

# Oficina de Dados Abertos – Dados Abertos e Cidades Inteligentes



CCG: Centro de Computação Gráfica

A NETWORK OF SOLUTIONS



Centro de Computação Gráfica  
Investigação & Desenvolvimento Tecnológico  
*Research & Technological Development*

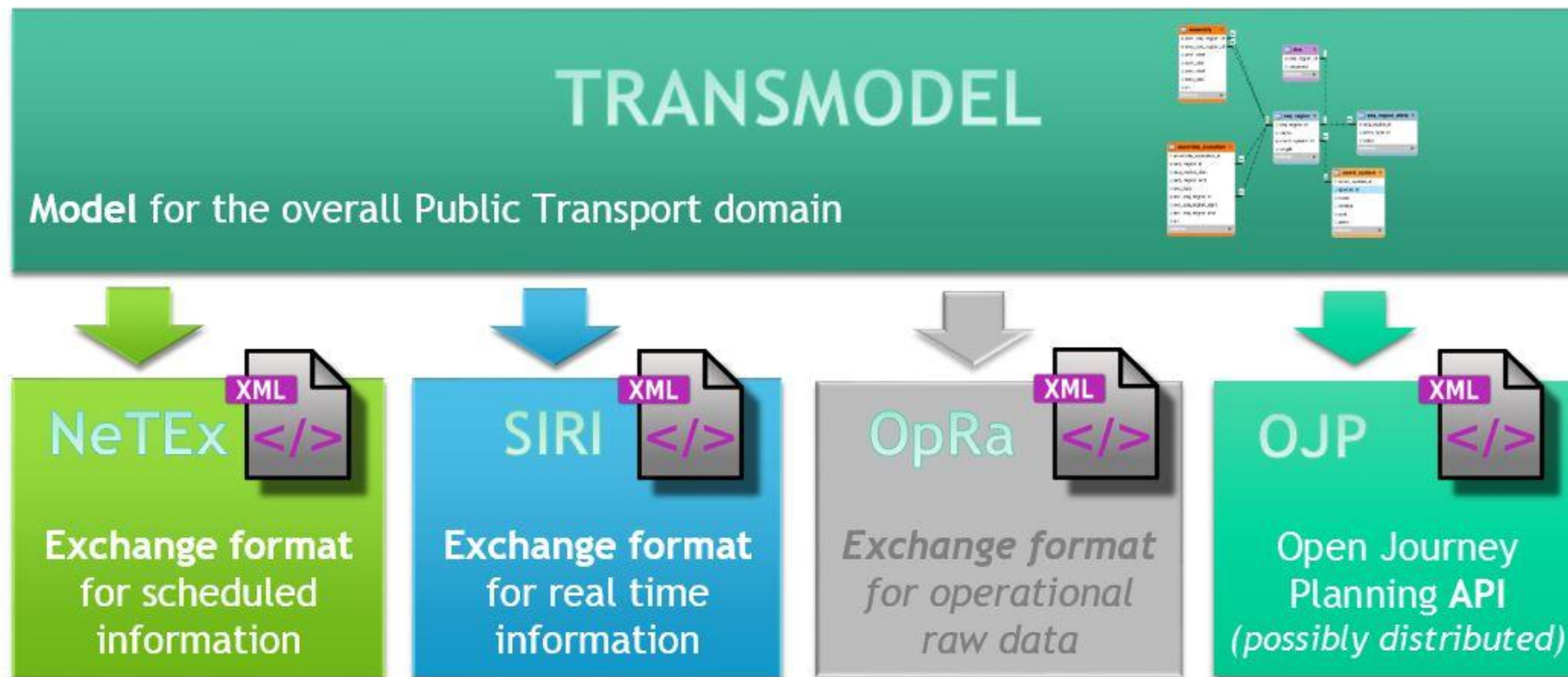


## Desafio - Rede de transportes públicos

- Desafio na “ordem do dia” : Cumprimento da Diretiva ITS - 2010/40/EU;  
*In 2017, under the Intelligent Transport Systems Priority Action A Directive (2010/40/E), the European Commission recognized NeTEx as a strategic standard for the cross-border exchange of data to enable the provision of EU-wide multi-modal travel information services, with the aim of making public transport **data available in NeTEx format at National Access Points in all European countries by 2019.***  
(<https://en.wikipedia.org/wiki/NeTEx>)
- Como Autoridade de Transportes (AT) é necessário a disponibilização dos dados de mobilidade ao futuro NAP nacional;
- É da responsabilidade da AT os novos contratos e concessões;

