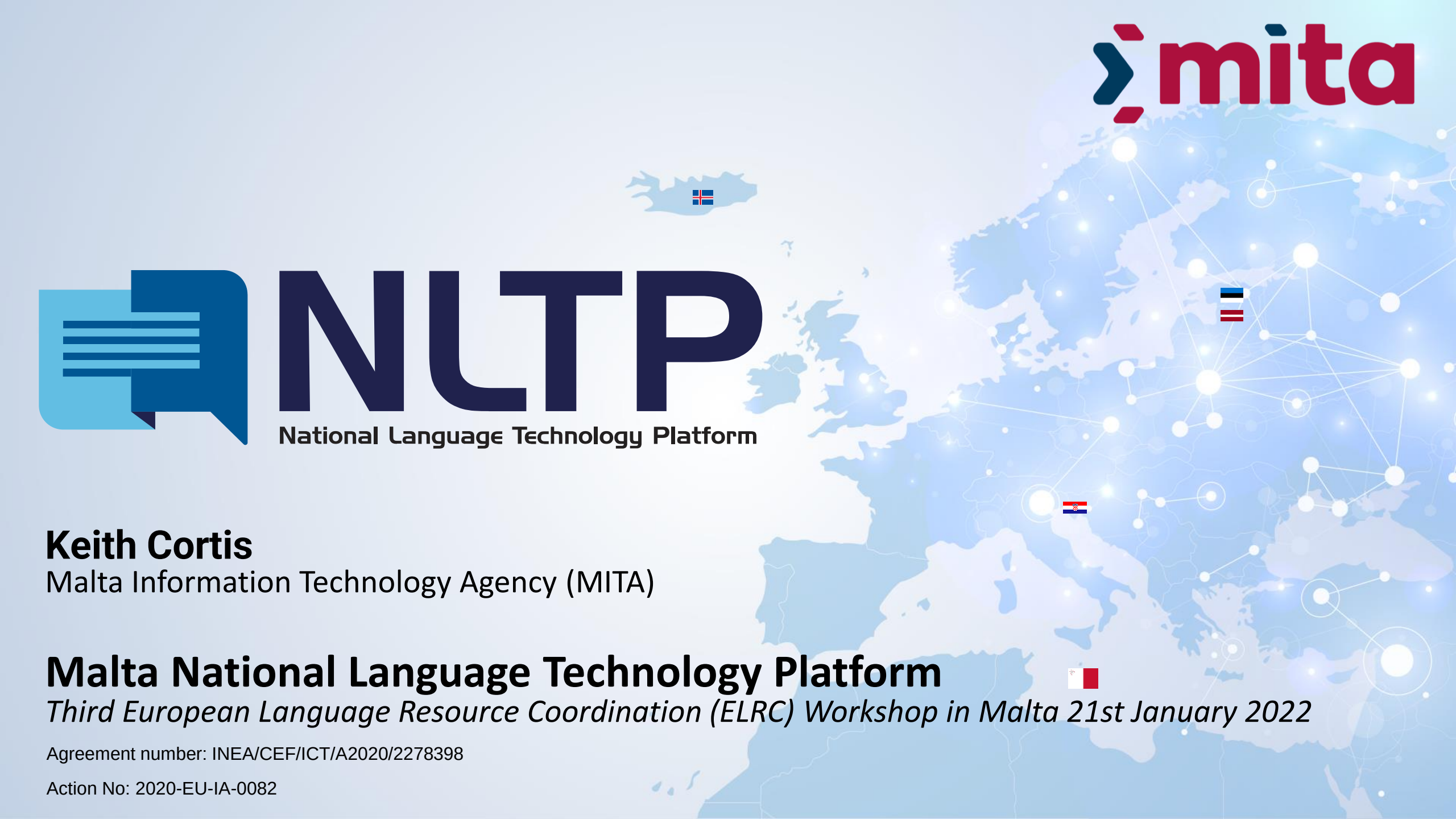

NLTP

National Language Technology Platform

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Malta National Language Technology Platform

Third European Language Resource Coordination (ELRC) Workshop in Malta 21st January 2022

