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The Sovereign Threshold & The 2035 Strategy

History. Institutions. Business decisions.

SELECTED CHAPTERS AND SOURCE NOTES

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Inside this sample

This selection introduces the two United Kingdom books through complete chapters and their source notes.

The Sovereign Threshold
Cover and contents; Chapter 12, What institutions mean for business; sources and reading notes.

The 2035 Strategy
Cover and contents; Chapter 1, The business outlook to 2035; Chapter 14, AI, productivity and businesses that keep the benefit; sources and reading notes.

Extracts retain the books' original page numbers. The bookmarks in this sample take you to each selection. The complete contents show chapters in the full books.

Official projections, author judgments and illustrative calculations are identified separately in the text.

Explore the United Kingdom edition at:
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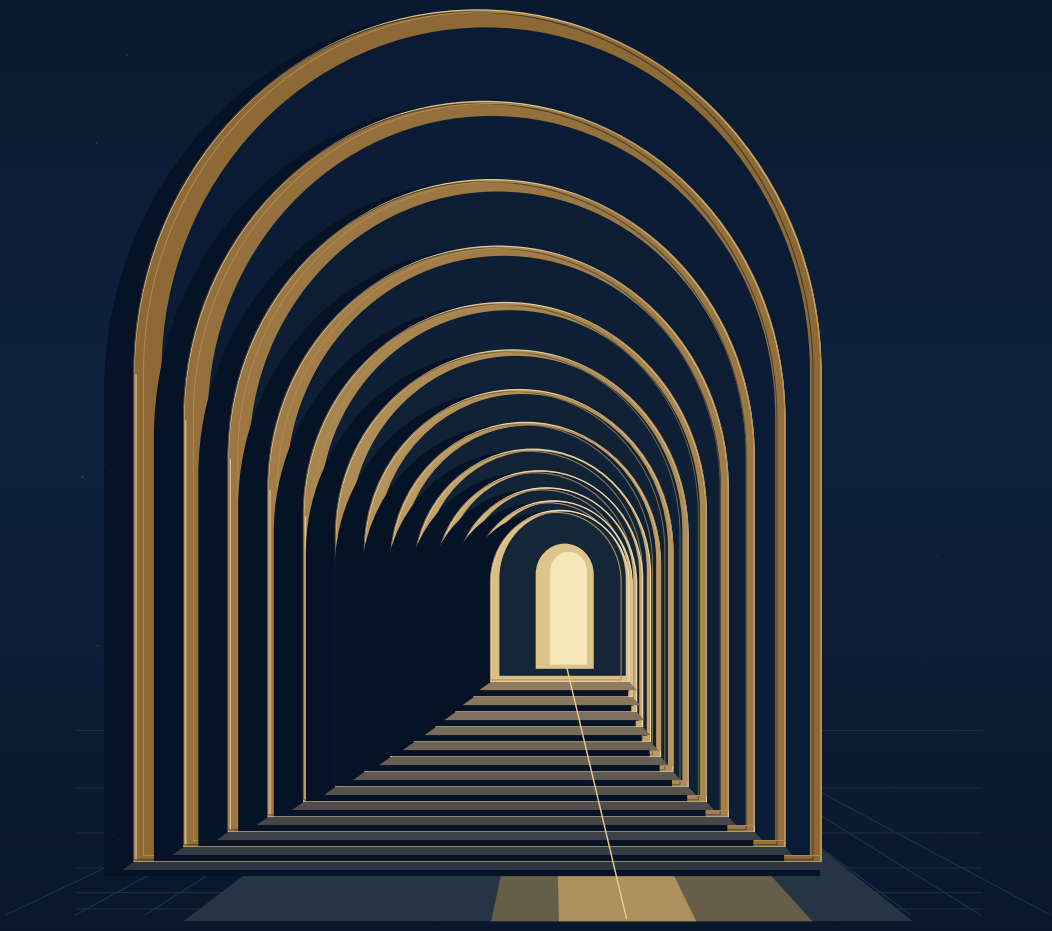
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UNITED KINGDOM

THE

SOVEREIGN THRESHOLD

Migration, institutions
and the inheritance of culture



J. RICHARD

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CHAPTER 12

What institutions mean for business

A company makes commitments inside an institutional setting it cannot fully control. It hires people whose skills depend partly on education and training. It relies on transport, records, public administration and the ability to settle disagreements. It can buy a building or a machine, but it cannot purchase a functioning society as a single input. The historical argument of this book matters to business because durable commercial activity depends on systems that make promises credible and useful work repeatable.