Base para a criação do National Access Point (NAP)

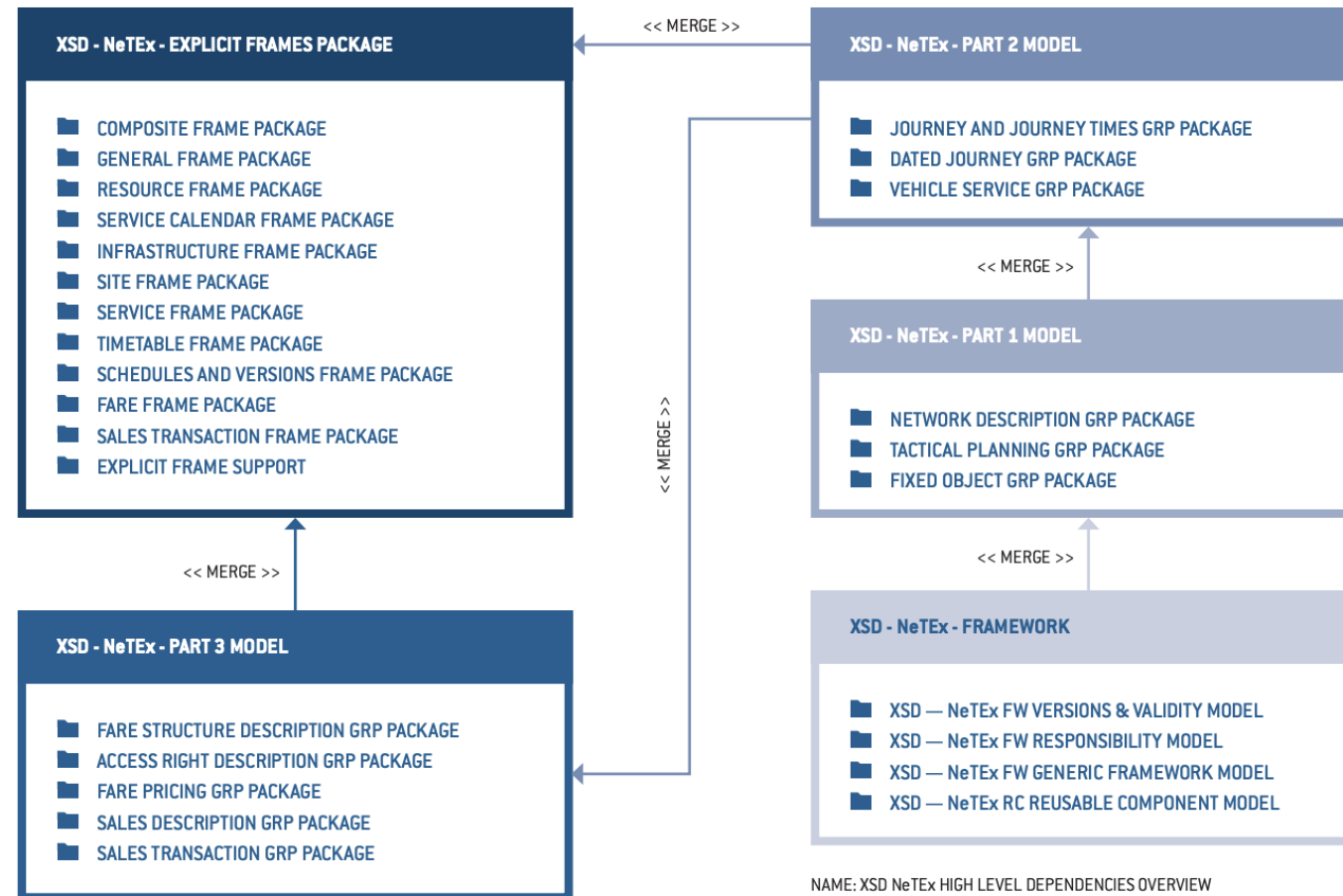
<http://www.transmodel-cen.eu>



## Network Timetable Exchange

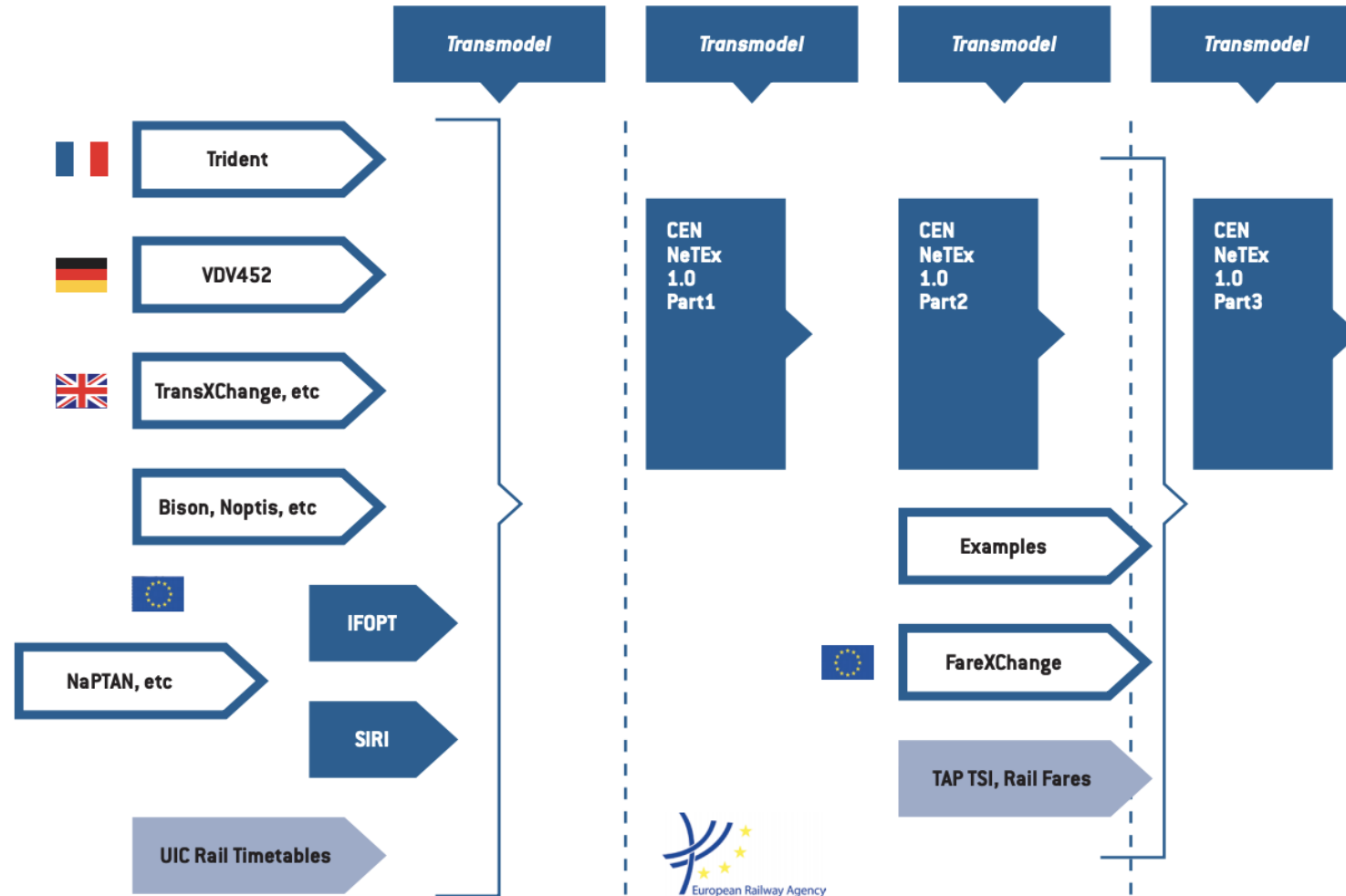
- NeTEx is a CEN Technical Standard for exchanging Public Transport Network, schedules and related data. It is divided into three parts, each covering a functional subset of the CEN Transmodel:
  - Part 1 describes the Public Transport Network topology (CEN/TS 16614-1:2014);
  - Part 2 describes Scheduled Timetables (CEN/TS 16614-2:2014);
  - Part 3 covers Fare information (CEN/TS 16614-3:2015).
- NeTEx provides a means to exchange data for passenger information such as stops, routes timetables and fares;
- NeTEx pode e deve ser usado para a partilha de dados estáticos. Para dados dinâmicos, ver o SIRI.
- Estrutura de dados em UML (disponível em: [http://netex-cen.eu/?page\\_id=14](http://netex-cen.eu/?page_id=14), <http://user47094.vs.easily.co.uk/netex/schema/index.htm> )

