biagio

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Graphical analysis of the definitions

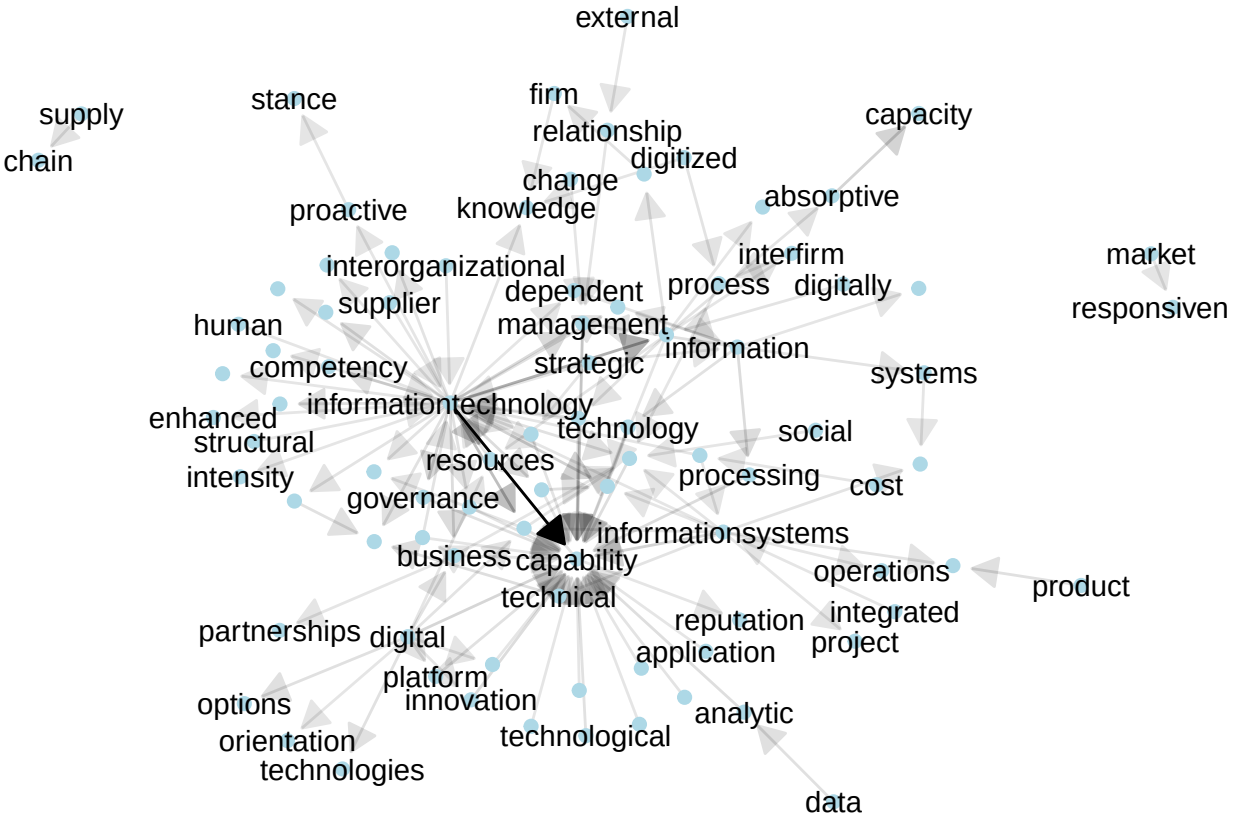
```
## Rows: 680
## Columns: 22
## $ id                                          <chr> "MB-061/01", "MB-061/02",~
## $ authors                                     <chr> "Battleson D.A., West B.C~
## $ title                                       <chr> "Achieving dynamic capabi~
## $ year                                        <dbl> 2016, 2016, 2014, 2014, 2~
## $ source_title                                <chr> "European Journal of Info~
## $ field                                       <chr> "INFO MAN", "INFO MAN", "~
## $ abstract                                    <chr> "Cloud computing enables ~
## $ keywords                                    <chr> "cloud computing; dynamic~
## $ explicit_definition_y_n                     <chr> "Y", "N", "Y", "Y", "Y", ~
## $ construct_name                              <chr> "Dynamic capability", "IT~
## $ construct_definition                        <chr> "'Dynamic' refers to the ~
## $ comments                                    <chr> NA, NA, NA, NA, NA, NA, N~
## $ repeatable_patterns_of_organizational_action <chr> "Yes", "Excluded", "Yes",~
## $ specific_it_domain                          <chr> "No", "Excluded", "No", "~
## $ it_assets_required                          <chr> "No", "Excluded", "No", "~
## $ module                                      <chr> "No", "Excluded", "No", "~
## $ encapsulated                                <chr> "No", "Excluded", "No", "~
## $ type_of_construct                           <chr> "Organizational capabilit~
## $ notes                                       <chr> NA, NA, NA, NA, NA, NA, N~
## $ check                                       <dbl> 1, 0, 1, 0, 1, 1, 0, 1, 1~
## $ priority                                    <dbl> 2, 2, 2, 2, 2, 2, 2, 2, 2~
## $ article_number                              <chr> "MB-061", "MB-061", "MB-0~
```

