Hybrid work and the organisation of the workday

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Introduction

- Remote and hybrid work have become persistent features of post-pandemic labour markets (Barrero et al., 2023; Aksoy et al., 2025; Buckman et al., 2025)
- However, in the last few years, firms have steadily increased return-to-office (RTO) requirements, motivated by concerns about productivity, communication and the benefits of being together (Ding and Ma, 2023; Emanuel et al., 2026)
- To understand what is gained or lost with RTO, we need to know what people actually do in each location (and how they do it)

This paper

- **What we do:** we study the organisation of the workday in a hybrid setting
  1. How much do people work? (Barrero et al., 2021a)
  2. How does the content of the workday change? (Emanuel et al., 2026)
  3. How fragmented is the workday? (Bloom et al., 2015)
  4. How do workers assess their day? (Barrero et al., 2021b)
- **Data:** full-day time-use diaries, 10-minute slots, 91 activities
- **Design:** we compare the same worker on a home day and a workplace day
- **Setting:** UK public sector, with little pay for performance and high job security

Contribution

1. **WFH and productivity:** effect of WFH on output, often in single organisations (Gibbs et al., 2023; Fenizia and Kirchmaier, 2024; Arenas et al., 2026)

   → **We add** the workday behind output, across public-sector jobs, and whether its reorganisation explains workers' own productivity reports

2. **Costs of organising work:** coordination costs and switching costs, studied separately (Battiston et al., 2021; Yang et al., 2022; Emanuel et al., 2026; Coviello et al., 2014)

   → **We study them jointly**: in the same diary, in minutes over the whole day, for the same worker at home and at the workplace, including what digital traces miss

3. **Time use and WFH:** total work time, from cross-sectional studies (Pabilonia and Vernon, 2022)

   → **We add** a view inside working time (79 work activities), and a within-worker panel: the same person on a home day and on a workplace day

Setting

- We focus on the **UK public sector**: civil service, local government, healthcare, police, justice, social care
- An interesting setting to study hybrid working:
  - High rates of hybrid and remote working (around 23%)
  - Productivity remains below pre-pandemic levels
  - Limited financial incentives and high job security
  - A broad range of tasks and occupations
- Home days are not only the worker's choice:
  - Attendance requirements (which vary by sub-sector and occupation)
  - Home days need manager approval; team days and rotas maintain service coverage

Data: ONS Public Sector Time Use Survey

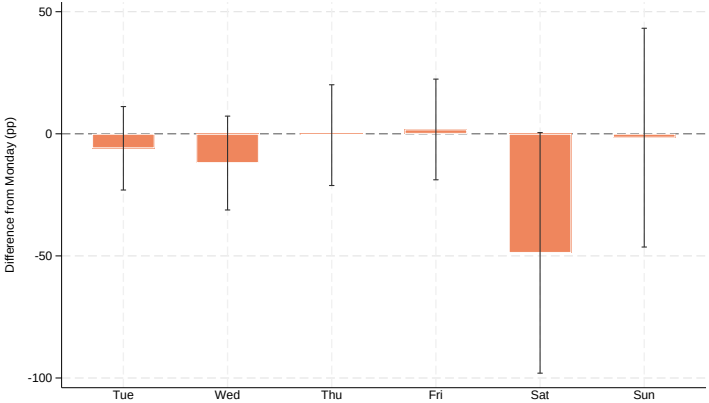
- UK public-sector workers, diaries collected 2–12 February 2024
- At least two full-day diaries per respondent, with the day split into 10-minute slots
- Each diary records:
  - Primary and up to five secondary activities, from 91 categories (79 work-related) Full list
  - Ratings of each activity (enough time, enjoyment) and self-reported productive time for the whole day
- Time-use diaries limit recall and social desirability bias (Gershuny et al., 2020)
- Survey not designed to study WFH, so respondents were not primed about location

