosystems, teams engaged with ecosystems in authentic and immersive learning experiences. Stakeholder types and specific stakeholders in the ecosystem were identified based on Stam's seminal (2015) review of ecosystem factors. Insights about the ecosystem were generated by analysing desktop reports and media interviews involved those stakeholders. Where possible, teams conducted their own interviews of key stakeholders, including asking them about the ecosystem's history, evolution and critical events, and their vision for how it may evolve further. By synthesising such reports and interviews from multiple stakeholders, teams developed a composite story of the ecosystem's evolution, visualised its current state and identified specific opportunities for change. These reports present this analysis of the ecosystems' evolution as well as the team's proposal for specific interventions by which to intentionally advance the ecosystem in a specific direction.

The method can be tailored to specific ecosystems, ranging from rural communities through to internationally acclaimed innovation precincts. The breadth of Stam's framework and this method enables pushing back against the myth that innovation and entrepreneurship is primarily the domain of high-tech startups and VCs. While they do play a very important role, they are not the only organisations that matter to create economic growth (Brown & Mason, 2017; Spigel et al., 2020).

Field research for coursework follows the same principles as field research for academic purposes. As a result, the students' work mirrored the process of ecosystem research conducted by Martin Bliemel, for which he has ethics approval (HREC# ETH18-3020).

Acknowledgements

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[1] Bliemel, M., Schweitzer, J., Roy, G., Keitel, A., Nicolas, L., Miles, M., ... & Griffith, S. (2019, November). Herding cats to co-create cross-university courses in record time. *UIIN University-Industry Interaction Conference 2019*. University Industry Innovation Network.

[2] Bliemel, M. (2019). University-based entrepreneurial ecosystems and their visualisations. *University-Industry Innovation Magazine*.

[3] https://www.goethe.de/resources/files/pdf197/5.-guide-for-mapping-the-entrepreneurial-ecosystem.pdf

[Editor's note: Where possible, we present the report 'as provided' by the student team. This report is an uncommon case of investigating a single large organisation through the lens of entrepreneurial ecosystem, for which we commend the team. However, to improve the report, the structure was reorganised by the editorial team, including minor editorial changes to content and titles.]

Contents

1   Ecosystem Timeline and Mapping

"Sydney Metro will revitalise communities, transform places and make the nation's only global city more liveable and connected.

Australia's largest city will be more productive and more attractive globally. Not only will this new mass transit system move more people safely and reliably than ever before, it will unlock the potential of Sydney as a growing global city – creating new and diverse opportunities to support changing communities.

Joining other great global mass transit development initiatives, the NSW Government has identified stations on the Sydney Metro system which can be better integrated with the areas around them, creating world-class places that will shape our city's future." Sydney Metro N.D

Sydney Metro began in 2019, however the ecosystem has been around for a much longer time, and has grown enormously since, from the first draft city plans right up to the first commuter, and beyond to its day to day operations.

The foundation of Sydney metro was designed around epitomizing the general transport needs of the public. As the fastest growing city within the nation, the requirement to suit the needs of the public quickly resulted in significant Western and Northern development. Sydney Metro's largest project to date is emblematic of this expansion; the Western Sydney Airport.

The evolution of Sydney Metro as an Entrepreneurial Ecosystem is clearly inextricably linked to Western Sydney Airport, and the state plans for a Western Sydney Aerotropolis. This will fundamentally result in primary transport links between the City, the South West, Western Sydney and North Sydney. This project has been referred to as a city-shaping project, however can also aptly be considered a Sydney Metro shaping project. Consisting of train lines, underground metro lines, airport links and automotive highways across the significant footprint of metropolitan NSW, it will provide significant structure to the future of the Entrepreneurial Ecosystem. Its eventual adoption and functioning will prove to be the most significant milestone for the company.

Sydney Metro Timeline

2000s Project Establsihed

2010s Compulsory Acuqidstion began

Late 2013: Construction Began

26th of May 2019 Sydney Metro Opens

2020s - 2030s Sydney metro to expand to link into the CBD

The development of Sydney metro as an Entrepreneurial Ecosystem is highly accredited to the urban expansion of the sydney population, and significant economic growth outside the central business district. Often analysed against London's Metro system by way of comparison, the evolution of the ecosystem is tied heavily to the public's requirements. By thinking of the system as a 'living organism' that responds to legitimate needs, it is clear that the future of Sydney Metro is in the hands of the public, and the inevitable economic growth within Sydney.

