Canada Digital Rail Proposal

***Tagline****: A national digital infrastructure capability, enabled by Blockchain, to support the COVID-19 response and accelerate the transformation of Canada into a digital economy and society.*

## Context

COVID-19 has surfaced the risk of relying on in-person and paper based processes to conduct transactions; governments and organizations that rely largely on these processes have been either unable or delayed in delivering services. In the post-COVID world, Canadians and businesses are expecting faster responses from governments and organizations, and the ability to transact digitally across the economy.

The essential part of any transaction is trust, or in other words, being assured that any claim made by a transacting party is true. As examples, transacting parties may need to verify who they are dealing with (e.g. individual or business identity), whether a party has the authority to conduct specified activities (e.g. importing a product or practicing law), whether they own the asset being exchanged (e.g. car ownership), or whether the exchange medium (e.g. digital currency) is issued by the central bank.

Government is a trust anchor in society and facilitates trust in society and the economy through various means, such as issuing individual and business identity, licences and permits and currency and making information publicly available to support the public good. Governments can enable trust online by providing digital versions of these documents and currencies, that could be verified through the Digital Infrastructure enabled by Blockchain, to support the COVID-19 response and address the recommendation from the Economic Strategy Tables to transform Canada into a digital society. Please see Annex 1 for a potential list of high-level use cases to support key priorities: responding to COVID-19, enabling the digital economy, and supporting a digital and open society.

Governments across the world have evidenced a growing interest in how this technology will transform our economies and societies, as well as its use as a tool to deliver policy objectives. A number of countries have already issued over-arching blockchain strategies, including Australia, the People’s Republic of China, Germany, and India, while others, including France and Italy, are currently in the process of developing such strategies.

## Proposal

The proposal includes the development of recommendations to establish a national **digital infrastructure capability** enabled by blockchain, aptly named the Digital Rail, to support two key areas:

* **digital credentials** (e.g. individual and business identity, professional qualifications, medical status, licences, permits, inspection certificates, product claims, etc.) and,
* **digital currency (**i.e.central bank digital currency).

The Digital Rail would be operated for the strategic benefit of Canada and include the participation of FPTM and Industry players to enable a Canada-wide ecosystem to respond to COVID-19 and enable the digital future.

The figure below is a notional illustration of how Digital Rail supports the two key areas and ultimately Canada’s priorities in a post-COVID world.



It should be noted that the Digital Rail would be built on globally-accepted standards developed by the **World Wide Web Consortium** (W3C). Further, technology implementations are now being proven by research funded by the **Department of Homeland Security Silicon Valley Innovation Program.** Within the Government of Canada there are several projects now underway (TBS, CRA, ISED, NRC, TC). A well-known project is the **Known Traveller Digital Identity** (KTDI) Initiative, sponsored by the **World Economic Forum** (WEF) in partnership with the **Netherlands**.

The recommendations will address the following elements:

1. **Technology Maturity**: Identifying the approach to assess and conduct due diligence on the Digital Infrastructure and relying applications\*.
2. **Governance:** Stakeholders that need to be involved to govern the Infrastructure and relying applications
3. **Interoperability:** Identification of standards and who should be developing them to ensure interoperability between digital infrastructure technologies, relying applications and legacy systems
4. **Security and Privacy:** Approaches to ensure ongoing security and protecting privacy
5. **Operations:** Digital Infrastructure required and whether the infrastructure and relying applications should be operated by government, by the private sector or jointly
6. **Education and Training:** Approaches to ensure sufficient skill-sets in government.
7. **International Cooperation:** Identifying potential collaboration with other countries and international fora on Digital Infrastructure and relying applications
8. **Policy and Regulatory Alignment:** Potential policy or regulatory alignment required
9. **Action Plan:** Proposing an action plan to support establishment of the Digital infrastructure

\*Relying applications refer to solutions that are built on the infrastructure to support Digital Credentials and Digital Currency, such as digital wallets and supporting communications protocols

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## Next Steps

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| **Activity** | **Date** |
| Establish Core Working Group | Mid-May |
| Roles and responsibilities of Core Working Group | End May |
| Identify stakeholders to be consulted | End May |
| Inventory of past and current Blockchain-reliant initiatives | Mid-June |
| Lessons learned from past and current initiatives | Mid-June |
| Draft Recommendations (version 1) | Mid-July |
| Consultations with Stakeholders | Mid-August |
| Draft Recommendations (version 2) | End August |
| Consultations with Stakeholders | Mid-September |
| Finalized Recommendations | End September |

**Annex 1: Potential High-level Use Cases under Canada’s Key Priorities**

The Digital Rail has the potential to transform a wide-range of government actions and services, and economic transactions across the economy, such as

* Responding to COVID-19
  + Supporting re-opening of businesses (i.e. start or close operations as warranted by the health crisis)
  + Supporting movement of individuals and businesses providing “essential” goods and services across provincial and national borders (i.e. activities deemed to be essential)
  + Supporting return to work (i.e. “immunity passport” or negative to COVID-19 testing results)

* Enabling a digital economy
  + Easing regulatory compliance by making it quicker and easier for individuals and businesses to prove their authority to conduct activities (e.g. liquor licence) and comply with regulations (e.g. Anti-Money Laundering reporting)
  + Facilitating trading of goods and services across international borders (e.g. import licences)
  + Identifying proof of origin and verifying product claims (e.g. environmental and social criteria)
  + Issuing digital currency backed by the Bank of Canada
  + Facilitating digital transactions between individuals and businesses.
* Supporting a Digital and Open Society
  + Establishing digital identity for individuals and businesses (e.g. government-issued identity, qualifications)
  + Enabling international travel (e.g. digital passports)
  + Delivering government services online to deliver social and economic benefits
  + Supporting transparency (e.g. government contracts)