



EUROPEAN COMMISSION  
EUROSTAT

Directorate G: Business and trade statistics  
**Unit G-2: European Businesses**

# CIS 2018

## Innovation profiles

### Derivation rules

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## 1 Introduction

This document presents the specifications for derivations of the profiles based on CIS 2018 data. The rules reflect the structure and content of CIS 2018 questionnaire.

## 2 CIS 2018 Innovation profiles - overview

Seven broad innovation profiles are conceptualized taking into account innovation characteristics of enterprises.

Profile I: In-house product innovators with market novelties

Profile II: In-house product innovators without market novelties

Profile III: In-house business process innovators

Profile IV: Innovators that do not develop innovations themselves

Profile V: Innovation active non-innovators

Profile VI: Non-innovators with potential to innovate

Profile VII: Non-innovators without disposition to innovate

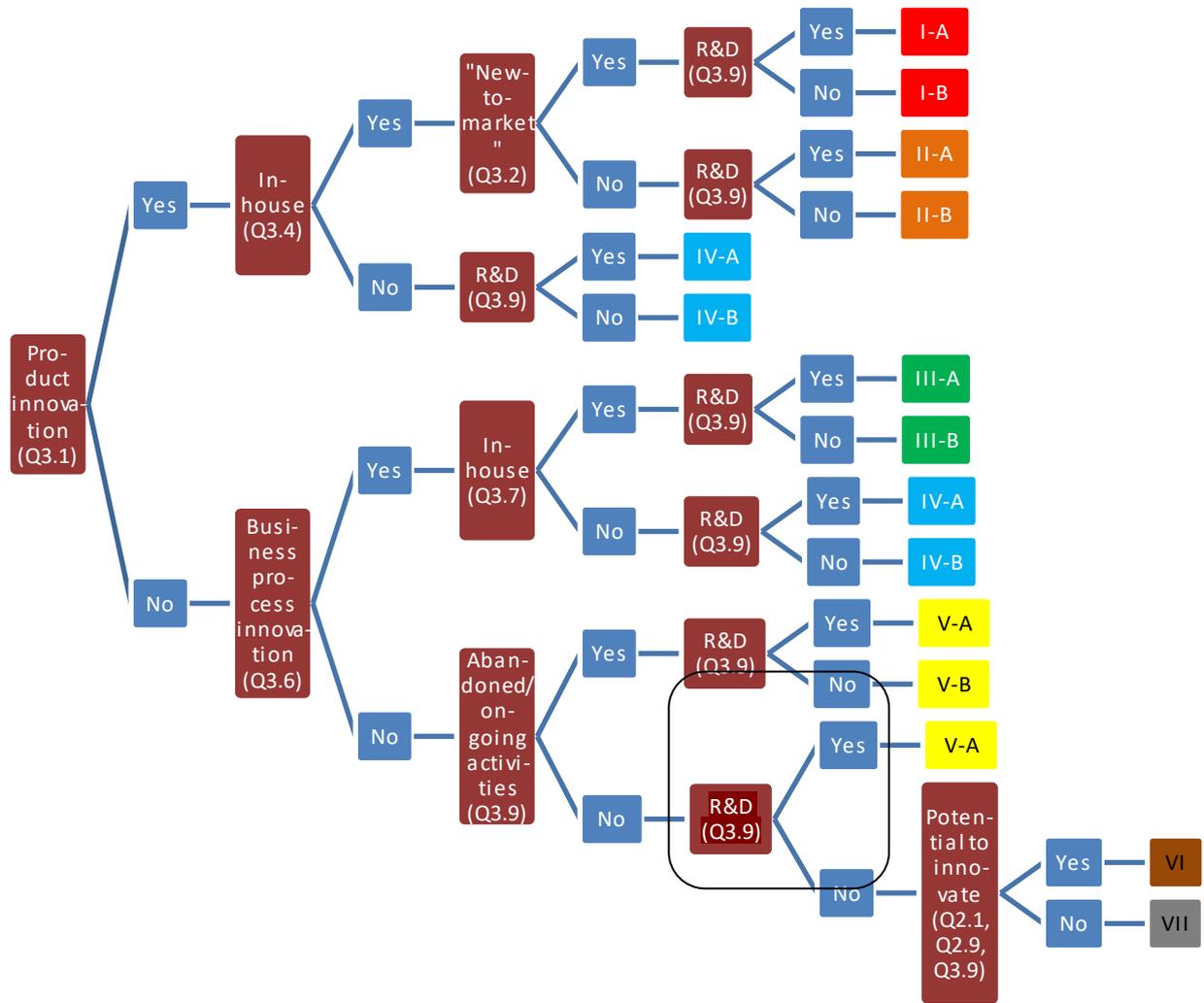
Profiles I to V are differentiated between R&D and no R&D performers (resp. A and B).