*Pkg XSD NeTEx High Level Dependencies Overview*



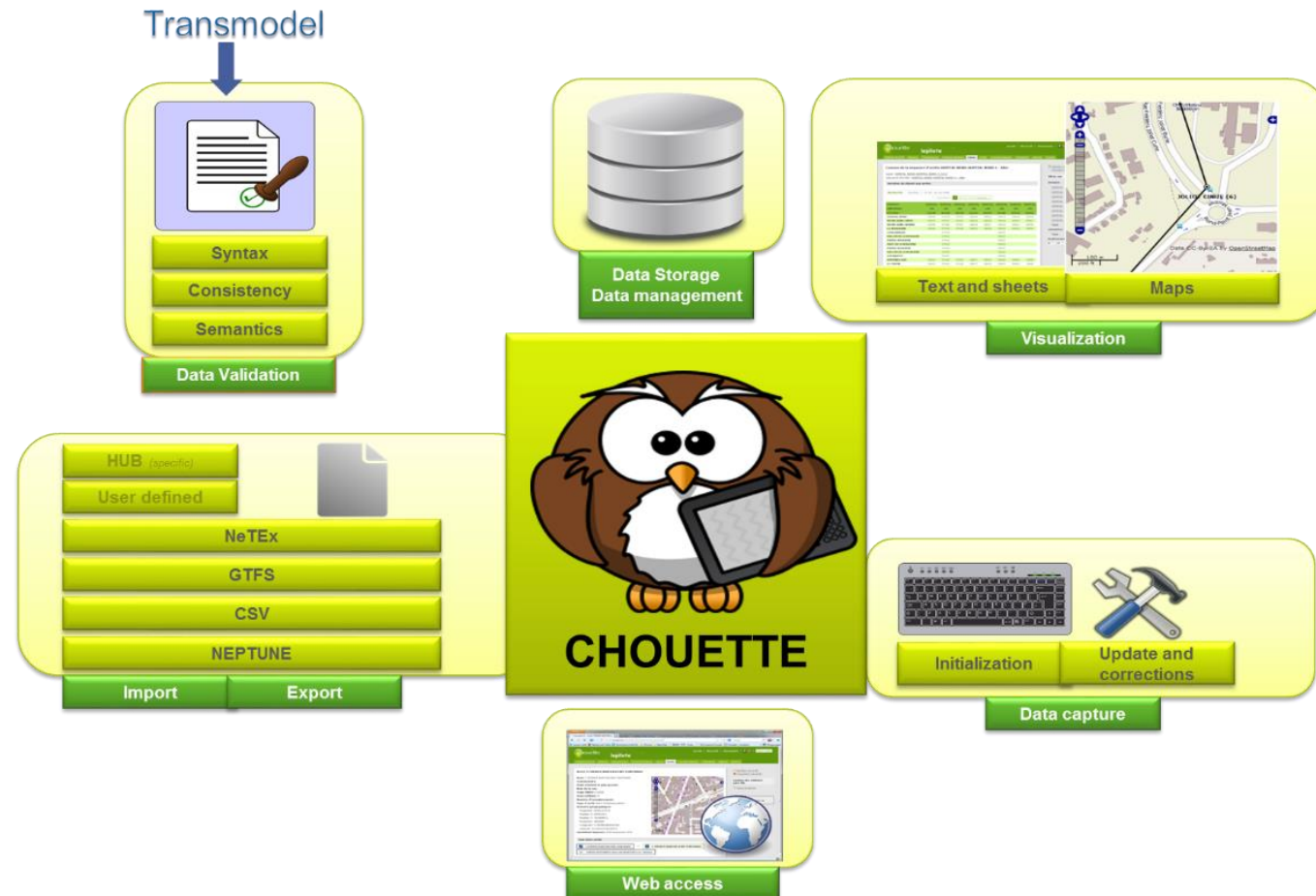
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AUTHOR: NeTEx  
VERSION: 1.0  
CREATED: 21/01/2010 12:24:53  
UPDATED: 03/10/2014 18:57:48