This connection must be made carefully. Rome, Byzantium and Northern Wei are not templates for forecasting a modern economy. Their institutions, technologies and political orders differed profoundly from those of the United Kingdom. The value of comparison lies in identifying mechanisms worth examining: the gap between a decision and its implementation, the alignment of incentives, the distribution of resources, and the ability to transmit capability when people and circumstances change.

The implementation gap

In the account of the Gothic admission examined earlier, imperial permission did not itself provide food, competent administration or a durable relationship between newcomers and officials. Ammianus's description places serious weight on abuse and provisioning failure. The historical lesson is about the means of carrying out a commitment. A policy announced at the centre could be undermined by the people and arrangements through which it operated. [24]

A business faces a smaller but recognisable implementation problem when it promises a service before organising the resources to deliver it. A contract can record an obligation; it cannot create competence, inventory or supervision by itself. The business implication is to trace a promise through the actual operating sequence. Who receives the order? Who allocates work? Which supplier or member of staff can halt delivery? What happens when a customer reports failure?

This is not an argument against ambitious commitments. It is an argument for matching ambition with an executable sequence. A firm that knows where delivery can fail can build contingencies and assign responsibility. A firm that relies on the promise alone may discover that its reputation is being decided by an unexamined part of the process.

Incentives can defeat the stated purpose

The historical cases repeatedly show that actors within one political system can face different rewards. A frontier commander, court official, patron and local community may not bear the same costs or gain from the same outcome. Treating the state as a single purposeful person can conceal the conflict that explains its behaviour.

The commercial parallel is useful when evaluating a partnership or a large organisation. A salesperson may be rewarded for signing work that an operating team cannot deliver profitably. A purchaser may minimise the price of a component while increasing failure costs elsewhere. A manager may protect a departmental target at the expense of the customer's complete experience.

The remedy begins with measurement across the sequence. Examine the cost and quality of completed work, not only the performance of its separate stages. Make responsibility for exceptional cases visible. Where incentives conflict, change the allocation of rewards or the decision process rather than assuming that a stronger statement of shared values will resolve the problem.

Resilience involves adaptation

Byzantium's continuity did not require every earlier arrangement to remain unchanged. The historical chapters describe institutional inheritance alongside territorial losses, conflict and changing conditions. Northern Wei's cultural inheritance likewise outlived the political unity of the dynasty. These cases distinguish the survival of a name, a political structure and a practice. [25, 28-29, 30]

A business should make a similar distinction when considering its future. The purpose it serves may remain valuable while its product, technology or organisation needs to change. Preserving an obsolete delivery method can undermine the customer relationship the firm intends to protect. Conversely, replacing a method without understanding the knowledge embodied in it can destroy useful capability.

Identify what must continue and what can change. The enduring element may be reliable maintenance, trustworthy analysis, skilled teaching or a relationship with a community. The variable element may be the premises, software, contract structure or division of labour. Adaptation becomes more coherent when the organisation can explain that distinction.

Geography distributes costs and benefits

The Northern Wei discussion shows how a change in political centre affected relationships among the court, military networks and frontier communities. The account is disputed in important respects, and the chapter attributes the competing interpretations. It nevertheless directs attention to who gains access and who loses standing when the location of power changes. [30, 37, 38]

A company expanding into a new region should examine the distributional consequences of its own decisions. Headquarters may gain efficiency while a branch loses practical support. A central purchasing arrangement may reduce prices but increase the time

required to obtain a specialist item. A relocation may suit senior staff while making recruitment or retention harder elsewhere.

Assess these effects in the operating model. Geography changes the time and cost of coordination. The appropriate question is whether the complete organisation can deliver, rather than whether its central budget looks better. This principle also helps a business read national policy: a favourable aggregate result need not imply that its own locality receives the capacity on which the company depends.