[Innovation profiles of enterprises CIS 2018 in Eurobase](#)

Table 1 : Broad and detailed innovation profiles and their nomenclature in Eurobase

CODE DERIVATION	CODE EUROBASE	LABEL
Profile I	INN_PF1	Enterprises that have developed product innovations themselves, with market novelties (profile I)
Profile I_A	INN_PF1_RND	Enterprises that have developed product innovations themselves, with market novelties, with R&D activities (profile I.A)
Profile I_B	INN_PF1_NRND	Enterprises that have developed product innovations themselves, with market novelties, without R&D activities (profile I.B)
Profile II	INN_PF2	Enterprises that have developed product innovations themselves, without market novelties (profile II)
Profile II_A	INN_PF2_RND	Enterprises that have developed product innovations themselves, without market novelties, with R&D activities (profile II.A)
Profile II_B	INN_PF2_NRND	Enterprises that have developed product innovations themselves, without market novelties, without R&D activities (profile II.B)
Profile III	INN_PF3	Enterprises that have developed business process innovations themselves, without product innovation (profile III)
Profile III_A	INN_PF3_RND	Enterprises that have developed business process innovations themselves, without product innovation, with R&D activities (profile III.A)
Profile III_B	INN_PF3_NRND	Enterprises that have developed business process innovations themselves, without product innovation, without R&D activities (profile III.B)
Profile IV	INN_PF4	Enterprises that have introduced but not themselves developed innovations (profile IV)
Profile IV_A	INN_PF4_RND	Enterprises that have introduced but not themselves developed innovations, with R&D activities (profile IV.A)
Profile IV_B	INN_PF4_NRND	Enterprises that have introduced but not themselves developed innovations, without R&D activities (profile IV.B)
Profile V	INN_PF5	Enterprises that have innovation activities but not introduced any innovation (ongoing or abandoned innovation activities) (profile V)
Profile V_A	INN_PF5_RND	Enterprises that have (ongoing or abandoned) innovation activities but not introduced any innovation, with R&D activities (profile V.A)
Profile V_B	INN_PF5_NRND	Enterprises that have (ongoing or abandoned) innovation activities but not introduced any innovation, without R&D activities (profile V.B)
Profile VI_	NINN_PF6	Enterprises that have no innovation activities but potential to innovate (profile VI)
Profile VII	NINN_PF7	Enterprises that have no innovation activities and no potential to innovate (profile VII)

### 3 Decision tree



## 4 Innovation profiles – derivation rules

This section presents the derivation rules for every single profile. The formulas are using variables codes from Harmonised Data Collection 2018 (Annex 2 of Metadata file).