The table below summarises the key points in the evolution of Sydney Metro.

| Era	Key events
1980-1990s	• First plans developed (town planners/architects) • Stakeholder engagement with community (users) • Project sought development approval • Compulsory acquisition began (state government)
1990-2000s	• Multiple governments knocked back the bid, due to funding • Start date for project established • Opal system began development
2000-2010s	• Ground work began (contractors) • Opal system trials began • Route changes occurred
2010-2020s	• Major project delays • Engaging with community and tenants • Sydney Metros operations began in 2019

1.1   Hierarchy Map

Observing Sydney Metro's organisational chart gives the impression that it is a hierarchical and divisional origination, common for most large organisations.
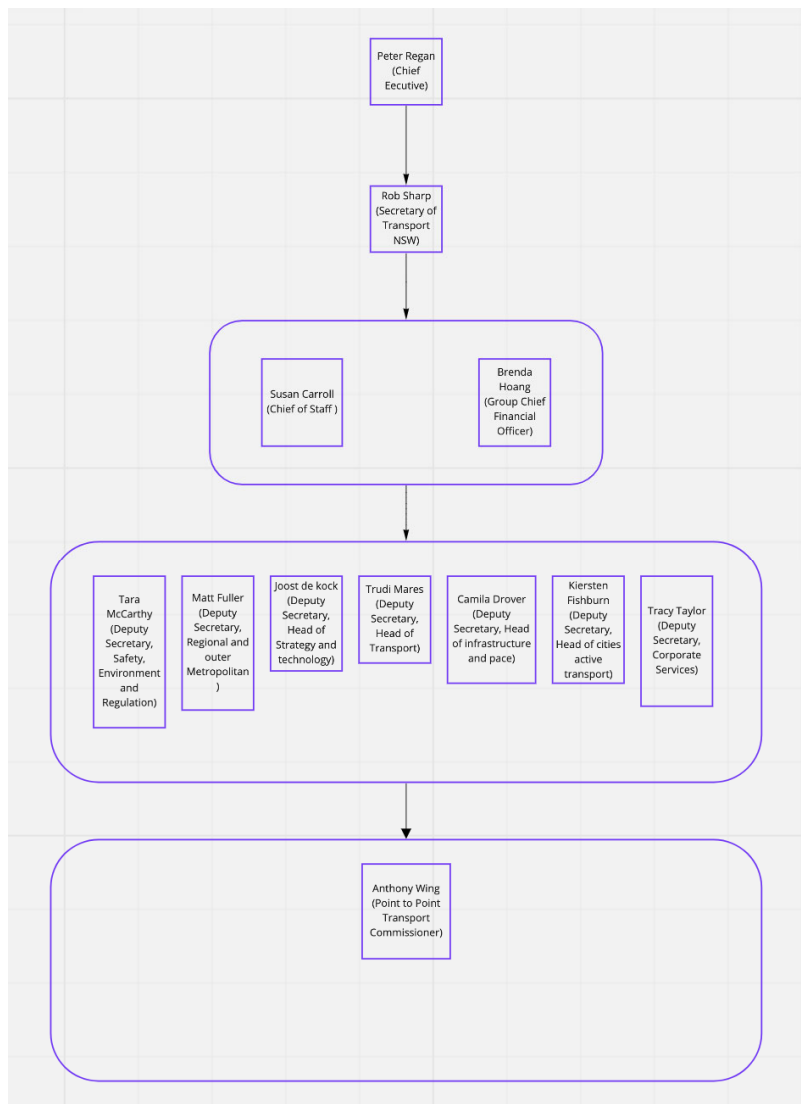
1.2 Sectorized Map

