



University of
Strathclyde
Glasgow

THE UNIVERSITY OF STRATHCLYDE: **Working with a PSRE**

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Associate Principal (R&I)

www.strath.ac.uk

Collaboration with PSREs

- National Physical Laboratory
- Laboratory of the Government Chemist
- National Engineering Laboratory
- DSTL
- UK AEA
- UK Space Agency
- National Telecoms Laboratory (in development)

NPL Strategic Partnership

- 31 March 2015 Agreement between Dept of Business Innovation and Skills, NPL, Strathclyde and Surrey Universities
- Partnership
 - Science and Technology Advisory Committee, which carries out International Science Review
 - Joint Working Group – develops collaboration
 - Postgraduate Institute (PGI)
 - University VCs on the Board;
 - Senior academics on *Science and Technology Advisory Committee*

Independent Quality Assessment

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Independent assessment of the quality of our science output

Professor Dame Anne Glover FRS FRSE chaired the International Science Review (ISR) Board which outlined the research capabilities, impact and outputs, as well as the future challenges for NPL science and engineering.

Summary of findings

NPL is an important and iconic institution with a rich history. NPL delivers against a mission that requires both fundamental expertise in laboratory science and the ability to turn that knowledge into societal impact. The ISR Board valued NPL as part of the national infrastructure, carrying out research in many areas and demonstrating international leadership in many areas.

NPL has considerable impact with a broad range of stakeholders. It is also clear that much progress has been made over the last few years to raise the profile and understanding of the work of NPL with key Government departments to underpin its position as an important national asset. NPL's people are a major asset and attraction of high-quality people is essential for the sustainability of the organisation.

The review spans the period 2016 – 2020 and was delayed due to the COVID-19 pandemic.



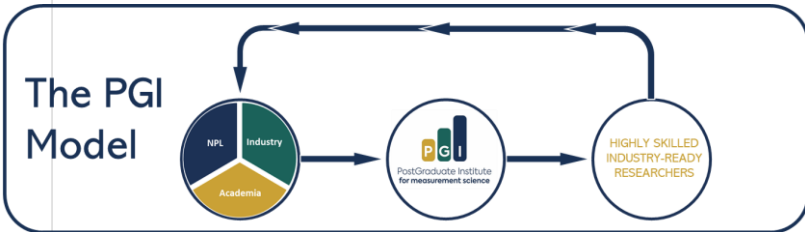
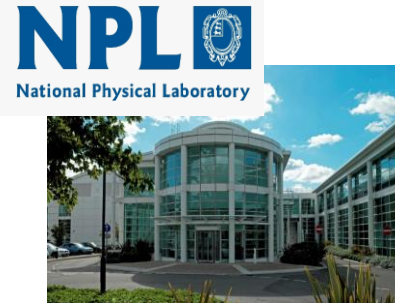
Prof Dame Anne Glover

Example Collaborations

- Postgraduate Institute – *National Significance*
- Global Environment Modelling and Measurement: Atmospheric and Indoor Air Quality in Glasgow – *“Bottom up” enhancing international collaboration*
- National Timing Centre – *Strategic UK project*
- Security and Resilience – *Trilateral project*