Agreement number: INEA/CEF/ICT/A2020/2278398

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Malta NLTP – Maltese Partners

- Malta Information Technology Agency (MITA)

- Office of the State Advocate (OSA)

stateadvocate.mt

- University of Malta (UM)

Malta NLTP – Goals

- Providing Malta NLTP for **public administrations**, **SMEs,** and **general public** as an efficient way to ensure multilingual access to online services, websites, documents and information

- **Ensuring sustainability** of Malta NLTP beyond the EU funding period

- Increasing of **language tools**, **resources** and **digital services** for the Maltese low-resourced language, as required for Machine Translation

- Building and validating custom **Neural Machine Translation** systems targeting **multiple domains** (through pilots – initially Legal domain)

Malta NLTP – Overview

- Assessment and aggregation of **linguistic tools and resources**
  - **Parallel** and **monolingual** corpora for general domain and domain specific areas
- Development of **custom Neural Machine Translation** systems:
  - Maltese-English and English-Maltese
  - General domain and domain-specific
- Data sources for Neural Machine Translation
  - Maltese laws
  - Government services and information
- Deployment on the **Government of Malta Hybrid Cloud Platform**
- Adhere to national **policies** and **directives** (e.g., Web Accessibility)

Malta NLTP – Requirements Analysis

- Il-Kunsill Nazzjonali tal-Ilsien Malti/National Council for the Maltese Language
- Ministry for the National Heritage, the Arts and Local Government (MHAL)
- Ministry for Justice and Governance (MFJG)
- Ministry for Social Justice and Solidarity, the Family and Children's Rights (MSFC)
- Ministry for Health (MFH)
- Servizz.gov
- Department of Information (DOI)

Malta NLTP – Key Language Technology Modules

- eTranslation building block Digital Service Infrastructure
- Website translation widget
- Web-based translation workspace
- Terminology management services (e.g., terminology portal)
- Data repository
- Neural Machine Translation environment (accumulation and management)
- Custom Online Translation Memories for specific domains and languages
- Online Computer Aided Translation (CAT) environment
- Speech recognition (Speech-to-Text)
- Speech synthesis (Text-to-Speech)

Malta NLTP – Pilot

- Legal domain: initial pilot for Malta's NLTP
- Vast majority of laws are first drafted in English and then translated in Maltese
- Data is **bilingual** in Maltese and English (official languages)
- Implementation shall enable relevant **stakeholders** to:
  - Translate drafted legislation more easily and efficiently
  - Facilitate the legislation enactment process
  - Aid in reduction of discrepancies in the respective texts
  - Ensure consistency of terms and terminology across all translations

LEĠIŻLAZZJONI MALTA

Malta NLTP – Benefits

- **Integration** of NLTP with multiple eGovernment services and public web services

