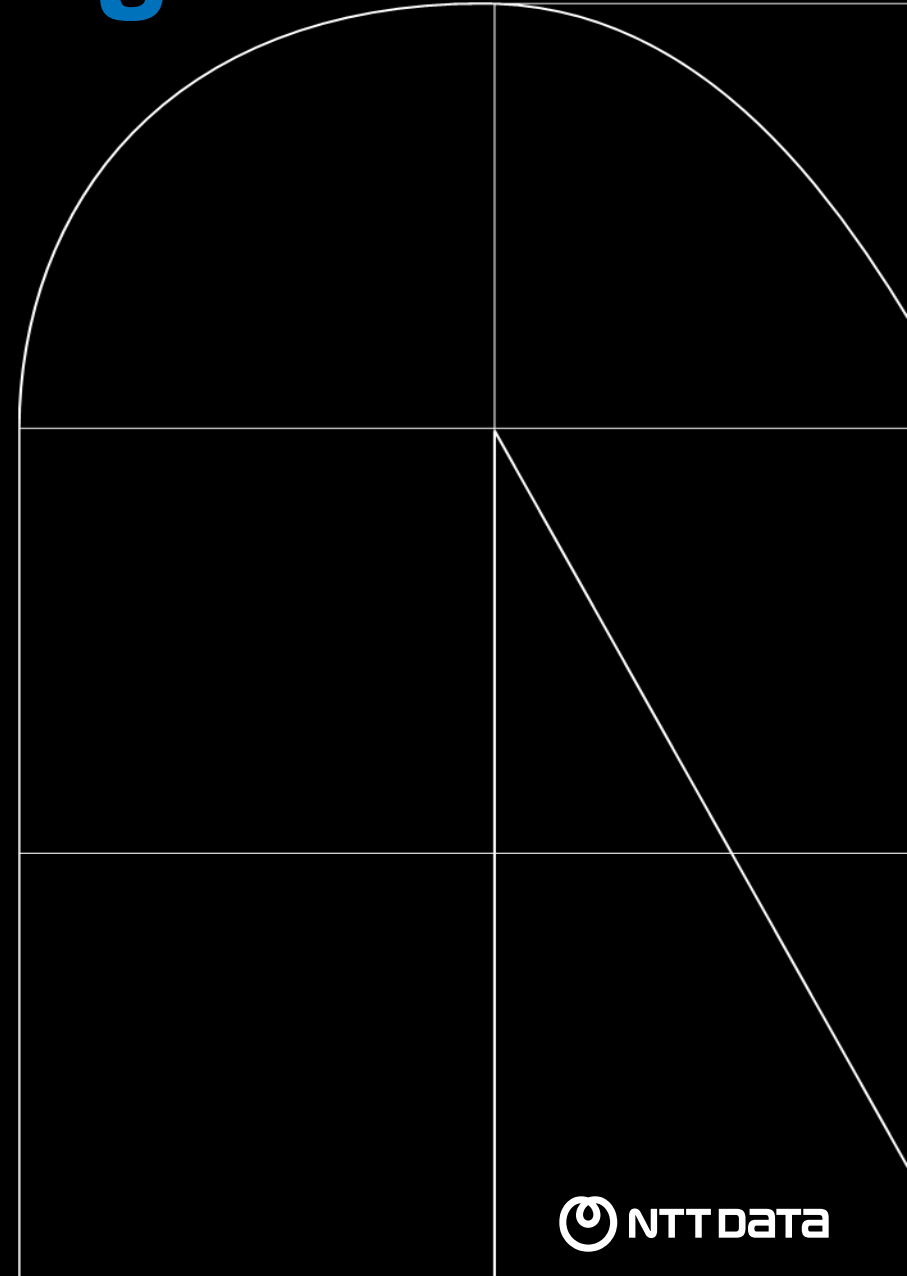


P.A.N.D.O.R.A

Priority-Aware Network Planning AI tool based on genetic algorithms and LLM for ensuring bandwidth and low latency in public networks.

Traditional network planning is complex and tedious

- The planning stage for public networks is a big challenge operation when distributing the resource allocation for public entities.
- Adding to the fact that ISP planning operations are typically performed manually using static templates, this increases the possibility of human error as well as designing a load distribution that most likely does not follow best practices or industry standard recommendations.
- In critical scenarios, the implementation of poorly planned public networks can lead to delays in project times, service outages in entities with high traffic demand and avoidable financial expenditure.



