Potential for a Catamaran Ferry System

on the Danube in Budapest

Linking Northern and Southern Agglomerations · Brisbane Case Study · MLC Financing

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Összefoglaló (magyar)

Budapest és agglomerációja (kb. 2,59 millió lakos) a Dunát természetes észak-déli tengelyként használhatná a közforgalmú közlekedésben. A jelenlegi vízi közlekedés minimális (BKK D14 szezonális, MAHART turisztikai). A északi szektor (~142 ezer fő: Vác, Dunakeszi, Szentendre) és a déli szektor (~247 ezer fő: Érd, Csepel, Szigetszentmiklós, Százhalombatta) közötti kapcsolatot egy gyors katamarán-rendszer erősíthetné, kiegészítve a zsúfolt közúti és vasúti hálózatot.

Brisbane CityCat rendszere (1996 óta) bizonyítja a modell életképességét: lineáris, nagy sebességű katamaránok, kb. 24 hajó, ~6 millió utas/év, 2024-es 50 centes jegyárcsökkentés után ~40 %-os növekedés. A siker a technológián, a tarifaintegráción és a folyóparti fejlesztésen alapul.

A projekt részleges finanszírozása helyi kiegészítő pénznemekkel (MLC, engethics.org N.02 szerint) lehetséges: helyi értékcirkuláció, demurrage-szerű ösztönzés, vállalati és közösségi előnyök, magyar esettanulmány. Ez kiegészíti a klasszikus forrásokat, növeli a helyi beágyazottságot és a rezilienciát. További műszaki, keresleti és jogi vizsgálatok szükségesek.

1. Potential on the Budapest Danube

1.1 Geography and population

The Budapest agglomeration comprises approximately 2.59 million inhabitants (KSH 2026 figures), with roughly 1.68 million in the capital and over 900 000 in the surrounding sectors. The northern sector (Vác, Dunakeszi, Szentendre, Göd and related settlements) holds about 142 000 residents; the southern sector (Érd, Szigetszentmiklós, Csepel, Százhalombatta, Dunaharaszti and others) holds about 247 000.

The Danube forms the natural longitudinal axis linking these poles. Distances of 40–60 km separate the northern (Szentendre/Vác) and southern (Érd/Csepel/Százhalombatta) clusters, with intermediate stops feasible in riverside districts of Budapest (Óbuda, Újpest, Csepel, Budafok).

1.2 Current waterborne public transport

Public transport on the Danube remains marginal. BKK operates a limited seasonal recreational line (D14). MAHART services focus on tourism and day trips (Danube Bend). Earlier studies (Uhljár 2018 and BKK-related work around 2014) identified potential for integrating high-speed catamarans (target 32–40 km/h) into suburban mobility.

1.3 North–south linking potential

A catamaran ferry system could deliver:

- An alternative or complement to congested road and rail corridors (HÉV, suburban trains, M0/M3/M5/M7 motorways) at peak hours.
- Competitive journey times on direct north–south links, avoiding terrestrial detours.
- Improved access to riverside areas less well served by rail, particularly in parts of the northern and southern sectors.
- Quality-of-life and image benefits by treating the river as a public mobility space.
- Contribution to congestion reduction and emissions cuts, aligned with decarbonisation and energy-independence objectives.

Earlier analyses suggested a well-designed system could capture a meaningful share of relevant suburban trips (illustrative target around 5 % in some scenarios). Continued growth in the southern agglomeration and housing pressure further support the case for a structuring river axis.

2. The Brisbane CityCat system

2.1 Genesis (1990s)

Before 1996 Brisbane operated a fragmented, costly and inefficient ferry network. In the context of riverfront renewal and the ambition to reposition the city as a “River City”, the municipal council adopted a linear network of fast, low-wash catamarans in 1996. The first CityCats (approximately 150 passengers, speeds up to 25 knots) entered service in November 1996. Local operators and policy entrepreneurs were instrumental in converting a technical concept into an urban structuring project.

2.2 Network and fleet evolution

The system expanded progressively. Four generations of vessels were built: Generation 1 (1996–1998, ~150 pax), Generation 2 (~160 pax), Generation 3, and Generation 4 (from

2019, up to 170 pax with an upper deck). The fleet now comprises approximately 24 CityCats and 5 KittyCats (smaller vessels for cross-river services). The network serves around 20 terminals over roughly 20 km of the Brisbane River, from UQ St Lucia to Northshore Hamilton.

2.3 Performance and patronage

Patronage grew substantially. Cumulative trips exceeded 5 million in the early years; more recent figures indicate approximately 6 million customers annually across ferry services. The introduction of a flat 50-cent fare in August 2024 (Queensland state initiative) produced an average monthly patronage increase of around 40 %. The system has become a central element of Brisbane's identity, combining daily commuting, leisure and tourism.

Success factors include appropriate technology (fast, comfortable catamarans), fare and operational integration with the Translink network, strong branding, and alignment with riverfront planning. Challenges remain (flooding, frequency adjustments, fleet renewal), yet the model has demonstrated robustness over nearly 30 years.

3. Financing potential via MLC

3.1 Principles of MLC according to engethics.org

Local complementary currencies (MLC), as set out in dossier N.02 on engethics.org, are local circuits of value that operate alongside the national currency (euro or forint) without substituting for it. They often incorporate incentives to circulate (including demurrage-type mechanisms in certain historical and contemporary models). The pedagogical approach draws on perspectives from economists (Friedman, Buchanan, Graham, Blanchard, Galbraith) and examines benefits for companies (balance-sheet effects), communities and territories, including a Hungarian case study.

3.2 Application to the ferry project

An MLC arrangement could support financing and social acceptability of a catamaran ferry system in several ways:

- Issuance of MLC backed by the project (or a broader local circuit) to pre-finance part of the investment (terminals, vessels, infrastructure) through participation of local actors (municipalities, firms, residents).
- Partial acceptance of MLC for tickets or related services, generating local demand and a value circuit linked to mobility.
- Closed or semi-closed circuits with suppliers (shipyards, maintenance, energy, on-board services) to maximise the local multiplier.
- Alignment with objectives of territorial autonomy and resilience, consistent with EngEthics work on energy independence and short circuits.

Such an arrangement does not replace conventional funding (public budgets, EU instruments, PPP, fares) but can complement it, particularly for start-up phases, citizen involvement and reduction of recurrent subsidy needs. Detailed examination of Hungarian and European legal frameworks would be required to operationalise the scheme.

Conclusion

Budapest possesses a clear potential for a catamaran ferry system linking the northern and southern agglomerations. The Brisbane example demonstrates that a linear network of fast

catamarans can become, within a few decades, a pillar of public transport and urban identity, carrying several million trips per year.

Financing via MLC, following the principles developed on engethics.org, offers a complementary route to mobilise local resources, strengthen territorial anchoring and improve economic and social sustainability. Technical, demand-modelling and regulatory studies would refine the conditions of viability for such a system on the Danube.

This document provides a factual and comparative basis for discussion with the competent authorities (BKK, City of Budapest, Hungarian government) and potential partners.