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**Project no.:** 619209

**Project full title:** Analysis of Massive Data STreams

**Project Acronym:** AMIDST

**Deliverable no.:** D2.1

**Title of the deliverable:** The AMIDST modelling framework – Initial draft report

<b>Contractual Date of Delivery to the CEC:</b>	<b>30.09.2014</b>
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<b>Organisation name of lead contractor for this deliverable:</b>	<b>AAU</b>
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<b>Participants(s):</b>	<b>P01, P02, P03, P04, P05, P06, P07</b>
<b>Work package contributing to the deliverable:</b>	<b>WP2</b>
<b>Nature:</b>	<b>R</b>
<b>Version:</b>	<b>1.0</b>
<b>Total number of pages:</b>	<b>68</b>
<b>Start date of project:</b>	<b>1st January 2014 Duration: 36 month</b>

<b>Project co-funded by the European Commission within the Seventh Framework Programme (2007-2013)</b>		
<b>Dissemination Level</b>		
<b>PU</b>	Public	<b>X</b>
<b>PP</b>	Restricted to other programme participants (including the Commission Services)	
<b>RE</b>	Restricted to a group specified by the consortium (including the Commission Services)	
<b>CO</b>	Confidential, only for members of the consortium (including the Commission Services)	

#### **Abstract:**

In this document, we explore aspects of the different distribution families exhibited by the data for the three use-case providers. Based on these findings and the expert knowledge provided, we present preliminary use-case-tailored model classes that address the application scenarios identified in Deliverable 1.2. Building on the commonalities of these specific model classes, we introduce the AMIDST modelling framework, which defines a probabilistic model class intended to support data-driven learning and integration of potential domain knowledge.

**Keyword list:** AMIDST modelling framework, application scenarios, preliminary models, data analysis, Bayesian networks, dynamic Bayesian networks, conditional linear Gaussian models.