The operations of Sydney Metro can also be visualised by sector, like a stakeholder map. This ecosystem map encapsulates the different sectors of the ecosystem with outlines to what each individual sector is responsible for. It also includes the plans for the future of the ecosystem, providing an idea of how this ecosystem will develop and evolve over time.
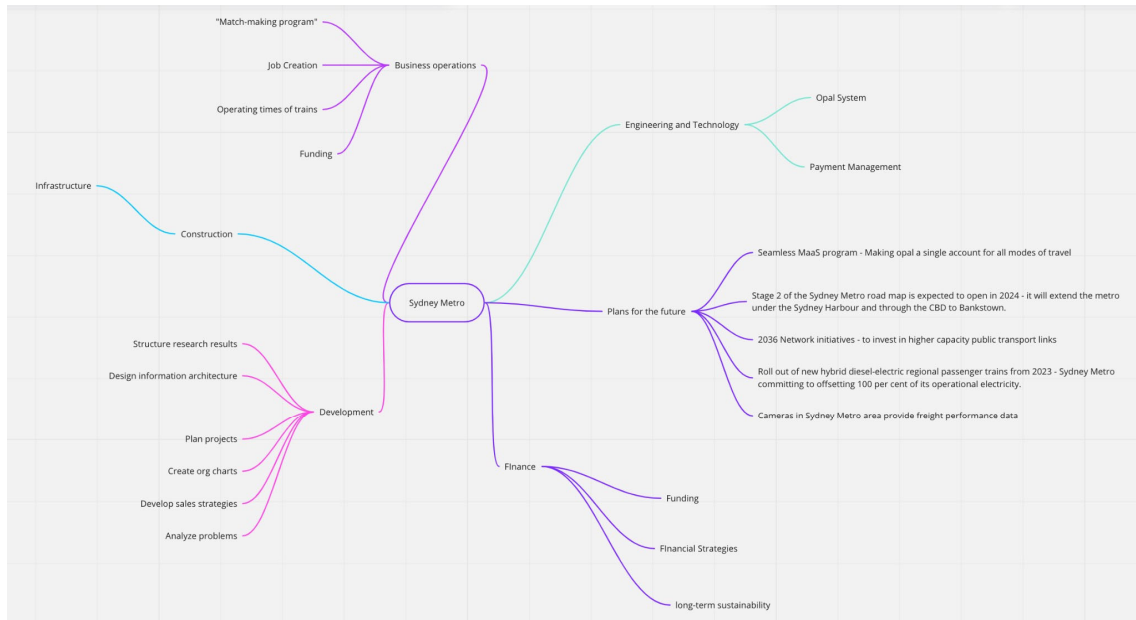
1.3   Sydney Metro Ecosystem Map

When considered from the perspective of how Sydney Metro interacts with the external environment, an ecosystem visualisation emerges. This diagram is an ecosystem influence and input map showing all the direct relationships currently present within The Sydney Metro entrepreneurial ecosystem (EE). The arrows indicate the origin and destination of each input, for example, Train Unions have influence with Tara McCarthy. Transport NSW largely sits in the centre of this ecosystem, serving as a middle man for most relationships. A massive disconnect is visible with this map, that being between the public and ordinary media sources to those positioned higher at Transport NSW. The only input that is getting through this divide is the message from the Train Union, everything else is filtered through TNSW.
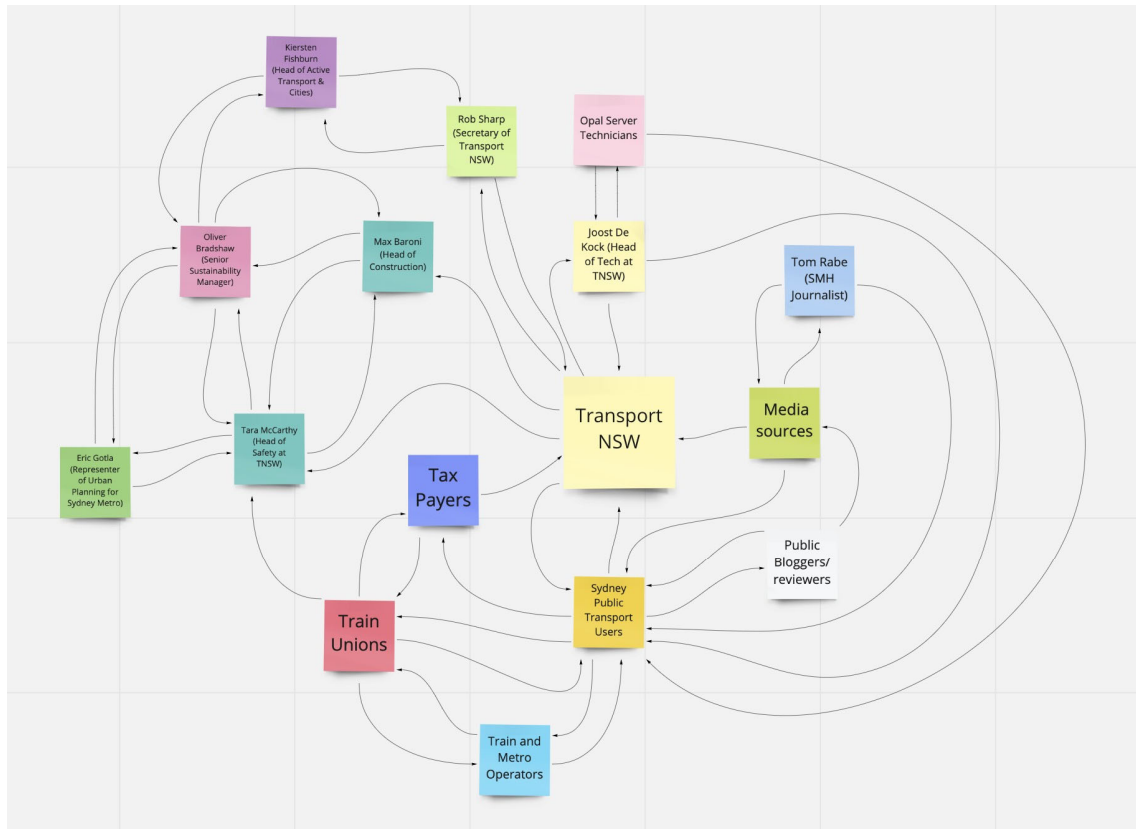
2   Leverage Proposal