Capability must survive its current custodians

Cultural continuity in this book depends on people able to practise, teach, preserve and adapt an inheritance. A building can remain while the skills that gave it purpose disappear. A recording can survive while the practice it records loses its living community. Organisations face a related challenge when essential knowledge resides in one founder, technician or long-serving employee.

Succession requires more than a written manual. Some knowledge becomes visible only through supervised work, correction and repeated performance. A useful transfer process therefore combines records with practice. Ask another person to carry out the task, observe where the instructions are insufficient, and improve both the training and the documentation.

This has a direct commercial implication. A company that can reproduce quality through trained successors is less dependent on continuous exceptional effort by one person. It can also evaluate growth more honestly. If the next team cannot perform the work to the required standard, the business has not yet demonstrated the capability assumed by its expansion forecast.

Trust is an operating resource

Public trust is not interchangeable with agreement, popularity or the absence of criticism. A person may disagree with a decision while understanding the process and believing that reasons can be challenged. The integration and accountability chapters emphasise the practical importance of intelligible institutions, usable channels and responsibility that can lead to correction.

For a business, trust is sustained when customers can understand the offer, receive the promised service and obtain a competent response when something goes wrong. Repeated small failures can be commercially significant even if no single incident appears decisive. An unclear bill, an unanswered complaint or an unexplained change can make a relationship harder to maintain.

Treat complaint handling as information about the operating system. Identify which failures recur, where authority to resolve them sits, and whether a remedy reaches the underlying cause. A growing company should be able to learn from service failures without requiring every case to reach its founder.

An institutional assessment for an investment

When considering an investment, examine five connected dependencies. The first is the authority required for the activity and the practical reliability of the relevant processes. The second is the capability needed to deliver, including skills and supporting infrastructure. The third is the alignment of incentives among the parties involved. The fourth is the distribution of costs and benefits across places and people. The fifth is the means of correcting errors and continuing through changes in personnel.

These questions do not produce a universal score for a country. They produce a more specific account of how a proposed enterprise will work in its setting. A weak dependency may be manageable if it is visible and the firm can reduce exposure. It becomes more dangerous when the investment case assumes it away.

The companion book, The 2035 Strategy, applies this reasoning to demographic change, local capacity and commercial choices in the United Kingdom. This book supplies the deeper principle: continuity is an achievement maintained through capable institutions. Businesses contribute to that achievement when they train successors, keep credible commitments and build services that remain useful as circumstances change.

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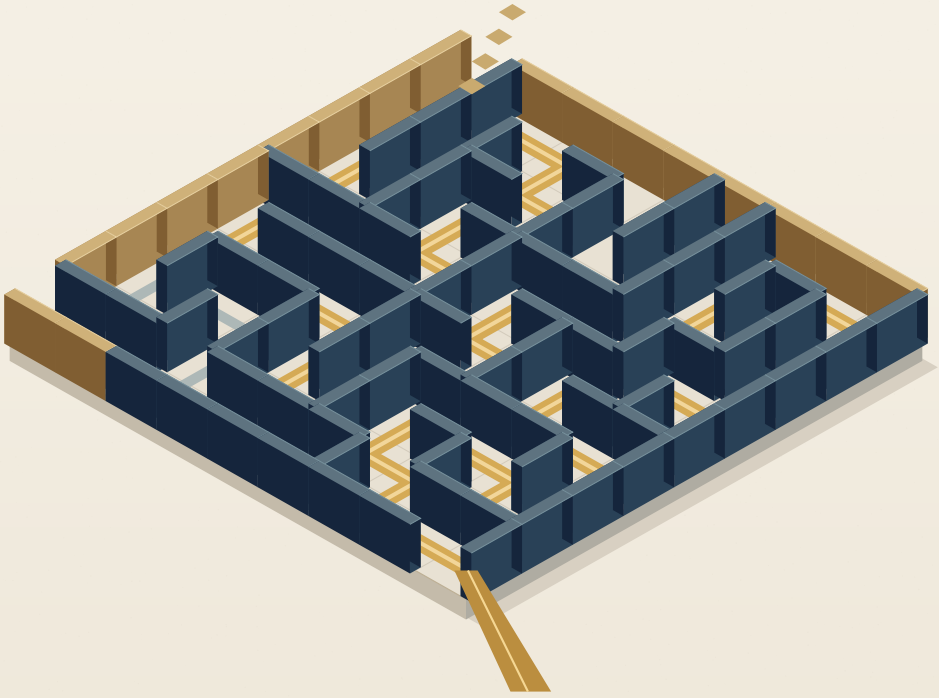
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UNITED KINGDOM