Sample

	(1)	(2)	(3)	*p*-value	
	Switchers	Always at the workplace	Always at home	(2) = (1)	(3) = (1)
Female	64.7	64.7	70.7	0.987	0.190
Age					
Under 35	17.3	23.4	16.1	0.054	0.749
35–44	26.5	23.8	28.2	0.442	0.708
45–54	28.5	23.4	29.3	0.144	0.859
55 and over	27.7	29.4	26.4	0.631	0.772
Frontline worker	14.9	43.5	6.9	0.000	0.007
Usual weekly hours, main job					
Under 30	10.0	15.0	11.5	0.057	0.637
30–40	85.9	77.8	86.2	0.007	0.939
Over 40	4.0	7.2	2.3	0.068	0.309
Long-standing health condition	34.1	29.4	35.6	0.209	0.751
Gross annual pay £50,000 or more	23.3	16.4	26.4	0.032	0.464
Sector					
Civil Service and Local government	46.6	20.8	41.4	0.000	0.288
Healthcare	13.3	28.3	18.4	0.000	0.159
Police	2.0	5.1	3.4	0.025	0.382
Justice	37.3	43.0	34.5	0.148	0.545
Social care	0.8	2.8	2.3	0.041	0.240
Teleworkable occupation	66.3	43.8	70.1	0.000	0.381
Diary days	598	941	365		
Workers	249	428	174		

Notes: Teleworkable occupation: share of O*NET codes in the SOC 2020 unit group classified as teleworkable. *p*-values from OLS of each characteristic on group dummies, robust SEs.

Home days are spread across the week

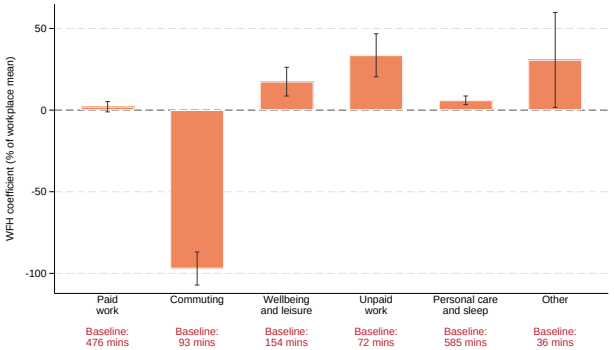


No evidence that home days are concentrated on particular days of the week

1. How much do people work?

Work time and non-work time

Hybrid working and total work time



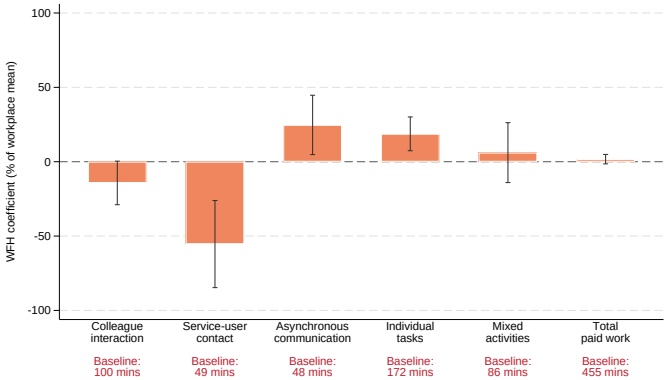
Notes: Switchers sample. Minutes per diary day in each category; bars show the WFH coefficient relative to the mean on workplace days (baseline, in red), $\times 100$. Paid work: all work activities, including breaks. Commuting: travel to and from work and travel as part of paid work. Unpaid work: childcare, adult care, household work and volunteering. FE estimates with 95% CIs, SEs clustered by worker.

- Total work time does not change with WFH
- The time saved from commuting is allocated to non-work activities rather than additional work
- In contrast to previous studies reporting longer working hours at home (Gibbs et al., 2023; Aksoy et al., 2023)

2. How does the content of the workday change?

Coordination costs and task allocation

Task allocation and coordination



Notes: Switchers sample. Minutes per diary day in each task group. FE estimates with 95% CIs, SEs clustered by worker.