2.1   Vision of Sydney Metro over the next 10 years

The Sydney Metro Entrepreneurial Ecosystem is to become more customer focused, build up a strong economy, set forward safe procedures, make services more accessible and improve sustainability.

To make the EE more customer and user focussed The Opal System is stepping up to make their technology more interactive and personalised (Future.Transport.NSW.Gov.au, 2021).

The Sydney Metro EE would like to satisfy the requests of train unions within the next few years, one action they will be taking is to provide more worker centred safety procedures and protocols.

The ecosystem envisions becoming accessible to anyone who needs their services, a great example of this that was gathered from our primary source research was a model which acts similarly to that of The London Tube, not necessarily underground but with the same outcomes, everyone is connected and no one is disturbed.

The final key outcome The Sydney Metro Entrepreneurial Ecosystem is visualising is to decrease carbon footprint and Metro malfunctions, to ensure an efficient and environmentally positive future.

2.2   Opportunities and gaps

What are the opportunities or gaps between the current ecosystem and the future one?

There is currently a massive gap between the way train unions are responded to now and the way the ecosystem plans to in the next 10 years. This is also an opportunity for collaborative development between two distant entities that already exist in the ecosystem.

A large gap is the accessibility of the metro system. As of now trains are often crowded (SMH, 2022) and it is not uncommon for workers to have to drive to the nearest train station to get to work. This is a very far off reality from the one envisioned within the next 10 years, one that will require massive development, planning and sustainability frameworks.

2.3   Lever 1: Working with the RTBU

The key stakeholders we have identified who can make significant change in regards to the future of the ecosystem are David Eliot and Rob Sharp. David Eliot is the current Minister for transport in NSW and is responsible for direct communications with the Rail, Tram and Bus Union NSW (RTBU). Therefore, Eliot could play an integral role in the intervention and resolution of these current Union problems and any problems that may arise in the future. Similarly, Rob Sharp the current Secretary of Transport for NSW can solve the current lack of accessibility of the metro system. Sharp leads more than 25,000 people across the transport cluster in planning, managing and delivering transport infrastructure and service for all transport modes (Transport for NSW, 2022). Therefore, we are proposing for immediate change to be implemented within the ecosystem as these issues are current and may be ongoing if intervention does not happen.

