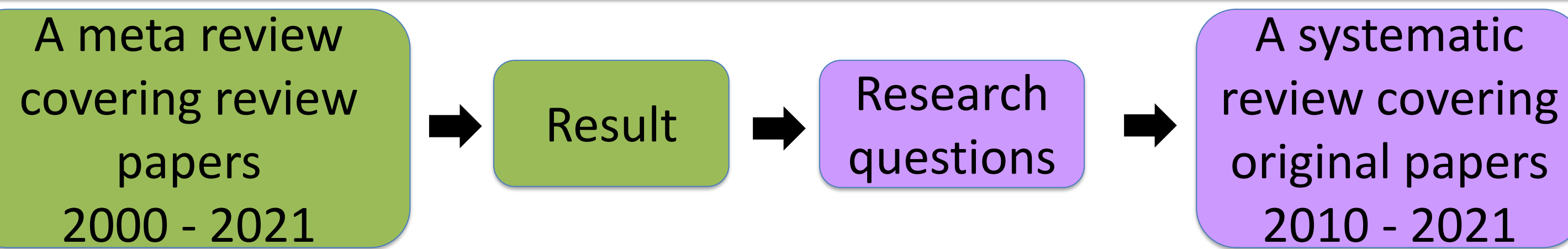




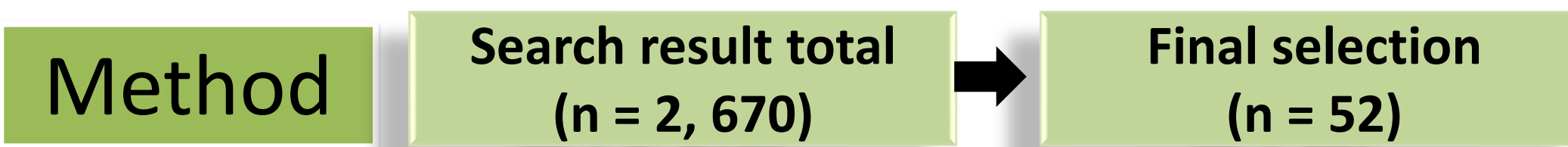
## Background

- Average number of connected devices in UK → 9.16 (Statista, 2020).
- A significant need to focus on the **privacy and security issues from a home user perspective.**

## 2 staged approach



## Meta Review : Review papers



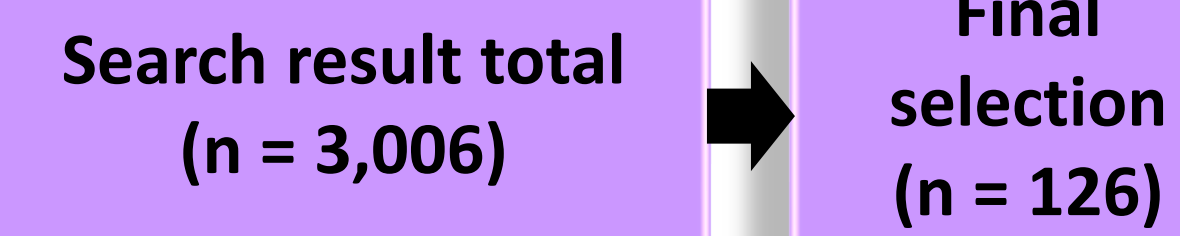
## Results & Discussions

- n = 19** Security & privacy in general
- n = 13** Security & privacy issues and solutions
- n = 10** User perspectives
- n = 9** Security threats and attack types
- n = 9** Smart Devices

- Absence of holistic review of smart home security
- Lack of current reviews reflecting the PrivSec aspects of User Perspectives at home
- Papers on user perspective were partial to
  - Aspects of privacy
  - Educational awareness
  - Challenges in general
- Reviews on related demographic aspects and contextual research is either very thin or old.