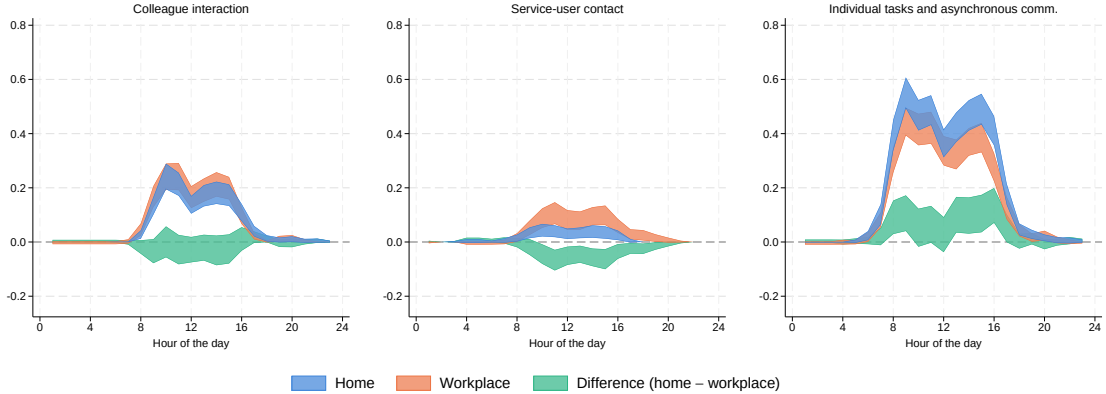
−14 min of colleague interaction

+12 min of asynchronous communication

+32 min of individual tasks

Patterns are consistent with task sorting across home and workplace days

Task allocation over the day



Notes: Switchers sample. 95% CIs for the share of each hour spent on the task group as main activity: home days (blue), workplace days (orange) and their difference (green). Linear probability model on the diary-day × hour panel with hour dummies, WFH, their interaction and worker fixed effects; SEs clustered by worker. Each line is relative to 00:00–00:59. Individual tasks include asynchronous communication.

WFH changes the time of day when low-coordination activities are done

3. How fragmented is the workday?

Multitasking and work fragmentation

Is the workday more fragmented at home?

	Non-work secondary activities		Juggling	Interruptions	
	(1) Minutes	(2) % of work	(3) Number of work activities	(4) Any (%)	(5) Number
WFH, FE	4.49*	0.95*	-0.02	3.01	0.11*
	(2.68)	(0.53)	(0.19)	(2.33)	(0.06)
Workplace mean	2.79	0.56	5.36	81.17	1.20

Notes: Switchers sample. Columns 1–2: minutes per diary day in which the first secondary activity is non-work, measured over all eligible work time, and their share of eligible work time. Column 3: number of eligible work episodes. Columns 4–5: within the work window (first to last work slot of the day), an interruption is a spell whose main activity is not eligible work, excluding breaks. Column 4: dummy equal to one if the day has at least one interruption. Column 5: number of interruption episodes. Within-worker estimates; SEs clustered by worker in parentheses. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.10$.

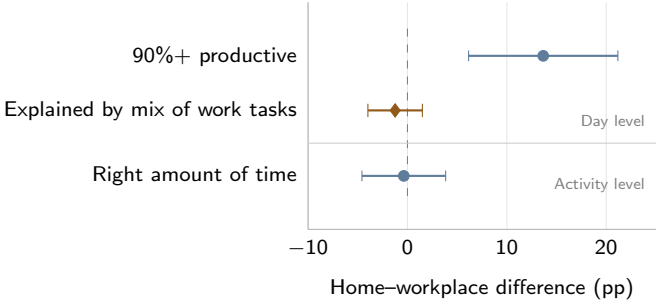
- Non-work while working rises at home, but only by about 1 p.p. of work time
- No more work activities; slightly more interruptions

Home days are not more fragmented than workplace days

4. How do workers assess their day?

Self-reported productive time, task timing and enjoyment

Home days are rated more productive

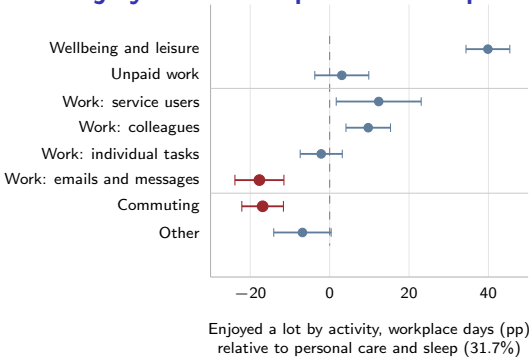


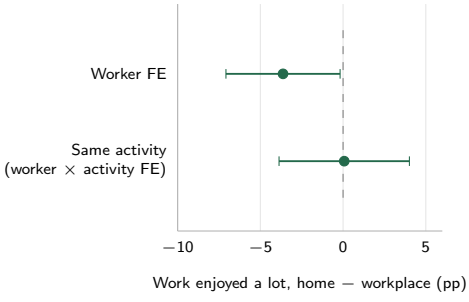
Notes: Switchers sample. Orange diamond: Gelbach component of the 90%+ productive gap attributable to the shares of work time in each task group and total work time. Timing: share of rated work time taking the right amount of time. FE estimates; 95% CIs, SEs clustered by worker.