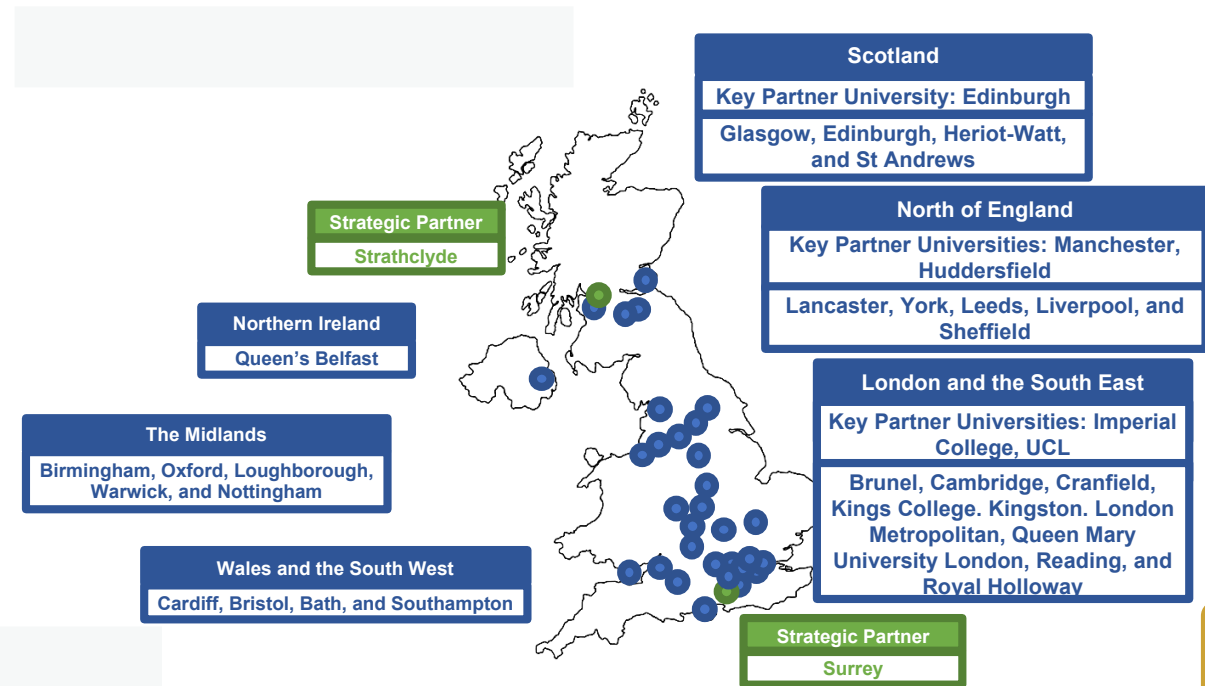
The PGI: A Partnership Model

Strategic Partners



Academic and Third-Party Stakeholders

Bath 3	Birmingham 11	Bristol 8	Brunel 5	Cambridge 15
Cardiff 2	Cranfield 3	Edinburgh 2	Glasgow 2	Heriot-Watt 2
Huddersfield 6	Imperial College London 11	King's College London 11	Kingston 5	Lancaster 2
Leeds 2	Liverpool 4	Loughborough 4	London Metropolitan 1	Loughborough 4