[http://netex-cen.eu/wp-content/uploads/2015/12/03.NeTEx-DesignMethodology-WhitePaper\\_1.05.pdf](http://netex-cen.eu/wp-content/uploads/2015/12/03.NeTEx-DesignMethodology-WhitePaper_1.05.pdf)



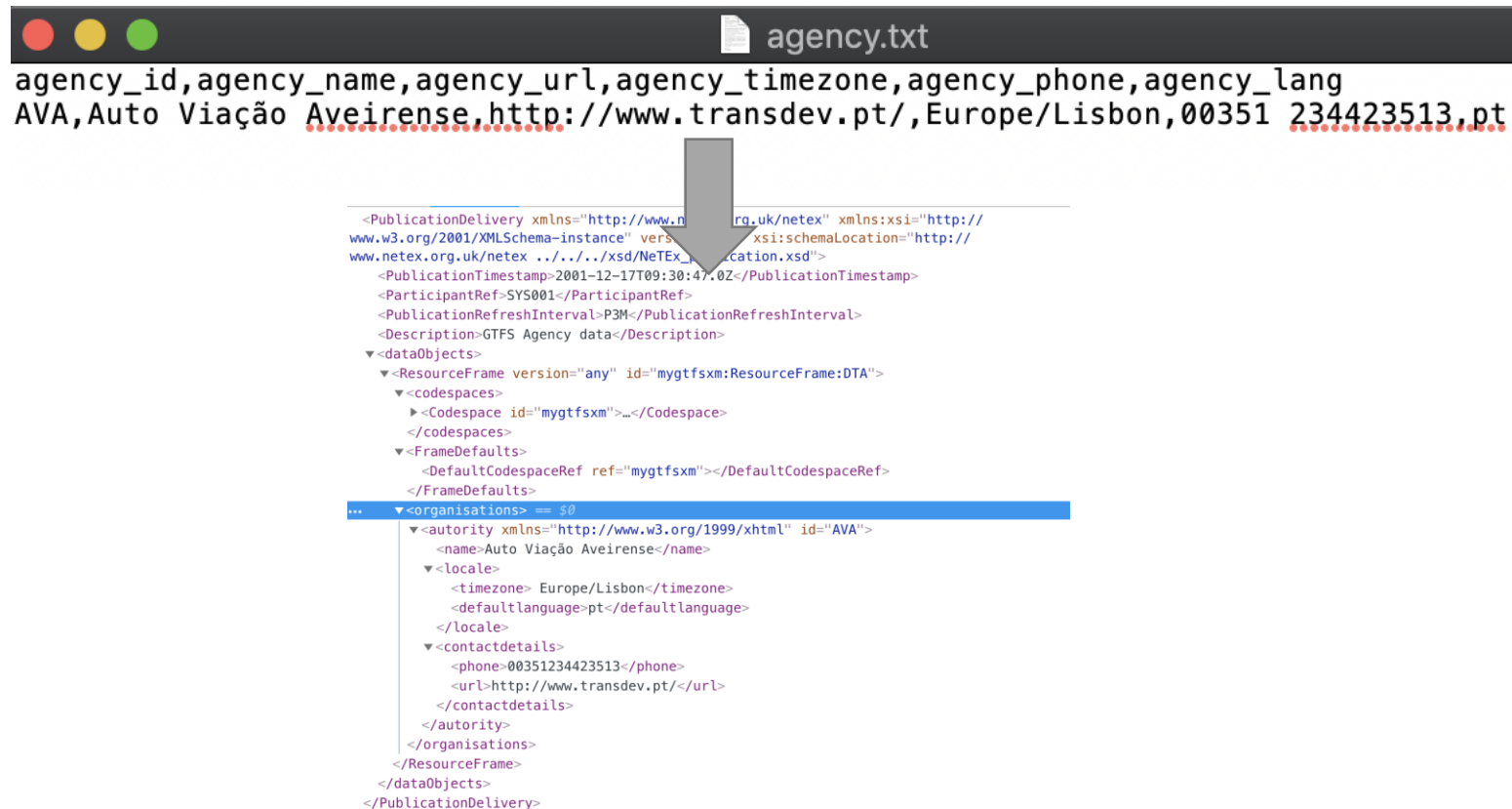
[http://netex-cen.eu/wp-content/uploads/2015/12/01.NeTEx-Introduction-WhitePaper\\_1.03.pdf](http://netex-cen.eu/wp-content/uploads/2015/12/01.NeTEx-Introduction-WhitePaper_1.03.pdf)