- Home days: +13.7 pp rated 90%+ productive (workplace mean 37%)
- The gap holds for the same mix of work tasks and total work time
- Tasks not more often rated as taking the right time

Home days are rated more productive, but not because of task mix, work time or tasks taking the right amount of time

Could enjoyment explain the productivity gap?





- **Enjoyment:** ▲ colleagues, service users; ▼ emails and messages, as disliked as commuting
- **Home days:** ▼ colleagues, service users; ▲ emails and messages: work at home is less enjoyed (−3.6 pp), but the same activity is not significantly more enjoyable at home

Work is less enjoyed at home, so the enjoyment of work cannot explain the productivity gap

So what might explain the productivity gap?

- **Commuting:** part of the day workers rate; removing it adds about 30 enjoyed minutes to the home day, weighting time by enjoyment (Krueger et al., 2009; Hamermesh, 2020)
- **The choice of home days:** control over where and when to work, including staying at home on days with work suited to it
- **A different reference point:** home and workplace days may be rated against different benchmarks

Conclusions

- Same workers observed on a home day and on a workplace day:
  - What changes: what they do (less coordination-intensive work, more individual tasks) and when they do it
  - What does not change: how much they work and how fragmented the day is
- Home days are rated more productive, not because of how work is organised or enjoyed
- **Implications for RTO:** home days are not lost working time
  - Their cost is less face-to-face interaction, which workers concentrate on workplace days
- **Next steps:** experiments that keep the detail of the diaries, e.g.
  - Randomly assigning *which* days are home days: effect of location vs sorting
  - Assigning tasks to locations: the cost that sorting avoids, with objective performance

Thank you

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Appendix

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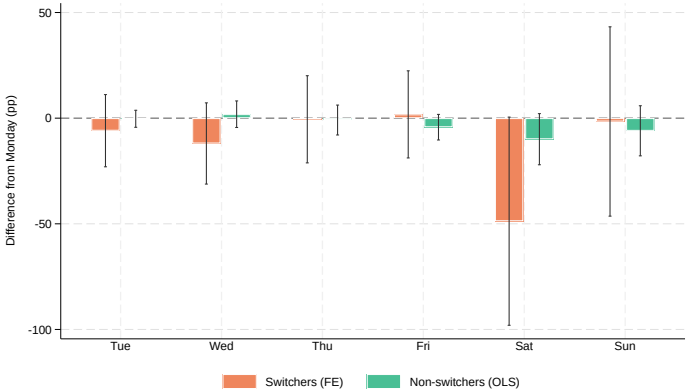
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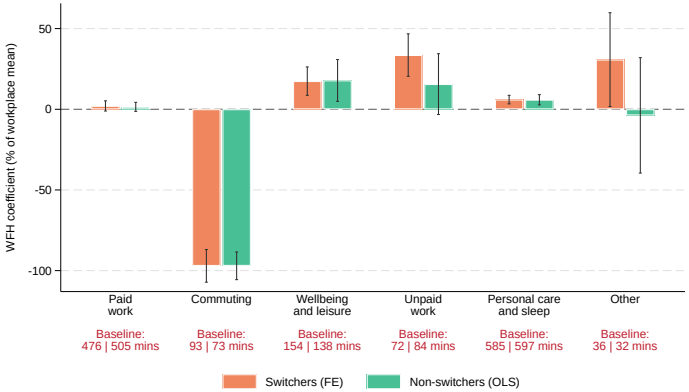
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WFH by day of the week: switchers and non-switchers



Notes: Linear probability model of WFH on the diary day ($\times 100$) on day-of-week dummies, Monday as baseline. Switchers: worker fixed-effects estimates (598 diary days, 249 workers). Non-switchers: all diary days in one location, including single diaries; OLS (1,503 diary days, 799 workers). Controls: gender, age, region, frontline, usual hours, health, top pay. 95% CIs, SEs clustered by worker. Weekend estimates rest on few diaries (switchers 7 Saturday, 12 Sunday) and are not informative.