### PROFILE I-A

[ INNO\_PRD\_GD = 1 OR INNO\_PRD\_SERV = 1 ] **product innovation**  
AND [ DEVE\_PRD\_ENT = 1 OR COOP\_RND = 1 OR COOP\_INN\_XRND = 1 ] **in-house innovation**  
AND [ INNO\_PRD\_NEW\_MKT = 1 ] **not previously offered by competitors**  
AND [ INNA\_IH\_RND = 1 OR INNA\_RND\_CONTR\_OUT = 1 ] **R&D**

### PROFILE I-B

[ INNO\_PRD\_GD = 1 OR INNO\_PRD\_SERV = 1 ] **product innovation**  
AND [ DEVE\_PRD\_ENT = 1 OR COOP\_RND = 1 OR COOP\_INN\_XRND = 1 ] **in-house innovation**  
AND [ INNO\_PRD\_NEW\_MKT = 1 ] **not previously offered by competitors**  
AND [ INNA\_IH\_RND <> 1 AND INNA\_RND\_CONTR\_OUT <> 1 ] **no R&D**

### PROFILE II-A

[ INNO\_PRD\_GD = 1 OR INNO\_PRD\_SERV = 1 ] **product innovation**  
AND [ DEVE\_PRD\_ENT = 1 OR COOP\_RND = 1 OR COOP\_INN\_XRND = 1 ] **in-house innovation**  
AND [ INNO\_PRD\_NEW\_MKT <> 1 ] **previously offered by competitors**  
AND [ INNA\_IH\_RND = 1 OR INNA\_RND\_CONTR\_OUT = 1 ] **R&D**

### PROFILE II-B

[ INNO\_PRD\_GD = 1 OR INNO\_PRD\_SERV = 1 ] **product innovation**  
AND [ DEVE\_PRD\_ENT = 1 OR COOP\_RND = 1 OR COOP\_INN\_XRND = 1 ] **in-house innovation**  
AND [ INNO\_PRD\_NEW\_MKT <> 1 ] **previously offered by competitors**  
AND [ INNA\_IH\_RND <> 1 AND INNA\_RND\_CONTR\_OUT <> 1 ] **no R&D**

### PROFILE III-A

[ INNO\_PRD\_GD <> 1 AND INNO\_PRD\_SERV <> 1 ] **no product innovation**  
AND [ INNO\_PCS\_PRD = 1 OR INNO\_PCS\_LOG = 1 OR INNO\_PCS\_COMM = 1 OR INNO\_PCS\_ACCT = 1  
OR INNO\_PCS\_OPROC\_EXTREL = 1 OR INNO\_PCS\_WR\_DEC\_HRM = 1 OR INNO\_PCS\_SLS\_SERV = 1 ]  
**business process innovation**  
AND [ DEVE\_PCS\_ENT = 1 OR COOP\_RND = 1 OR COOP\_INN\_XRND = 1 ] **in-house innovation**  
AND [ INNA\_IH\_RND = 1 OR INNA\_RND\_CONTR\_OUT = 1 ] **R&D**

### PROFILE III-B

[ INNO\_PRD\_GD <> 1 AND INNO\_PRD\_SERV <> 1 ] **no product innovation**  
AND [ INNO\_PCS\_PRD = 1 OR INNO\_PCS\_LOG = 1 OR INNO\_PCS\_COMM = 1 OR INNO\_PCS\_ACCT = 1  
OR INNO\_PCS\_OPROC\_EXTREL = 1 OR INNO\_PCS\_WR\_DEC\_HRM = 1 OR INNO\_PCS\_SLS\_SERV = 1 ]  
**business process innovation**  
AND [ DEVE\_PCS\_ENT = 1 OR COOP\_RND = 1 OR COOP\_INN\_XRND = 1 ] **in-house innovation**  
AND [ INNA\_IH\_RND <> 1 AND INNA\_RND\_CONTR\_OUT <> 1 ] **no R&D**

### PROFILE IV-A

[ INNO\_PRD = 1 ] **product innovation**  
AND [ DEVE\_PRD\_ENT <> 1 AND COOP\_RND <> 1 AND COOP\_INN\_XRND <> 1 ] **no in-house innovation**  
AND [ INNA\_IH\_RND = 1 OR INNA\_RND\_CONTR\_OUT = 1 ] **R&D**