## Implementação com base no Transmodel



## Problema

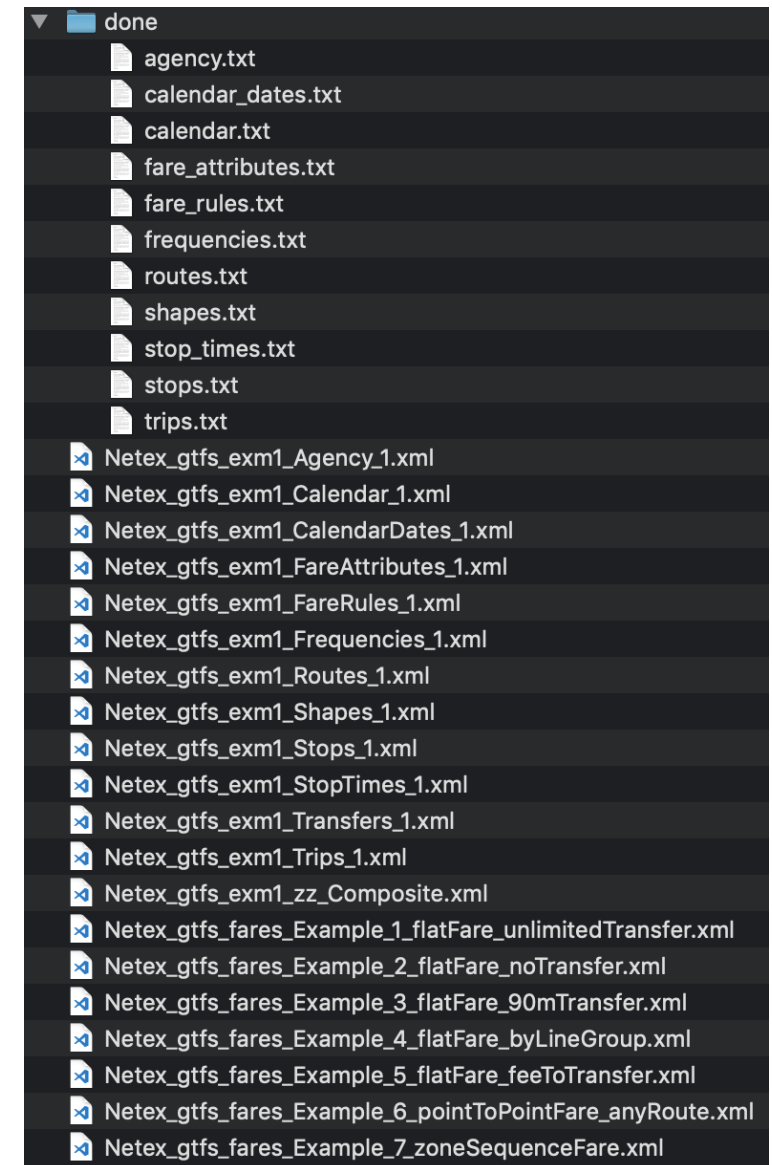
- Transformar os dados em GTFS no formato XML do NetEx





## Problema

- Transformar os dados em GTFS no formato XML do NetEx
- Cada entidade do GTFS deverá assim ser convertido para uma estrutura própria do NetEx



”Meia solução” 😊

## Process GTFS - Agency File - to NetEx format

### HTML File Upload

Files to upload:  agency.txt

File information: **agency.txt** type: **text/plain** size: **158** bytes

Status Messages

”Meia solução” 😊

```
<PublicationDelivery xmlns="http://www.netex.org.uk/netex" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" version="1.0" xsi:schemaLocation="http://www.netex.org.uk/netex ../../../../xsd/NeTEx_publication.xsd">
  <PublicationTimestamp>2001-12-17T09:30:47.0Z</PublicationTimestamp>
  <ParticipantRef>SYS001</ParticipantRef>
  <PublicationRefreshInterval>P3M</PublicationRefreshInterval>
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            <defaultlanguage>pt</defaultlanguage>
          </locale>
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            <url>http://www.transdev.pt/</url>
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      </organisations>
    </ResourceFrame>
  </dataObjects>
</PublicationDelivery> == $0
```



# Thanks For Watching



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