As stated above there is a massive gap between the response to trade unions currently and the way the ecosystem plans to interact with them for the next 10 years. Over the last year Sydney has faced multiple rail strikes from the RTBU in the escalating dispute between the union and the NSW government. This has had a significant impact on the Sydney Metro ecosystem with regular train times and routes being highly delayed or completely cancelled. The aftermath of this conflict can be felt among the public with thousands of people across NSW being unable to attend school, work and in multiple circumstances unable to return to their home. Key stakeholder David Elliot has been in multiple discussions with the union, most recently making a $264 million offer to fix a fleet of trains in a bid to avoid further train strikes (SkyNews, 2022). Despite these attempts, constant conflicts still emerge in regards to the rail transport system between the NSW and the RTBU. Through research we found significant impacts of these disputes in our interview with Workspace Manager Matiler Eder stating that "workers complain when they need to travel into the city, especially with the constant train delays and disruptions". Therefore, the development of a gloomy perspective can be seen growing within the transport industry creating opportunities for a lasting negative impact on the ecosystem of Sydney Metro. Hence, we are proposing that Mr Elliot intervenes and acts

within the next few years to create a 10-year plan addressing current and future issues regarding the RTBU's concerns and problems to ensure a safe, productive and efficient environment for the ecosystem of Sydney Metro. This could be achieved by cooperating and working together with the RTBU, David Elliot and also the Secretary of Transport, Rob Sharp. Through this collaboration the current problems of the RTBU can be heard in a safe space in an attempt to come to an agreement about the climate of the ecosystem. Mr Sharp and Mr Elliot can also plan for future problems that may arise within the union by understanding concerns now and implementing the solutions to these problems in any future projects Sydney Metro is creating. This will highly reduce the risk of a future conflict and ensure that the union remains calm and allows for the smooth operation of our Sydney railwork system. We believe this 10-year plan is also the first step in creating trust and coherence between the NSW Government and the RTBU allowing for the ecosystem to remain productive and an integral part of the wider community.

2.4 Lever 2: Parking and the last mile

A large gap is the accessibility of the metro system. As of now trains are often crowded (SMH, 2022) and it is not uncommon for workers to have to drive to the nearest train station to get to work. This is a very far off reality from the one envisioned within the next 10 years, one that will require massive development, planning and sustainability frameworks.

The metro does have plans to expand into other areas of the city with a proposal to connect those sub-points to larger corridors of the CBD and surrounding area, however, this is still a long way away and encompasses part of a 2056 roadmap for the Sydney Transport system (NSW government, 2016). In our research it was evident that many commuters were not actually being brought to their final destination, instead, the metro acted as just a point along their ride, with workers commonly driving to the stations to then take the metro to work. This comprises a very significant problem space for the Sydney Metro ecosystem and a strong area for opportunity and growth which we believe can be ushered into action by putting Trudi Mares and Peter Regan onto the case. As identified, there is a large gap in the accessibility of the metro system, and part of the solution involves developing stronger commuter car parks which serves the purpose of increasing accessibility while at the same time reducing emissions as workers have the opportunity to drive to their local metro station. Despite discussion already being raised in a report responding to the community feedback on Sydney Metro Northwest parking management (Sydney Metro, 2019) and a subsequent report collating further research (Sydney Metro, 2019), there still exists a sizeable gap in accessibility that spans across the entire network of the Sydney Metro with no indicated plans to develop the same parking infrastructure in those lines (Sydney Metro, 2021, pg. 6).

Our findings suggest that a joint effort spearheaded by Peter Regan and Trudi Mares along with the collaboration of the relevant Sydney Metro divisions can mirror the efforts of the Sydney Metro Northwest Parking Strategy within the Greater Sydney area as well as the wider scope of the Metropolitan corridors. Following the same design and framework put forth by the Sydney Metro Northwest Parking Management Strategy, by cloning it along the City & Southwest, West, and Western Sydney Airport lines, this proposal should assist in minimizing traffic and parking impacts all the while improving general accessibility for the public. Peter Regan's current involvement in the Sydney Metro project in conjunction with Trudi Mares's jurisdiction over the Greater Sydney Division, means that they hold the power to allocate the appropriate resources and manpower in producing this solution effectively and in a timely manner. The aforementioned proposal greatly benefits all stakeholders of the Sydney Metro ecosystem with a significantly positive impact on the community which has been complaining about accessibility issues since the start of the Metro development (Libby Daniels, 2019). Lastly, it is important to note that the current ecosystem looks very differently to how the NSW government envisions it will look in the next 10 years, and it is imperative that these levers are put in place so that the ecosystem can create a seamless and sustainable journey for its customers in the long term.