THE

2035 STRATEGY

Business opportunities and decisions through 2035



J. RICHARD

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CHAPTER 1

The business outlook to 2035

A business can recognise a long-term need and still lose money serving it. An ageing population does not guarantee a profitable care company. A housing shortage does not make every development financeable. A useful forecast must connect the direction of change to a customer, a means of payment, a delivery system and a return on the capital committed. That is the organising argument of this book.

The central commercial judgment is that the United Kingdom through 2035 will reward firms that can make constrained services work more reliably. The strongest opportunities examined here concern suitable housing, independent living, workforce development and measurable improvements in labour productivity. These are judgments about where to investigate, supported by the demographic and institutional evidence in the following chapters. They are not market-size estimates or assurances that a particular enterprise will succeed.

The official population evidence provides a useful starting boundary. In the ONS 2024-based projections, the UK population reaches approximately 71.143 million in 2035 on the principal path. The low- and high-migration variants reach about 69.830 million and 73.508 million. Compared with the common 2024 base, these imply very different degrees of growth. They do not assign a probability to each path. Across the principal projection, the changing age composition is particularly consequential for businesses: the pension-age category expands while the child population contracts. The precise categories follow the ONS pension-age assumptions, rather than a fixed age-65 division. [6, 12-15, 33]

Eight forecasts that a business can act on

First, services supporting independent living will become more strategically important by 2035. The direction of ageing has strong support in the principal demographic projection. The commercial inference has moderate confidence: more potential need can support adaptation, maintenance, transport, care coordination and accessible services, but purchasing power and public commissioning determine which needs become revenue. The first task is to identify who pays and which delivery constraint currently prevents the need from being met.

Second, housing businesses will need a more varied offer than additional floor space alone. The existing stock, household composition, suitability and location will continue to matter alongside new construction. This is a moderate-confidence judgment drawn from the household and local housing evidence. Repair and adaptation may have a viable role where a large development is impractical. The forecast weakens in a proposed locality if surveys show little relevant unmet need or customers cannot fund the work. [36-37, 24, 28-29]

Third, training and retention will remain strategic investments where delivery depends on scarce, occupation-specific skills. National working-age totals do not establish the availability of a supervisor, installer, care worker or specialist in the right place. Confidence in the need to manage this mismatch is high; confidence in the profitability of any training offer is conditional on employer demand, completion and employment outcomes. A training provider should sell a credible route to competence, not a forecast of universal labour shortage.

Fourth, the commercial value of AI will depend increasingly on integration, checking and workflow ownership. The cited customer-support study shows that assistance can improve a defined task, with results differing by worker experience. It does not justify applying one productivity percentage to a whole company. The forecast is that firms able to show lower cost per acceptable completed job will

have a stronger proposition than firms selling usage alone. Confidence is moderate because technology, competition and purchasing behaviour can change quickly. [38, 40]

Fifth, local delivery conditions will create substantial differences between businesses exposed to the same national trend. London's scale, Hull's housing-stock questions and the Outer Hebrides' settlement and delivery constraints call for different operating models. A national expansion plan will therefore need local evidence about customers, staff, premises and access. This is a high-confidence planning conclusion, not a numerical ranking of those markets. [35-37, 24-29]

Sixth, suppliers to health, care and other public services will need to distinguish social need from funded purchasing. A waiting list or an ageing population may establish a problem without establishing an available contract. Moderate confidence attaches to a continuing need for delivery improvements; no confidence rating is assigned to unverified future budgets. The commercial opportunity becomes credible when a buyer, purchasing route, measurable result and payment timetable can be identified. [34, 31, 32]

Seventh, education businesses will need to separate child-volume exposure from adult skills and specialist services. The principal path's lower child population challenges business plans that depend only on expanding national pupil totals. It does not predict falling demand for every school, place, subject or support service. The commercial response is selective positioning around verified local cohorts and needs. Confidence is high in the demographic distinction and moderate in its commercial implications. [6, 15, 27]

Eighth, businesses with flexible commitments will be better placed to respond when migration, demand or capacity diverges from plan. This is a strategic judgment rather than an official forecast. Shorter pilot commitments, premises that can serve several uses, alternative suppliers and staged investment can limit the

cost of a wrong assumption. Flexibility has a price; it is valuable when that price is lower than the avoidable loss from an irreversible decision.