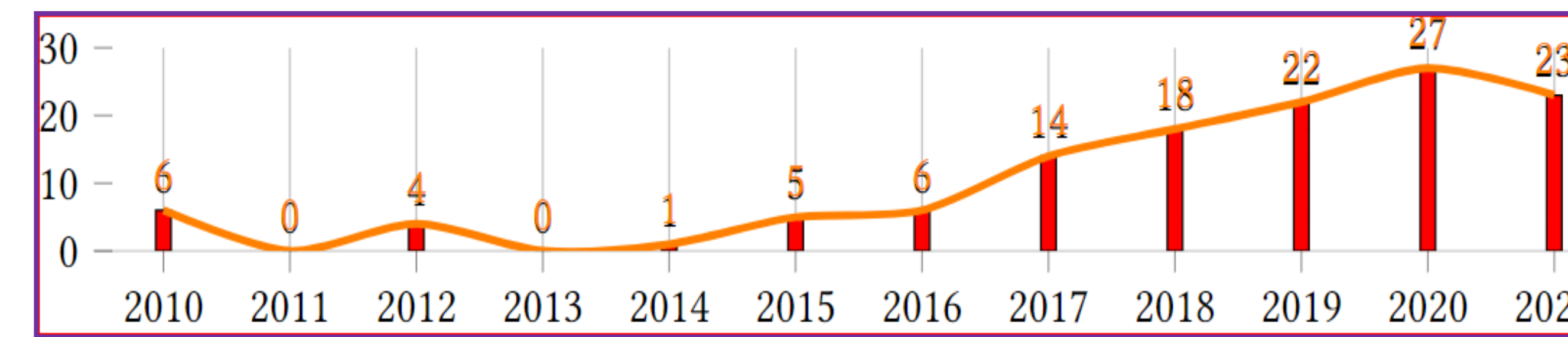
## Systematic Review : Original papers

### Method



### Results & Discussions

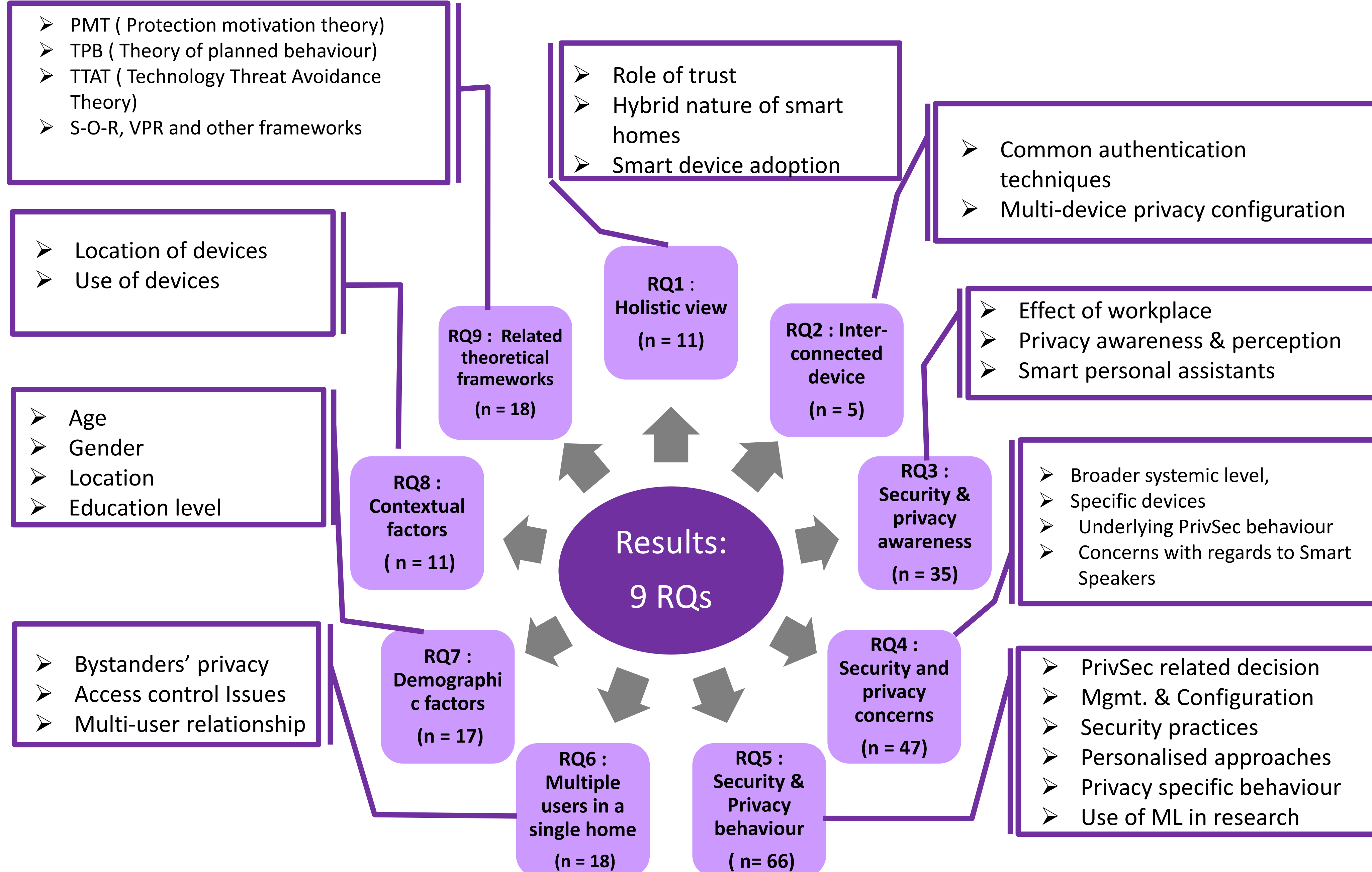
No of papers per year



No of papers per RQ

Papers in 9 RQs (2016–2021). Legend: ● Substantial coverage ○ Partial coverage ○ Light touch

Paper(s)	RQ1	RQ2	RQ3	RQ4	RQ5	RQ6	RQ7	RQ8	RQ9
[119, 166]		●							
[4, 77, 199]					○	●			
[77]					○	●			○
[20, 120, 129]									●
[22]	●			○	○				
[31]			●		○				
[85]			●	○					
[196]			○	○					
[34]	○	●							
[37, 137, 162, 170, 201]	●								
[30, 40]				○				●	
[42, 49]				●	●				
[48, 100, 106, 136, 138, 174, 179]					●				
[53, 146]			●		●				●
[1, 27, 67, 76, 93, 95, 121, 145, 163]			●						
[56]	●								○
[57, 87]			○		●				
[58]			●		○				
[83]			○	●	○				
[47, 61, 135, 164, 167, 183]					○			●	
[7, 13, 46, 60, 71, 112, 154, 165, 171, 203]				●					



## Discussions & recommendations

- Limited research on **the impact of connected multiple smart and traditional computing device**
  - (1) On the security & privacy health of home user
  - (2) Home user behaviour and practice
- Need to explore security & privacy in **different types of multi-user home environments** i.e.
  - (1) 'Extended home', (2) 'Pseudo-home'
- Detailed experimental work is needed to **examine the details of data flows** between
  - (1) Multiple **devices**
  - (2) Multiple **users**
  - (3) In multiple **context**
- Advanced '**Ontology**' to provide **more holistic view** covering
  - (1) Traditional devices
  - (2) Smart devices
  - (3) Software
  - (4) Network
  - (5) Household structure
  - (6) PrivSec Threats
  - (7) Different user types