[Editor's note: The original report by this team included notes from an interview with a co-working workspace manager. The interview revealed the shift to remote work and a desire for shorter commutes, e.g. to a local co-working space rather than a longer commute to the CBD. Those local spaces could be near mass transit, to enable local clustering of work and to commute to the CBD for business meetings. For the latter, there were concerns about the reliability of transit and timely arrival at the destination.]

2.5 Anticipated impact

There is an intrinsic value untapped in the fragmented ecosystem that is the Sydney Metro network, and we believe that a well planned execution of the aforementioned solutions will not only benefit the ecosystem at large but also the activators that can push it into action. The first problem space identified between the NSW Trasport and the RTBU is that the media and RTBU is bearing its head at the top executives of the NSW transport board, which is forcing people such as David Elliott to make haphazard

statements all the while throwing money at the problem for a quick fix (SkyNews, 2022). Thereupon, the solution we propose serves to amend the discord between the two entities all the way taking the media spotlight off of the executives or levers of the Sydney Metro leadership board. Furthermore, the 10-year plan we envision will have a secondary effect of improving the relationship between the NSW and RTBU which is crucial towards future developments that the NSW transport has in mind in its 2056 roadmap (NSW Government, 2016). Summarily, the implementation of our 10-year plan seeks to benefit the entirety of the Sydney Metro Entrepreneurial Ecosystem with consideration of facilitating real tangible value for the levers such as David Elliott who suffer as scapegoats to the media.

The second problem space identified is an issue that the NSW Sydney Metro already understands, and it has already taken action in combating in its Northwest segment, however has failed to administer in the larger scope of the network. Stronger commuter car parks is the solution, it will improve accessibility for users of the ecosystem and it has the effect of reducing carbon emissions which is a major KPI target of their corporate plan (Sydney Metro, 2021). Additionally, our hope is that the strategic framework will follow in similar design and benefit to what the London tube transport system offers, and that one day commuters can have the luxury of having a station for every stop. On the corporate side of the ecosystem, the Sydney Metro will be able to hit its carbon emission targets which presents an intrinsically business gain for the activators. It is through careful consideration of all members of the Sydney Metro Entrepreneurial Ecosystem that we propose these strategies, and thus it serves to benefit not only the EE at large but inclusively the activators which will be put in place to drive the change.

References

About Sydney Metro | Sydney Metro. Retrieved from https://www.sydneymetro.info/about

Calderwood, K. (2021). Sydney plagued by public transport failures despite billions spent on infrastructure. ABC News. Retrieved from https://www.abc.net.au/news/2021-11-14/sydney-transport-woes-despite-billions-spent-of-infrastructure/100618634

Libby Daniels. (2019). "Create more car spots for the brand new Sydney Metro North West stations." https://penandthepad.com/cite-petition-4579.html

NSW Government. (2016). Future Transport Strategy 2056. NSW: NSW Government.

O' Sullivan, M., & Rabe, T. (2022). Sydney commuters in for delayed, crowded and cancelled trains. The Sydney Morning Herald. Retrieved from https://www.smh.com.au/national/nsw/sydney-commuters-in-for-delayed-crowded-and-cancelled-tr ains-20220701-p5ay79.html

Our approach to sustainability | Sydney Metro. Retrieved from https://www.sydneymetro.info/our-approach-sustainability

Sydney Metro. (2019). Sydney Metro Northwest - Community feedback - Parking Management Strategy Overview Report. NSW: NSW Government.

Sydney Metro. (2019). Sydney Metro Northwest - Parking Management Strategy. NSW: NSW Government.

Sydney Metro. (2021). Sydney Metro Corporate Plan 2022-2024 (p. 6). NSW: NSW Government.

Wu, C. (2022). David Elliott says transport strike is 'nothing more than a politically motivated attack' as union refuses to back down. Sky News. Retrieved from https://www.skynews.com.au/australia-news/david-elliott-says-transport-strike-is-nothing-more-than-a-politically-motivated-attack-as-union-refuses-to-back-down/news-story/f854e19bd588fd4eade33d1edc2a280e

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