Confidence does not mean certainty

The confidence descriptions above are qualitative assessments of the strength of the reasoning. They are not measured probabilities. A high-confidence demographic direction can coexist with a highly uncertain commercial outcome. The path from more potential users to revenue passes through access, affordability, conversion, capacity and competition. Each additional step can change the result.

A forecast should be specific enough to fail. For independent-living services, an operator should track qualified enquiries, who pays, conversion, completion cost and repeat use. For training, the signals are employer commitments, completion, competence and retention. For AI, they are accepted output, error costs and cashable savings. If those measures disappoint consistently, the investment thesis needs revision even when the national demographic argument remains intact.

What the book recommends committing to now

The immediate commitment should be to a disciplined investigation of an identifiable market. Select a small number of customer problems with a strong connection to the evidence. Establish the unit economics using local observations, test the offer with actual customers, and specify the evidence required before larger capital is released. Protect working capital during the test. A business that learns cheaply can improve its strategy while preserving the means to act.

The rest of the book supplies the demographic, institutional and sector reasoning for these decisions. Its commercial chapters then show how to turn that reasoning into an investment case, how to stress-test it, and how to judge when a project deserves expansion. The intention is a decision that can be defended to a business partner, lender or board because its assumptions are visible and its risks have been priced into the choice.

CHAPTER 14

AI, productivity and businesses that keep the benefit

AI can change the economics of a task without improving the economics of the business around it. Faster drafting is of limited value if checking takes longer, customers do not accept the output, or the saved time cannot be used. The commercial question through 2035 is therefore who can turn technical capability into reliable completed work and retain enough of the benefit to justify the cost.

The cited 2023 working paper on generative AI in customer support offers a useful bounded example. It studied a defined operation and reported a productivity improvement that varied with worker experience. It supports investigating task assistance; it does not supply a universal return for UK firms or a forecast of workforce replacement. [38, 40]

The 2035 forecast

The judgment here is that customers will place increasing value on dependable integration, clear responsibility and a demonstrable result as AI becomes part of more operating processes. Confidence is moderate. The pace of adoption, product capabilities and competitive prices remain uncertain. A firm should therefore validate a particular workflow rather than commit to a broad technological narrative.

The commercially durable provider may be the one that understands how work enters the organisation, what makes an output acceptable, who must approve it and what happens when the system is wrong.

Those requirements can be more difficult to reproduce than a demonstration built around an isolated prompt.

Begin with a costed baseline

Choose a task that occurs often enough to measure and has a clear quality standard. Record the time, labour and other cost required to complete an acceptable unit. Separate straightforward cases from difficult ones. A new system tested only on easy examples may appear better than the process it would actually replace.

Define failure before the pilot starts. Rework, customer complaints, missed obligations and incorrect decisions can have different costs. Some should prevent automatic processing altogether. The appropriate degree of human review depends on the task and its consequences, not on a universal ambition to remove people from the process.

Calculate the net value

Suppose a hypothetical operation processes 20,000 cases annually. An assisted workflow saves eight minutes per case but adds three minutes of review. The net time saving is five minutes, or about 1,666.7 hours a year. At an assumed fully loaded value of £30 per hour, the potential value is £50,000.

If annual software and integration support cost £28,000, the potential recurring benefit is £22,000 before error costs, transition costs and any additional governance. If initial implementation costs £44,000, simple payback is two years only if the entire £22,000 is realised annually and no other material cost changes. It is not a discounted investment appraisal.

Now assume that only 60% of the time saving becomes usable paid capacity, reduced overtime or additional contribution. Realised value falls to £30,000, leaving just £2,000 after recurring system cost. The simple payback stretches to 22 years under these assumptions. The difference between potential and realised savings is more important than the headline speed improvement.

