Data point of view

$Q_1 (x; z, w) := A_1 (x, y), A_2 (y, z), A_3 (y, w)$      $Q_2 (x; z, w) := A_1 (x, y), A_2 (y, z), A_3 (y, w)$
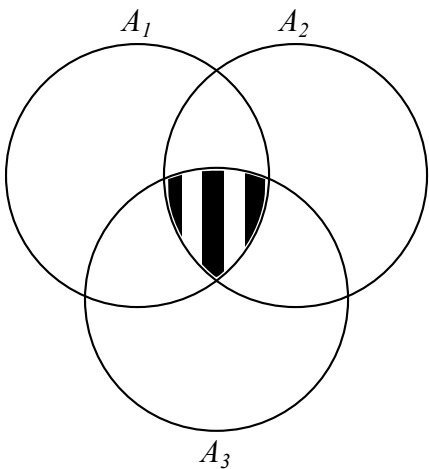
$A_1$     $A_2$            $A_1$     $A_2$

$A_3$                         $A_3$
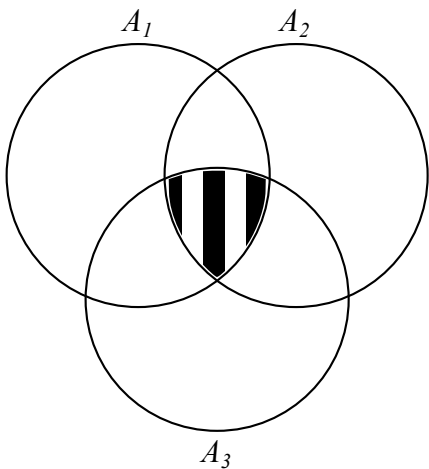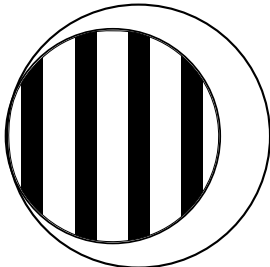


Data services point of view

$Q_1.R = \{$
  *availability > 98%*
  *response time < 2s*
  *price per call < 0.2$*
  *authentication = true*
  *privacy = yes*
  *trust = high*
  *degree of rawess = none*
  *veracity = true*
  *production time = 12h/day*
  *production rate = 0.5GB/day*
  *data type = none*
  *freshness = yes*
  *provenance = certified*
$\}$

$Q_1.S \subset Q_2.S$

$Q_2.R = \{$
  *availability > 97%*
  *response time < 2s*
  *price per call < 0.2$*
  *authentication = true*
  *privacy = yes*
  *trust = high*
  *degree of rawess = none*
  *veracity = true*
  *production time = 12h/day*
  *production rate = 0.5GB/day*
  *data type = none*
  *freshness = no*
  *provenance = certified*
$\}$
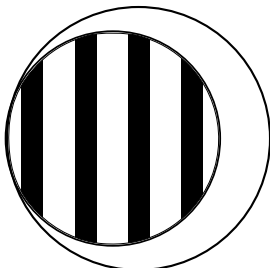
Universe of data services

Rewritings point of view

$Q_1.R = \{$
  *cost < 5$*
  *total response time < 5s*
$\}$

$Q_1.C \subset Q_2.C$

$Q_2.R = \{$
  *cost < 5$*
  *total response time < 10s*
$\}$