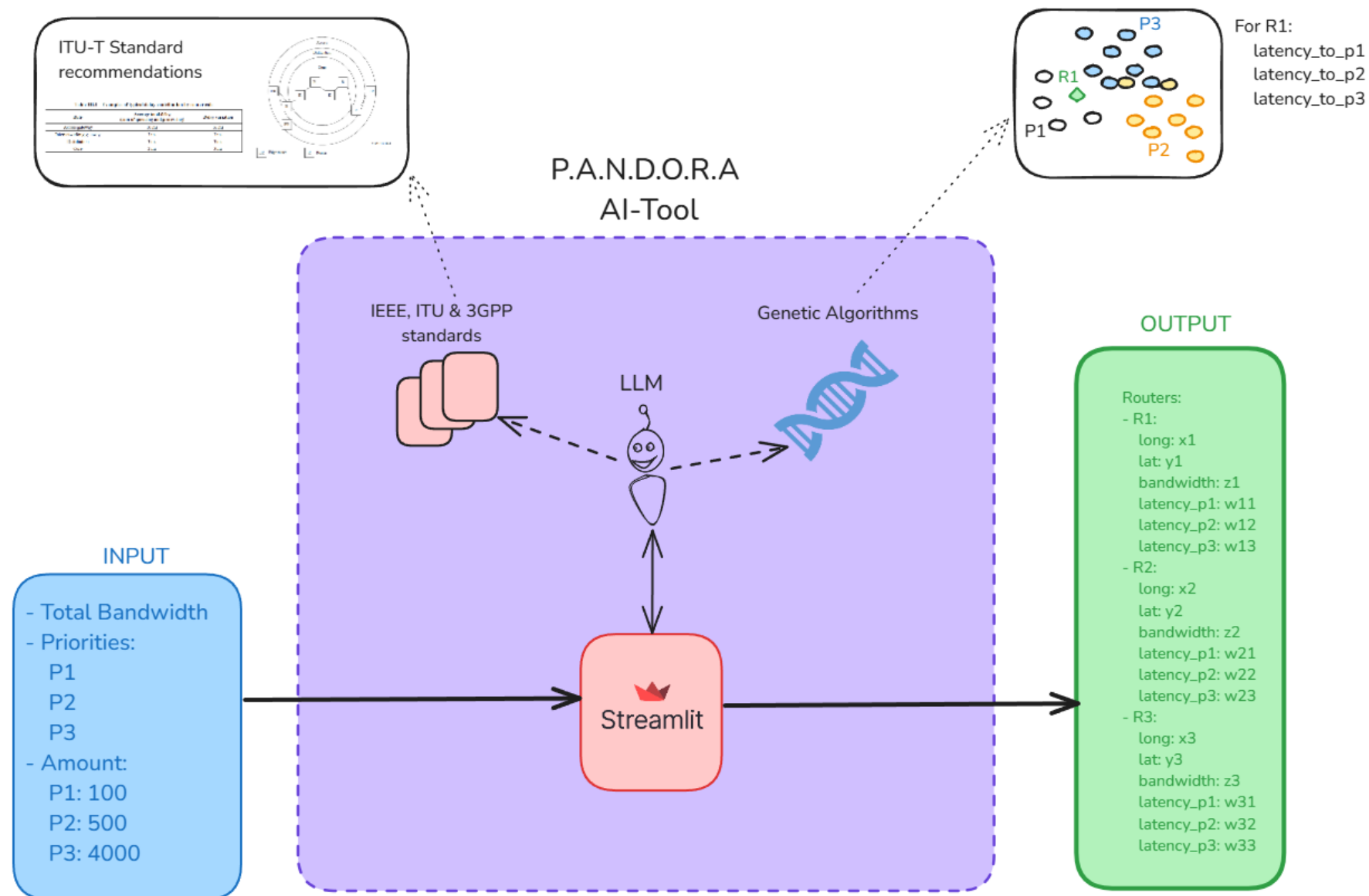
AI in action - How we solve it?

Starting from an existing core infrastructure capability, the network planning problem can be viewed as a resource allocation at the distribution layer.

This allocation of resources is not uniform, i.e. different user profiles and use cases are considered, each associated with a quality of service. In the case of public networks, the highest priority is assigned to government institutions; guaranteeing government services is key for a city in order to improve its socioeconomic sustainability.

We created an **AI Tool** supported by **genetic algorithms together with LLM to optimize latency and bandwidth levels** following the recommendations given by different standardization organizations such as ITU, IEEE and 3GPP.

High level Architecture



Commercial Opportunity

According to Gartner about Automation and AI in Networks:

“Applying AI in CSP network operations empowers rapid end-to-end business or operation process automation complemented by algorithms, leading to better efficiency, faster response and improved productivity.”

The demand for AI-driven network planning tools represents a high-impact opportunity for ISPs to:

- **Reduce costs** through operational efficiency.
- **Increase revenue** by improving customer experiences and enabling new services.
- **Stay competitive** in a rapidly evolving market.

By investing in AI and automation, ISPs can future-proof their operations and unlock significant business value.

Competitive Analysis: Strengths and Opportunities of Our Solution