Decide who receives the productivity gain

Even a real improvement may be shared with customers and employees. Competition can lower prices. Staff may receive higher pay for more valuable work. The firm may use some of the gain to improve service without increasing revenue immediately. Forecasting requires an explicit view of these choices.

A supplier that charges solely for the number of users may struggle when customers judge value by completed work. Conversely, a payment arrangement linked to outcomes needs a clear definition of those outcomes and the factors each party controls. The book does not recommend one universal pricing model. It recommends making the relationship between price and delivered value intelligible.

Avoid dependence that removes strategic choice

Before committing a core process to a supplier, understand what would be required to move records, prompts, workflows and accumulated operational knowledge. Test whether the business can continue if the tool becomes unavailable or its economics change. The relevant question is the practical cost of switching, not whether a nominal export button exists.

Maintain a documented operating method and a workable route for important exceptions. A supplier relationship can create considerable value while still concentrating risk. A business should know which decisions it continues to control and which depend on another organisation's availability, terms or design choices.

Expand from evidence

The pilot should measure accepted output per paid hour, the distribution of errors, review burden, user effort and total cost. Compare similar work before and after the change, while considering other changes in volume, staffing or complexity. A favourable result should be replicated on the work the system will actually handle at scale.

By 2035, the attractive AI business may look less like a spectacular demonstration and more like a dependable part of a service operation. Its customers will know what it does, where it needs supervision and how its value is measured. The investment case is strongest when improved performance survives the full cost of delivering that reliability.

Sources and reading notes

Sources retain their stated publication and observation dates. The notes identify the passages, tables and calculation inputs actually used, including the limits of selective reading. An attributed interpretation is not a claim of scholarly consensus; a model or hypothetical exercise is not an observed outcome.

1. ONS, *Ethnic group, England and Wales: Census 2021*, 29 November 2022. Bulletin. Usual residents and self-reported categories; category-specific shares and counts distinguished.

2. ONS, *Religion, England and Wales: Census 2021*, 29 November 2022. Bulletin. Voluntary identification question; no individual transitions inferred.

3. ONS, *Language, England and Wales: Census 2021*, 29 November 2022. Bulletin. Residents aged three and over; main language and proficiency distinguished.

4. ONS, *International migration, England and Wales: Census 2021*, 2 November 2022. Bulletin. Birthplace stocks and local variation, not 2026 flows.

5. National Records of Scotland, *Scotland's Census 2022: ethnic group, national identity, language and religion*. Report. Scotland's classification and 2022 reference date retained.

6. ONS, *National population projections: 2024-based*, 28 April 2026. Bulletin. Principal age and population figures; conditional assumptions and revision comparison.

7. Department for Education, *National pupil projections: 2026*, updated 31 July 2026. Release. England state-funded coverage and horizon through 2031; source and display rounding distinguished.

8. ONS, *National life tables, UK: 2022 to 2024*. Bulletin. Period mortality measures, not healthy life expectancy, waiting times or individual lifespan predictions.

9. ONS, *Public sector finances, UK: September 2026*. Bulletin. Borrowing and debt with provisional status and definitions; no migration attribution.

10. Home Office, *Indicators of Integration Framework 2019*. Full framework. Fourteen domains; not a programme evaluation.

11. ONS, *Long-term international migration, provisional: year ending December 2025*, 21 May 2026. Bulletin. UK estimated flows, provisional and subject to revision; percentages retain subgroup denominators.

12. ONS, *Table A1-1 principal projection UK summary*, 2024-based release. Dataset. Original annual workbook, mid-2035 stock M34: 71,143.153 thousand.

13. ONS, *Table F1-1 high migration variant UK summary*. Dataset. Mid-2035 stock M34: 73,507.672 thousand.

14. ONS, *Table G1-1 low migration variant UK summary*. Dataset. Mid-2035 stock M34: 69,829.521 thousand.

15. ONS, *Variant projections: 2024-based*. Methodology. Variants are conditional demographic alternatives, not assigned probability bounds.