Manchester 11	Nottingham 5	Oxford 11	Queen Mary University London 2	Queens Belfast 4
Reading 5	Royal Holloway 10	Sheffield 2	Southampton 2	St. Andrews 1
Strathclyde 17	Surrey 7	University College London 10	Warwick 4	York 4



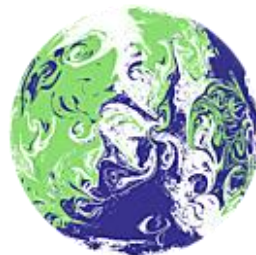
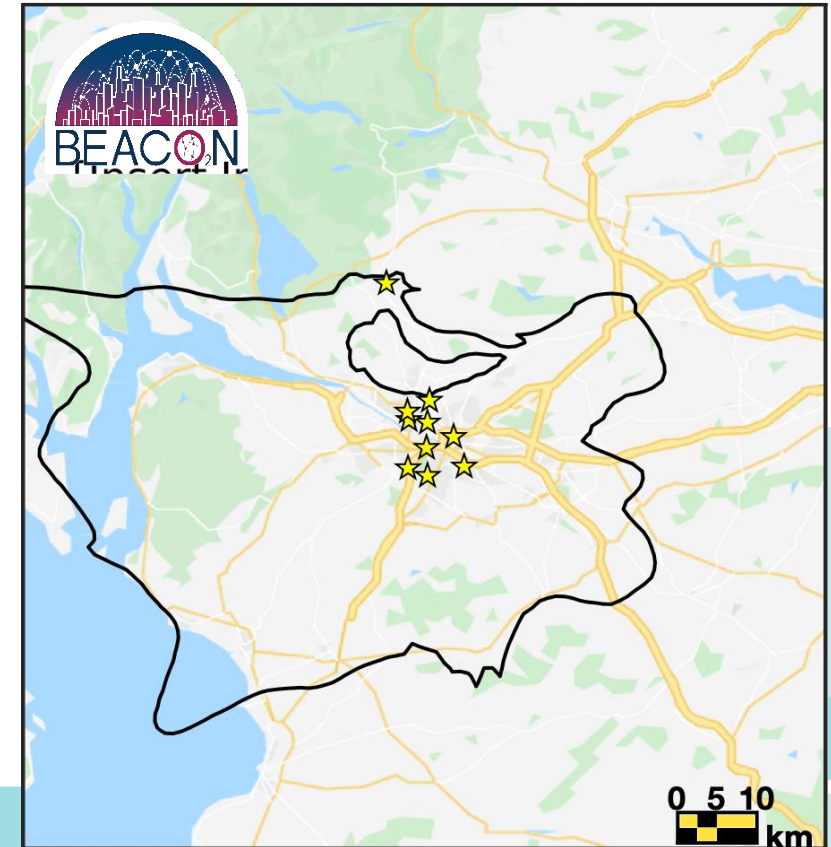
GEMINOA Glasgow Environmental Monitoring of Indoor and Outdoor Air