Time use: switchers and non-switchers



Notes: Switchers: worker fixed-effects estimates (598 diary days, 249 workers). Non-switchers: all diary days in one location, including single diaries; OLS (1,503 diary days, 799 workers). Bars: WFH coefficient divided by the mean minutes on workplace days in the same sample (baselines in red), $\times 100$; 95% CIs, SEs clustered by worker. Controls: gender, age, region, frontline, usual hours, health, top pay, SOC 2-digit and sector.

Task allocation: non-switchers

	(1) Colleague interaction	(2) Service-user contact	(3) Asynchronous communication	(4) Individual tasks	(5) Mixed activities	(6) Total work time
WFH	17.2**	-55.1***	18.1***	35.8**	-12.0	4.0
	(7.8)	(10.6)	(6.8)	(14.0)	(12.0)	(6.7)
Workplace mean	52.7	152.5	31.2	151.9	93.9	482.3
Relative effect (%)	32.7	-36.1	58.0	23.6	-12.8	0.8
Diary days	1,503	1,503	1,503	1,503	1,503	1,503
Workers	799	799	799	799	799	799

Notes: Non-switchers: all diary days in one location (including workers with a single diary). Minutes per diary day; total work time is the sum of the five task groups. OLS estimates. Controls: gender, age, region, frontline, usual hours, health, top pay, SOC 2-digit and sector. SEs clustered by worker. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.10$.

Is the workday more fragmented at home? Non-switchers

	Non-work secondary activities		Juggling	Interruptions	
	(1) Minutes	(2) % of work	(3) Number of work activities	(4) Any (%)	(5) Number
WFH, OLS	1.15	0.17	0.58*	12.19***	0.24***
	(0.83)	(0.18)	(0.33)	(2.90)	(0.08)
Workplace mean	2.23	0.54	4.68	74.75	1.15

Notes: Non-switchers: all diary days in one location, including workers with a single diary (799 workers, 1,503 diary days). OLS; SEs clustered by worker in parentheses. Controls: gender, age, region, frontline, usual hours, health, top pay, SOC 2-digit and sector. Outcomes as in the main table. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.10$.

Self-reported productive time: non-switchers

	(1) 90%+ productive (%)	(2) Right amount of time (%)
WFH	2.60	0.40
	(4.09)	(2.48)
Workplace mean	42.70	73.80
Observations	1,420	1,133
Workers	760	638

Notes: Non-switchers: all diary days in one location, including single diaries. Column 1: day-level self-report of being productive 90% of the time or more. Column 2: share of rated work time taking the right amount of time. OLS. Controls: gender, age, region, frontline, usual hours, health, top pay, SOC 2-digit and sector. SEs clustered by worker. $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.10$.

Enjoyment by activity: switchers and non-switchers

	Switchers		Non-switchers	
	OLS (1)	Mean [episodes] (2)	OLS (3)	Mean [episodes] (4)
Personal care and sleep	*Baseline*	31.7 [1,320]	*Baseline*	32.0 [4,671]
Unpaid work	3.06 (3.47)	34.9 [331]	-0.39 (1.90)	31.7 [1,248]
Wellbeing and leisure	39.86*** (2.82)	71.2 [423]	39.92*** (1.59)	72.2 [1,400]
Commuting	-16.88*** (2.67)	14.8 [527]	-13.41*** (1.52)	18.5 [1,994]
Work: colleague interaction	9.72*** (2.86)	39.9 [430]	6.52*** (2.38)	37.9 [863]
Work: service-user contact	12.36** (5.46)	49.1 [112]	16.21*** (2.92)	48.6 [943]
Work: emails and messages	-17.69*** (3.15)	13.0 [287]	-19.26*** (2.22)	13.1 [640]
Work: individual tasks	-2.12 (2.71)	29.7 [619]	-9.02*** (1.80)	23.5 [1,864]
Work: other (mixed, breaks)	12.74*** (3.42)	43.7 [371]	8.44*** (1.87)	40.1 [1,306]
Other	-6.85* (3.69)	25.3 [196]	-3.81* (2.32)	28.4 [635]
p: commuting = emails and messages	0.820		0.009	
p: commuting = other work groups (largest)	0.000		0.024	
p: work groups equal	0.000		0.000	
Episodes	4,616		15,564	
Workers	249		584	

Notes: Workplace diary days only; all rated episodes over the whole diary day. Dependent variable: 100 if the episode is rated 6 or 7 on the 1–7 enjoyment scale (linear probability model, pp). Columns 1 and 3: coefficients on activity dummies, omitted category personal care and sleep; controls: gender, age, region, frontline, usual hours, health, top pay, SOC 2-digit and sector. Paid work split into task groups; emails and messages = asynchronous communication. Columns 2 and 4: share of episodes enjoyed a lot, number of episodes in brackets. SEs clustered by worker. Worker FE (switchers): same pattern (commuting = emails, $p = 0.55$). $^{***}p < 0.01$, $^{**}p < 0.05$, $^{*}p < 0.10$.