16. Ministry of Housing, Communities and Local Government, *Housing supply: net additional dwellings, England, 2024-25*, 20 November 2025. Release. Financial-year England dwellings, not UK people or households.

17. ONS, *Housing affordability in England and Wales: 2025*. Bulletin. Workplace full-time employee earnings and median sale prices; revised comparisons retained in the consulted release.

18. Radah independent arithmetic on the saved original ONS 2024-based UK summary workbooks D3-D5, ONS Census 2021 TS041 version 3 and TS003 version 4 files used in R604, and NHS England's August 2026 RTT statistical notice R601, recalculated 30 October 2026. Principal population workbook source, household control CSV, household composition CSV, RTT statistical notice. The calculation script reads the original XLSX PERSONS sheets, checks labels/years/units, selects B34/M34 for all-age stocks and B47:M51 for principal age categories, and checks the dependency ratio against row 56. It independently reconstructs Hull and the 33-authority London household controls/categories and confirms the RTT threshold counts in the saved primary PDF. The methods appendix identifies the selected cells, units and formulas. The capacity index of 103, proportional-workload relationship and 20 + 10 - 12 task example are labelled hypothetical arithmetic, not official service models, local demand estimates or evaluated interventions. Population units, census reference dates, geography and missing-provider coverage are retained; no new fiscal totals, probabilities or causal effects are inferred.

19. ONS, *Labour market overview, UK: October 2026*, 20 October 2026. Bulletin. June-August rates with distinct denominators and source quality notes.

20. Pew Research Center, Europe's Growing Muslim Population. 2017-11-29. Source. Thirty-country mid-2016 base and conditional 2050 migration scenarios; not a 2026 forecast or a measure of political preferences.

21. ONS, Religion, England and Wales: Census 2021. 2022-11-29. Source. Same bulletin as C2/U2; E13 identifies the additional local-authority passages. Voluntary self-identification, not political support, individual switching or a 2026 population count.

22. House of Commons Library, NHS key statistics: England. 2026-10-02 in saved page. Source. Briefing summary consulted: July 2026 hospital waiting list and five-year staff increases. England only; full PDF and underlying NHS tables not independently re-extracted. Workforce comparisons do not adjust for demand or activity.

23. House of Commons Library, *NHS staff from overseas: statistics*, published 26 November 2025 in the saved page. Source. The saved briefing describes June 2025 self-reported nationality, unknown-nationality exclusions and NHS employment coverage. Its summary and staff-group comparison give different overall percentages (21% and 19%), without a reconciliation established in the inspected material. No overall staff percentage is used here. The briefing supports the qualitative employment observation and its measurement limits; it is not a measure of immigration or all health/social-care employment. The conflicting aggregate is not used in this book.

24. Hull Council housing stock investment and asset management strategy 2023-2027. Official source. Inspected: PDF pp. 6, 8-9: investment priorities and scope; PDF pp. 11-13: stock-condition evidence and programme; PDF pp. 29-32: repair, damp/mould, new building and empty homes; PDF pp. 40-41: adaptations and housing support. Selected passages of the 2023-2027 strategy were inspected. Historical condition figures, anticipated completions and budgets are not asserted as current 2026 results. Old legal descriptions are not treated as a current legal guide. Internal subheadings occasionally contain inconsistent years; the cover identifies 2023-2027.

25. Outer Hebrides local housing strategy. Official source. Inspected: Main page text under Local Housing Strategy. Authority self-description and published strategy status, not an external evaluation of delivery. The page promises future annual updates; none is claimed to have occurred.

26. Outer Hebrides strategic housing investment plan. Official source. Inspected: Main page text under Strategic Housing Investment Plan. Describes a planning instrument, not completed housing or verified current expenditure.

27. DfE school capacity survey guidance. Official source. Inspected: Page metadata last updated 30 April 2026; introductory SCAP collection list and explicit description of SCAP as a statutory collection; SCAP 2026 documents and SEND forecasting guidance description. Collection and guidance framework; no local capacity numbers, SEND prevalence or forecast accuracy are inferred. No claim that a local proposal satisfies legal requirements.