OR

[ INNO\_PRD\_GD <> 1 AND INNO\_PRD\_SERV <> 1 ] **no product innovation**

AND [ INNO\_PCS\_PRD = 1 OR INNO\_PCS\_LOG = 1 OR INNO\_PCS\_COMM = 1 OR INNO\_PCS\_ACCT = 1  
OR INNO\_PCS\_OPROC\_EXTREL = 1 OR INNO\_PCS\_WR\_DEC\_HRM = 1 OR INNO\_PCS\_SLS\_SERV = 1 ]

**business process innovation**

AND [ DEVE\_PCS\_ENT <> 1 AND COOP\_RND <> 1 AND COOP\_INN\_XRND <> 1 ] **no in-house innovation**

AND [ INNA\_IH\_RND = 1 OR INNA\_RND\_CONTR\_OUT = 1 ] **R&D**

#### PROFILE IV-B

[ INNO\_PRD = 1 ] **product innovation**

AND [ DEVE\_PRD\_ENT <> 1 AND COOP\_RND <> 1 AND COOP\_INN\_XRND <> 1 ] **no in-house innovation**

AND [ INNA\_IH\_RND <> 1 AND INNA\_RND\_CONTR\_OUT <> 1 ] **no R&D**

OR

[ INNO\_PRD\_GD <> 1 AND INNO\_PRD\_SERV <> 1 ] **no product innovation**

AND [ INNO\_PCS\_PRD = 1 OR INNO\_PCS\_LOG = 1 OR INNO\_PCS\_COMM = 1 OR INNO\_PCS\_ACCT = 1  
OR INNO\_PCS\_OPROC\_EXTREL = 1 OR INNO\_PCS\_WR\_DEC\_HRM = 1 OR INNO\_PCS\_SLS\_SERV = 1 ]

**business process innovation**

AND [ DEVE\_PCS\_ENT <> 1 AND COOP\_RND <> 1 AND COOP\_INN\_XRND <> 1 ] **no in-house innovation**

AND [ INNA\_IH\_RND <> 1 AND INNA\_RND\_CONTR\_OUT <> 1 ] **no R&D**

#### PROFILE V-A (version WITH reference to 'ongoing or abandoned innovation activities')

[ INNO\_PRD\_GD <> 1 AND INNO\_PRD\_SERV <> 1 ] **no product innovation**

AND [ INNO\_PCS\_PRD <> 1 AND INNO\_PCS\_LOG <> 1 AND INNO\_PCS\_COMM <> 1 AND  
INNO\_PCS\_ACCT <> 1 AND INNO\_PCS\_OPROC\_EXTREL <> 1 AND INNO\_PCS\_WR\_DEC\_HRM <> 1 AND  
INNO\_PCS\_SLS\_SERV <> 1 ] **no business process innovation**

AND [ INNA\_COMPL <> 1 AND [ INNA\_ONGO = 1 OR INNA\_ABDN = 1 ] ] **ongoing or abandoned innovation activities**

AND [ INNA\_IH\_RND = 1 OR INNA\_RND\_CONTR\_OUT = 1 ] **R&D**

OR

[ INNO\_PRD\_GD <> 1 AND INNO\_PRD\_SERV <> 1 ] **no product innovation**

AND [ INNO\_PCS\_PRD <> 1 AND INNO\_PCS\_LOG <> 1 AND INNO\_PCS\_COMM <> 1 AND  
INNO\_PCS\_ACCT <> 1 AND INNO\_PCS\_OPROC\_EXTREL <> 1 AND INNO\_PCS\_WR\_DEC\_HRM <> 1 AND  
INNO\_PCS\_SLS\_SERV <> 1 ] **no business process innovation**

AND [ INNA\_COMPL <> 1 AND INNA\_ONGO <> 1 AND INNA\_ABDN <> 1 ] **no ongoing or abandoned innovation activities**