Construct name and definition preprocessing

Bigram analysis on construct name

```
## # A tibble: 610 x 2
##    bigram                                n
##    <chr>                             <int>
##  1 informationtechnology capability    109
##  2 informationtechnology enabled        27
##  3 informationtechnology infrastructure 20
##  4 management capability                18
##  5 informationtechnology resources      14
##  6 informationsystems capability        11
##  7 informationtechnology competence     11
```

```
##  8 absorptive capacity                    10
##  9 dynamic capability                     10
## 10 digital capability                      9
## # ... with 600 more rows
```



In this section I perform a bigram analysis to explore the relationships between words in the construct name.

```
## # A tibble: 977 x 26
##    id        authors   title  year sourc~1 field abstr~2 keywo~3 expli~4 const~5
##    <chr>     <chr>     <chr> <dbl> <chr>   <chr> <chr>   <chr>   <chr>   <chr>
##  1 MB-061/01 Battleso~ Achi~  2016 Europe~ INFO~ Cloud ~ cloud ~ Y       Dynami~
##  2 MB-061/02 Battleso~ Achi~  2016 Europe~ INFO~ Cloud ~ cloud ~ N       IT cap~
##  3 MB-061/02 Battleso~ Achi~  2016 Europe~ INFO~ Cloud ~ cloud ~ N       IT cap~
##  4 MB-062/01 Huang P.~ Deve~  2014 Europe~ INFO~ The op~ case s~ Y       Inform~
##  5 MB-062/01 Huang P.~ Deve~  2014 Europe~ INFO~ The op~ case s~ Y       Inform~
##  6 MB-062/02 Huang P.~ Deve~  2014 Europe~ INFO~ The op~ case s~ Y       Inform~
##  7 MB-063/01 Li T., V~ Info~  2009 Europe~ INFO~ Using ~ Inform~ Y       Inform~
##  8 MB-065/01 Chan C.M~ Mana~  2011 Europe~ INFO~ The re~ case s~ N       Focal ~
##  9 MB-068/01 Mikalef ~ IT a~  2021 Europe~ INFO~ A ques~ compet~ Y       IT-ena~
## 10 MB-068/01 Mikalef ~ IT a~  2021 Europe~ INFO~ A ques~ compet~ Y       IT-ena~
## # ... with 967 more rows, 16 more variables: construct_definition <chr>,
## #   comments <chr>, repeatable_patterns_of_organizational_action <chr>,
## #   specific_it_domain <chr>, it_assets_required <chr>, module <chr>,
## #   encapsulated <chr>, type_of_construct <chr>, notes <chr>, check <dbl>,
## #   priority <dbl>, article_number <chr>, discipline <chr>, construct <ord>,
## #   construct_def_clean <chr>, bigram <chr>, and abbreviated variable names
## #   1: source_title, 2: abstract, 3: keywords, 4: explicit_definition_y_n, ...
```

```
## # A tibble: 492 x 3
```

```
##    word1                 word2              n
##    <chr>                 <chr>          <int>
##  1 informationtechnology capability       109
##  2 informationtechnology enabled           27
##  3 informationtechnology infrastructure    20
##  4 management            capability        18
##  5 informationtechnology resources         14
##  6 informationsystems    capability        11
##  7 informationtechnology competence        11
##  8 absorptive            capacity          10
##  9 dynamic               capability        10
## 10 digital               capability         9
## # ... with 482 more rows
```

```
## IGRAPH 96f4fbf DN-- 88 131 --
## + attr: name (v/c), n (e/n)
## + edges from 96f4fbf (vertex names):
##  [1] informationtechnology->capability     informationtechnology->enabled
##  [3] informationtechnology->infrastructure management           ->capability
##  [5] informationtechnology->resources      informationsystems   ->capability
##  [7] informationtechnology->competence     absorptive           ->capacity
##  [9] dynamic              ->capability     digital              ->capability
## [11] informationtechnology->governance     informationtechnology->management
## [13] information          ->processing     informationtechnology->business
## [15] informationtechnology->leveraging     innovation           ->capability
## + ... omitted several edges
```