# Intelligent Financial Document Analysis for Regulatory Compliancy

**Intelligent Document Cognition System, Automatic Document Summary and Compliance Checking**

**Keywords:**
- Artificial Intelligence (AI), Natural Language Processing (NLP), Named Entity Recognition (NER), Relation Extraction, Event Detection, Text Summarization

## Problems addressed

- The challenge of handling various kinds of complex formatted documents in the financial sector
- The need to understand, analyse and extract specific data information for the purpose of regulatory compliance checking, report generation, and disclosure requirement, etc.
- The issue of existing process which is slow, error-prone and labor-intensive

ASTRI's Financial Document Analysis (FDA) system addresses these pain points, providing an intelligent information cognition system to automatically analyse and extract key information from the financial documents, and conduct summary generation and compliance checking.

## Innovations

**ASTRI's FDA system provides an end-to-end solution based on deep learning to enhance regulatory technology, reduce "Non-compliance costs" and "Manual checking processes", and improve the operational efficiency with artificial intelligence (AI).**
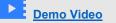
The innovation outlines:
- **A deep natural language processing engine** to accurately extract entities, relationships, and event roles
- **Hybrid (table and text) data mining models** to conduct structure process of the richly formatted documents
- **A document level event extraction** to detect and extract the events scattered across the documents
- **A deep learning based end-to-end solution** to enhance Regulatory Technology

## Key impact

- Reduce Non-compliance costs
- Reduce manpower cost of manual checking process
- Improve the operational efficiency
- Automate and streamline the whole regulatory compliance checking process

## Innovation snapshot



▶ **Demo Video**

## Project completed
- 2021

## Applications
- Document Summary
- Report Generation
- Regulatory Compliance Checking
- Enterprise Knowledge Graph
- Information Consistency Checking

## Patent(s)
- N/A

ASTRI Patent Search

## Commercialisation opportunities
- IP licensing
- Technology co-development