BEACO2N low cost monitoring network in Glasgow inspired by Berkeley network

Partners: Glasgow City Council, Glasgow Science Centre, Smartstems, U California Berkeley, and supported by NPL



Glasgow Area

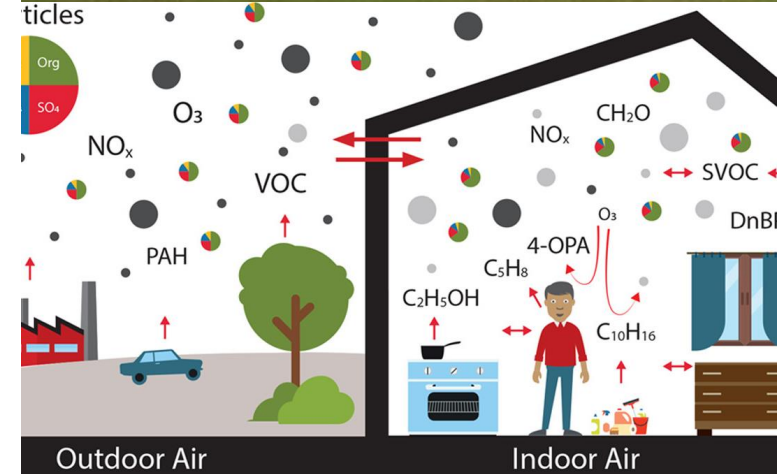


UN CLIMATE
CHANGE
CONFERENCE
UK 2021

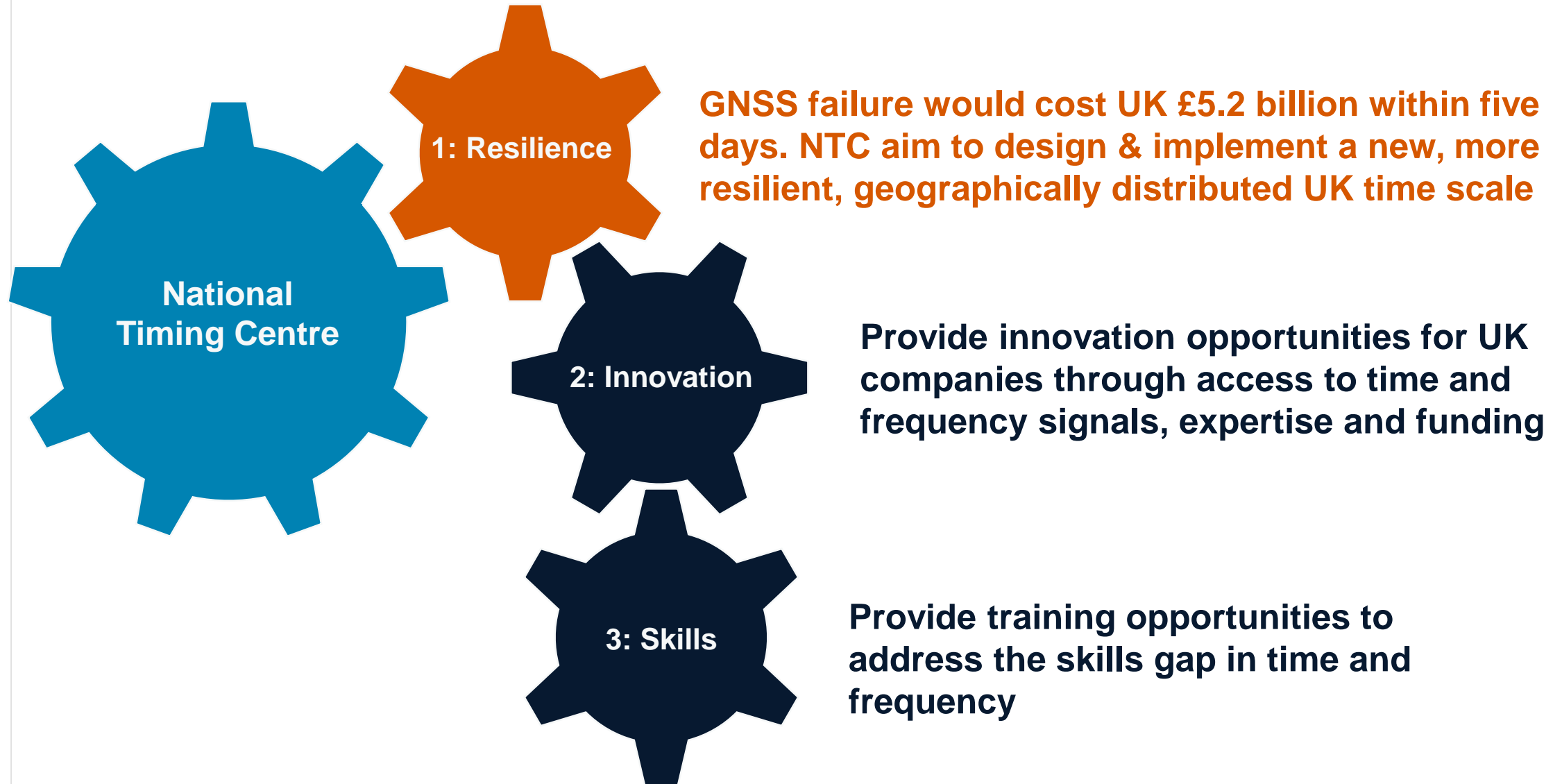
IN PARTNERSHIP WITH ITALY

Working with NPL

- Precision reference GHG instrument (Picarro) located in Glasgow Science Centre tower
- Integrated with data from Scotlands 'Tall Tower' observation site located at James Hutton
- Radon measurement possibility across Glasgow to calibrate dense sensor network
- Compare with indoor air – schools, Universities, public buildings, social housing
- Glasgow COP26 event with ministerial representation from Scotland and California
- **NPL enhancing international and civic collaboration**