AND [ INNA\_IH\_RND = 1 OR INNA\_RND\_CONTR\_OUT = 1 ] **R&D**

**Please note that the above is technically equivalent to**

#### PROFILE V-A (version WITHOUT reference to 'ongoing or abandoned innovation activities')

[ INNO\_PRD\_GD <> 1 AND INNO\_PRD\_SERV <> 1 ] **no product innovation**

AND [ INNO\_PCS\_PRD <> 1 AND INNO\_PCS\_LOG <> 1 AND INNO\_PCS\_COMM <> 1 AND  
INNO\_PCS\_ACCT <> 1 AND INNO\_PCS\_OPROC\_EXTREL <> 1 AND INNO\_PCS\_WR\_DEC\_HRM <> 1 AND  
INNO\_PCS\_SLS\_SERV <> 1 ] **no business process innovation**

AND [ INNA\_IH\_RND = 1 OR INNA\_RND\_CONTR\_OUT = 1 ] **R&D**

#### PROFILE V-B

[ INNO\_PRD\_GD <> 1 AND INNO\_PRD\_SERV <> 1 ] **no product innovation**

AND [ INNO\_PCS\_PRD <> 1 AND INNO\_PCS\_LOG <> 1 AND INNO\_PCS\_COMM <> 1 AND  
INNO\_PCS\_ACCT <> 1 AND INNO\_PCS\_OPROC\_EXTREL <> 1 AND INNO\_PCS\_WR\_DEC\_HRM <> 1 AND  
INNO\_PCS\_SLS\_SERV <> 1 ] **no business process innovation**

AND [ INNA\_COMPL <> 1 AND [ INNA\_ONGO = 1 OR INNA\_ABDN = 1 ] ] **ongoing or abandoned innovation activities**

AND [ INNA\_IH\_RND <> 1 AND INNA\_RND\_CONTR\_OUT <> 1 ] **no R&D**

## PROFILE VI

[ INNO\_PRD\_GD <> 1 AND INNO\_PRD\_SERV <> 1 ] **no product innovation**  
AND [ INNO\_PCS\_PRD <> 1 AND INNO\_PCS\_LOG <> 1 AND INNO\_PCS\_COMM <> 1 AND  
INNO\_PCS\_ACCT <> 1 AND INNO\_PCS\_OPROC\_EXTREL <> 1 AND INNO\_PCS\_WR\_DEC\_HRM <> 1 AND  
INNO\_PCS\_SLS\_SERV <> 1 ] **no business process innovation**  
AND [ INNA\_COMPL <> 1 AND INNA\_ONGO <> 1 AND INNA\_ABDN <> 1 ] **no ongoing or abandoned  
innovation activities**  
AND [ INNA\_IH\_RND <> 1 AND INNA\_RND\_CONTR\_OUT <> 1 ] **no R&D**

Option 1: Strong focus on 'innovative strategies' (most discriminatory strategies using CIS 2018 data):  
high focus on improving existing goods or services and high focus on customer-specific solutions:  
AND [ STRA\_FIMPGS = 3 OR STRA\_FCSO = 3 ]

Option 2: Purchased machinery and equipment or software based on new technology not used in the  
enterprise before  
AND [ PUR\_MES\_NEW = 1 ]

Option 3: At least one highly important hampering factor  
AND [ HAMP\_LFIN\_INT = 3 OR HAMP\_LCRED\_LEQUIT = 3 OR HAMP\_DIF\_SUB = 3 OR HAMP\_HCOST = 3  
OR HAMP\_LQLF\_SAL = 3 OR HAMP\_LCOLL\_PTN = 3 OR HAMP\_LACS\_KNOW = 3 OR  
HAMP\_UNC\_MKT\_DM = 3 OR HAMP\_HCOMP = 3 OR HAMP\_DPRIOR = 3 ]

Option 4: Any combination of options 1 to 3.

## PROFILE VII

All other enterprises