Is the home day more enjoyable overall?

- **Approach:** weight each activity's minutes by how often it is enjoyed a lot on workplace days (Kahneman et al., 2004; Krueger et al., 2009)
- **Implied by the reallocation of time:** +29 minutes enjoyed a lot per home day (95% CI 19 to 40)
  - Mostly less commuting (+20 min): 88 fewer minutes of an activity enjoyed a lot only 14% of the time
  - More leisure (+10 min) and more rated time (+7 min); different work tasks −7 min
- **Measured:** +11 minutes enjoyed a lot, not significant (95% CI −29 to 51); share of the day +0.2 pp
- **Why the gap:** the same activity is enjoyed equally at home (+0.8 pp, n.s.), except leisure (−7.5 pp), which is not explained by the amount of leisure

Diary activities (1/3)

Colleague interaction

68 Attending a meeting or event
72 Phone or video calls
74 Having a conversation
85 Delivering a training course

Asynchronous communication

71 Emails
73 Instant messaging
75 Writing letters

Breaks and waiting (excluded from all groups)

87 Waiting
88 Taking a work or lunch break
89 Changing clothes
90 Sleeping or resting during work time

Service-user contact

13 Teaching or assisting learners in the classroom
14 Coaching or assisting learners outside the classroom
15 Supervising children outside of the classroom
22 Assessing patients
23 Observing patients
24 Treating patients
25 Supporting patient care, e.g. changing beds, bathing, feeding
32 Non-crime-related activities, e.g. public safety and welfare
33 Patrolling
34 Offender-facing activities
38 Community activities or events
40 Court duties
42 Prison interviews
43 Security checks and searches
45 Working directly with members of the public, service users or customers

Diary activities (2/3)

Administration

16 Preparing classroom lessons
18 Reporting, assessing or marking pupil's work
19 Registering attendance
26 Recording medical notes
27 Writing medical reports or treatment planning
28 Treatment preparation
29 Writing prescriptions
35 Non-offender-facing activities
51 Checking, testing, cleaning or replenishing equipment
53 Photocopying, printing or scanning
54 Storing, filing or managing documents
55 Recruitment-related administration
56 Reading, reviewing or editing documentation or paperwork
57 Booking travel and accommodation
58 Taking notes
59 Ordering supplies or equipment
60 Finance-related activities
61 Auditing
63 Data entry
64 Creating or updating records, databases, case files or similar documents
65 Completing or processing forms
66 Creating or updating an appointment or booking
67 Organising meetings, meeting administration
69 Planning
70 Writing or reviewing reports
76 Postal or mailing duties
78 Creating or updating website, noticeboard or display boards
79 Staff-related administration
82 Personal study
86 Data processing, data analysis, data science

Diary activities (3/3)

Mixed activities

17 Preparing or delivering extra-curricular activities
20 Safeguarding and wider support for pupils
21 Other teaching or education activities
30 Other healthcare activities
31 Crime-related activities
36 Other offender management activities
37 Intelligence gathering
39 Crime prevention activities
41 Warrant executions
44 Other policing and public order activities
46 Social care activities
47 Environmental or waste management activities
48 Housing or welfare related activities
49 Safeguarding
50 Military duties
52 Other public service activities
62 Health and safety
77 Media or press duties
80 Staff management
81 Conducting research
83 Attending or completing a course
84 Physical or practical training
91 Other work activity

Non-work activities and travel

1 Sleeping or resting
2 Personal care, e.g. washing, getting dressed, eating or drinking
3 Looking after children
4 Looking after adults
5 Household work, e.g. cooking, cleaning, laundry
6 Volunteering
7 Entertainment and socialising
8 Exercise, sports and well-being
9 Other activities outside of work
10 Travelling to or from a place of paid work
11 Travelling as part of paid work
12 Travelling to or from another place

◂ First page ◂ Back to data