National Timing Centre (NTC) R&D programme



University of Strathclyde NPL T&F Innovation Lab

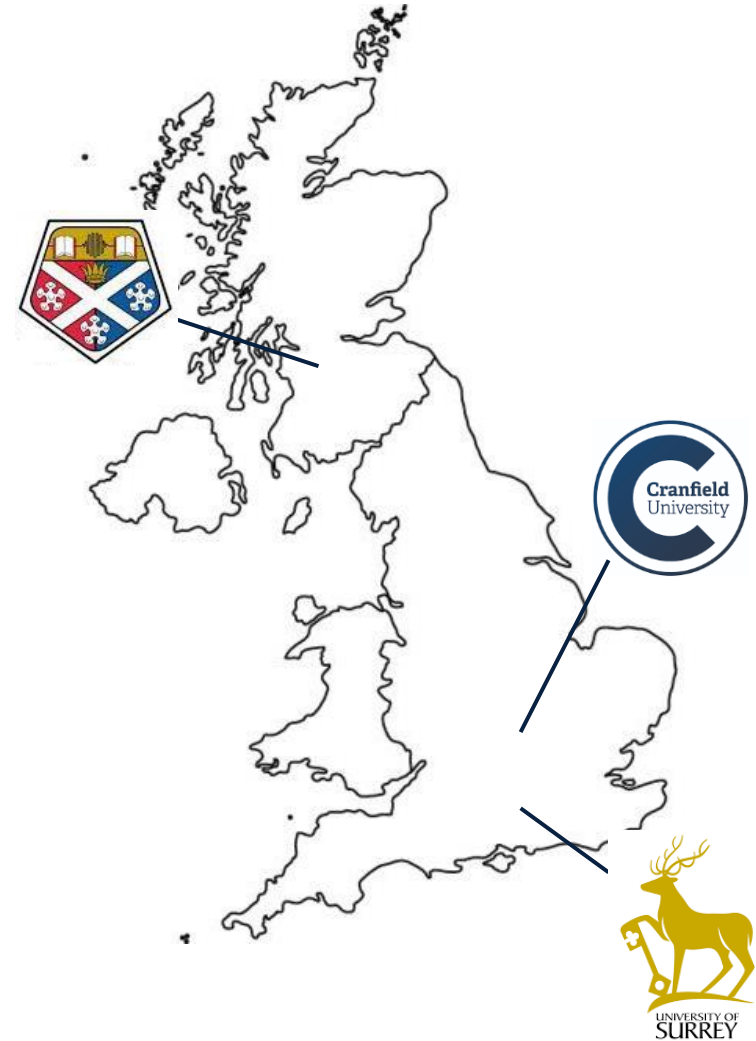


NTC Innovation node installed at the John Anderson Lab JA322a on 18th Jan 2023 and is operational

Supporting quantum and photonics industry and academia with reference time and frequency signals

Strathclyde and partners M-Squared, Spire, Fraunhofer working with the system

Interest from Financial Services – opportunity through Uni partnership with FinTech Scotland and Innovation Accelerator



Trilateral Collaboration – key elements

- PGI
- Health
- Space
- Comms
- Security and Resilience
- CDTs

Security and Resilience case study: Partnership with NACE

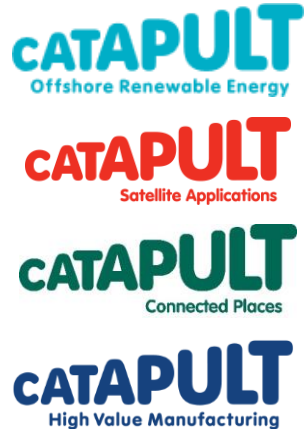
- **NACE: National Authority for Counter Eavesdropping, part of FCDO**
 - Providing security support for UK Government, friendly Governments, Military, Law Enforcement and CNI
- **Requirement: Trusted & Connected Expertise**
 - NACE must connect to the global leading edge of knowledge and capability to keep one step ahead of adversaries
 - They are committed to working with partners - but those partnerships must engender trust
- **NACE - NPL - Universities relationship**
 - NPL provides NACE with unique capabilities and a trusted portal to NPL's partner universities
 - The relationship has already enabled NACE to:
 - Access expertise and insights from 10s of multi-disciplinary academics through a horizon scanning study
 - Co-create a long list of PhD research themes for a NACE-funded CDT-style programme, with the first 5 studentships (2 in Strathclyde, 3 in Surrey) starting 2024
 - Develop additional requirements for project work to be delivered by NPL with university support
- **The basis for proposed large scale CDT on resilient digitalised CNI led by Surrey – final round of EPSRC competition**

Innovation Ecosystem Collaboration: Place-Based and Beyond

UK Government R&D Roadmap 2020 Case Study on Strathclyde's Innovation Ecosystem

“These initiatives are attracting significant numbers of companies and organisations looking to nurture and accelerate growth, improve productivity and access world-class research, technology and talent from the University of Strathclyde.”

4 x UK Funded Catapults



4 x Scottish Innovation Centres



UK funded Research and Technology Organisations



UK's only based Fraunhofer Centre

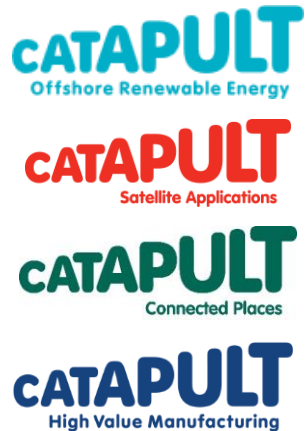


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UK

UK's only based
Hofer Centre

Strategic collaborative
research and
innovation leadership

Partner of
Partners

Partner in
robotics
Place-Based
IAA



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