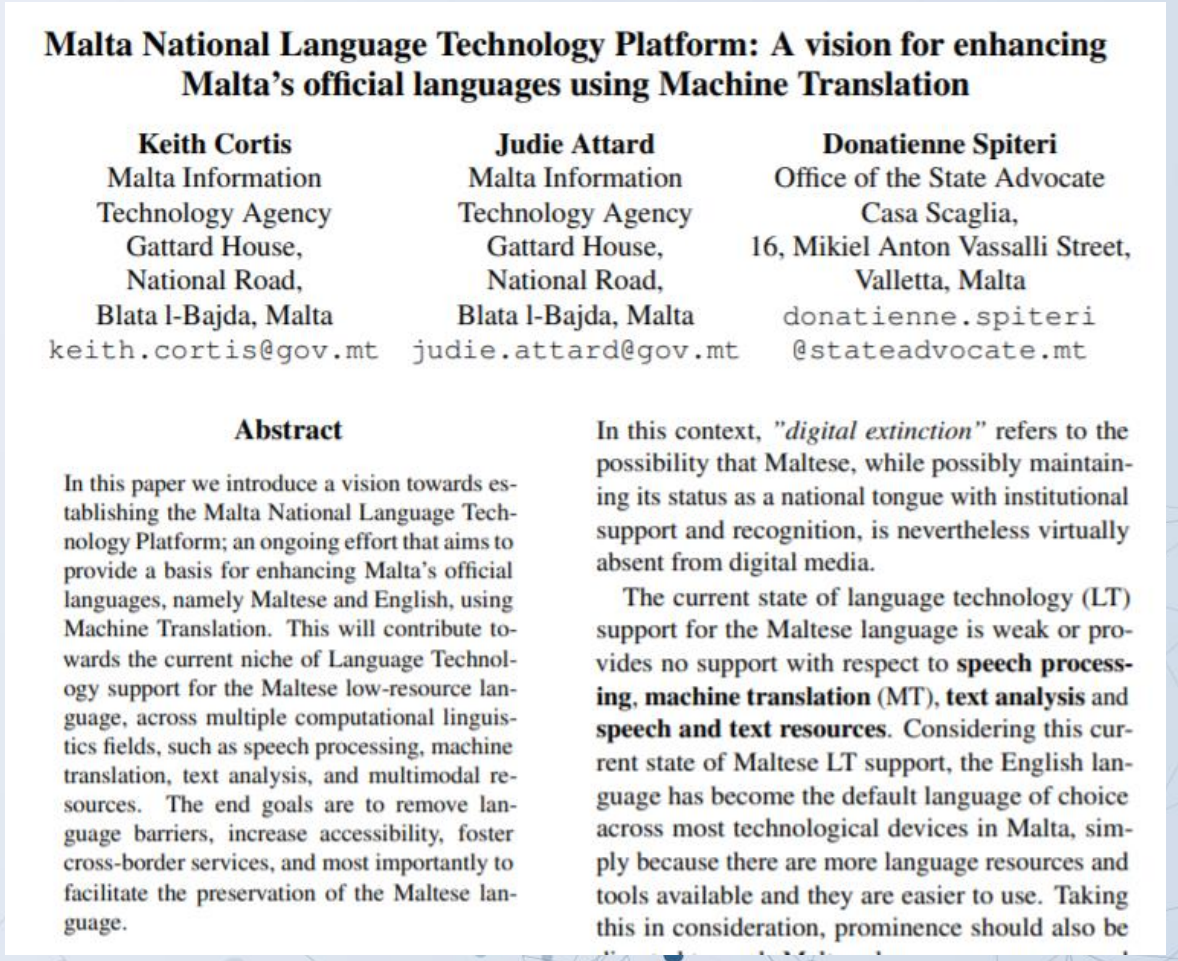
- **Increasing efficiency** in the public administration and **reducing** the expenditure on manual translations through the provision of **automated Machine Translation services**

- Improve **citizen service support** at a cross-sectoral level

Malta NLTP – Dissemination

Malta National Language Technology Platform: A vision for enhancing Malta's official languages using Machine Translation

In Proceedings of the First Workshop on Multimodal Machine Translation for Low Resource Languages (MMTLRL 2021)



Malta National Language Technology Platform: A vision for enhancing Malta's official languages using Machine Translation

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Abstract

In this paper we introduce a vision towards establishing the Malta National Language Technology Platform; an ongoing effort that aims to provide a basis for enhancing Malta's official languages, namely Maltese and English, using Machine Translation. This will contribute towards the current niche of Language Technology support for the Maltese low-resource language, across multiple computational linguistics fields, such as speech processing, machine translation, text analysis, and multimodal resources. The end goals are to remove language barriers, increase accessibility, foster cross-border services, and most importantly to facilitate the preservation of the Maltese language.

In this context, *"digital extinction"* refers to the possibility that Maltese, while possibly maintaining its status as a national tongue with institutional support and recognition, is nevertheless virtually absent from digital media.

The current state of language technology (LT) support for the Maltese language is weak or provides no support with respect to **speech processing**, **machine translation** (MT), **text analysis** and **speech and text resources**. Considering this current state of Maltese LT support, the English language has become the default language of choice across most technological devices in Malta, simply because there are more language resources and tools available and they are easier to use. Taking this in consideration, prominence should also be

Grazzi / Thank You

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