Acronym	**ALECTOR**
Name of the project	**Reading Aids to leverage Document Accessibility for Children with Dyslexia** *Aide à la LECTure pour améliORer l'accès aux documents pour enfants dyslexiques*
Challenge	8 – Innovative, inclusive and adaptive societies Theme 4 – Life-long education, cognitive skills, socialisation and training

1. ABSTRACT

The goal of the ALECTOR project is to develop and test resources and a web-based application that make it possible to propose simplified texts for children who face major problems in reading and understanding written texts. For these children, text simplification might be a powerful and possibly the only way to leverage document accessibility. The idea is not to impoverish written language but *to propose simplified versions of a given text that convey the exact same meaning*. The core hypothesis is that the simplification of a text will allow children with reading difficulties to eventually get through a text and thus discover the pleasure of reading through understanding what they actually read. This will allow them to enter a *virtuous circle*, whereby word recognition and decoding skills are trained through reading more. The promise of this enterprise is that *training children on simpler texts* will lower their give-up threshold and improve their decoding, word recognition and comprehension skills, *which ultimately would allow them to move on to more complex texts*. This virtuous circle, also referred to as "self-teaching", is at the heart of the most influential theory of reading development (Share, 1995, see Ziegler et al. 2014).

The ALECTOR project will address scientific issues including (a) readability assessment (identifying the complex elements of a text that make it hard to understand and read at an optimal speed), (b) lexical simplification (replacing the complex lexical units detected with simpler equivalents, while dealing with polysemy and multiwords expressions), (c) syntactic simplification (replacing complex sentences with shorter ones, avoiding subordinations, passive voices, parenthetical explanations, etc.), and (d) discourse transformations (replacing pronouns with their antecedents). The main innovative aspect is that the system will be tailored to dyslexic and poor readers: text transformations will be based on theoretical findings about the reading process and further refined by specific adaptations leveraging the feedback from the targeted audience. As one of the key innovative deliverables, ALECTOR will propose a web-based application where simplified corpus will be available to teachers and speech therapists.

2. GENERAL INFORMATION

ALECTOR is a 3,5-year project proposal.

2.1. PARTNER INSTITUTIONS

- Aix Marseille Université, Laboratoire d'informatique fondamentale (LIF-CNRS, UMR 7279)

- Aix Marseille Université, Laboratoire de psychologie cognitive (LPC-CNRS, UMR 7920)

- Laboratoire pour la mécanique et les sciences de l'ingénieur (LIMSI, CNRS, UPR 3251)

- Université de Strasbourg, Unité de Recherche Linguistique, Langues, Parole (LiLPa, EA 1339)

- Centre pour le Traitement Automatique du Langage (CENTAL), Université Catholique de Louvain-la-Neuve (Belgium) –not financed by ANR.