28. Outer Hebrides Local Housing Strategy 2026/27-2030/31. Official source. Inspected: PDF pp. 6-8: action framework; PDF pp. 9-10: introductory chapter overview. Selected pages only of a 185-page strategy; full statistical annex and all action costs have not been audited. No housing target, cost or evaluated impact is newly asserted from this document.

29. Outer Hebrides Strategic Housing Investment Plan 2026/27-2030/31. Official source. Inspected: PDF pp. 12-14, sections 8-11: rural housing, site selection, constraints and partnership. Plan linked by council as current; the PDF was prepared before final adoption of the later LHS and refers to draft LHS material. It is used for delivery constraints/partnership, not to establish latest LHS status, job forecasts, completed units or spending.

30. Author calculations for the methods annex, 28 October 2026. Inputs: ONS TS041 Census 2021 version 3; TS003 Census 2021 version 4; NHS England August 2026 RTT notice p. 1. Reproduces Hull categories and shares, London aggregation/disclosure discrepancy, and non-overlapping waiting bands. Editable calculation script and JSON retain source URLs, hashes, row selections, units and formulas. These are derived results, not new official forecasts, cost estimates or causal effects.

31. Migration Advisory Committee, *Annual report 2025*, accessible full report, Chapter 1 and Table 1.3. Official report. Selected static/dynamic analysis, route comparison and limitations inspected 28 October 2026. Published model values for 2022/23 arrival cohorts; not observed lifetime receipts or a new UK forecast. Sponsor-household responses and linked benefits data are incomplete. The report's policy assumptions are dated model inputs, not an account of current legal entitlements.

32. Migration Advisory Committee, *The Fiscal Impact of Immigration: Static and Dynamic Estimates for the UK*, December 2025. Official report. Inspected printed p. 3 (method), p. 12 (capital adjustment), pp. 28-31 (valuation and worker cohorts), and p. 37/Table 22 (adult-dependant sensitivity). The sensitivity table was rendered and visually checked. Selected passages only; administrative microdata have not been replicated. Real discounting, future spending/revenue growth, residence, employment and household assumptions condition the estimates.

33. Radah calculations from ONS 2024-based UK annual summary workbooks D3-D5, recomputed 28 October 2026. Principal source dataset. Stocks retain original source cells and units in the calculation record. Growth, the high-low gap, the maximum within the inspected window and small reconciliation residuals are derived arithmetic; they are not new ONS forecasts. No fresh workbook retrieval or local allocation is implied.

34. NHS England, *Referral to Treatment Waiting Times Statistics for Commissioner Data: August 2026*, statistical press notice and overview time series. Statistics collection. England commissioner basis, explicitly identified in the overview workbook; four acute trusts were missing and estimates were used. Pathways and unique patients are distinct; the release does not attribute the backlog to migration. Duration statistics (median and 92nd percentile) exclude missing-provider estimates, while adjusted headline counts include them. The thresholds for waits over 52, 65, 78 and 104 weeks overlap and must not be summed. Relevant passages: pp. 1, 3, 8-9.

35. ONS, Census 2021 population change workbook, TS041 number of households and TS003 household composition. Census datasets. London region E12000007; household totals summed across 33 E09 authorities. Population cells are rounded and household composition is perturbed for disclosure control.

36. ONS, Census 2021 population and household datasets and *How life has changed in Kingston upon Hull*. Area profile. Kingston upon Hull E06000010; Census Day 21 March 2021. Rounded population cells, pandemic-period labour observations and household definitions retain their source qualifications.

37. Scotland's Census 2022, council-area population, demography, migration and housing workbooks. Census results. Na h-Eileanan Siar S12000013; 2022 reference date and Scottish definitions must not be silently combined with England and Wales Census 2021.

38. Brynjolfsson, Li and Raymond, Generative AI at Work, NBER working paper 31161. 2023 working-paper findings on AI assistance in a defined customer-support operation.

39. European Commission, AI Act regulatory framework. Policy overview of risk, rights and innovation objectives.

40. Generative AI at Work, working-paper text. 2023 working-paper abstract and introduction; version identified in the main text.

41. J. Richard, illustrative business models in this book. All prices, volumes, costs, utilisation rates and investment amounts in the worked commercial examples are assumptions for instruction, not observed market benchmarks or company forecasts. Calculations distinguish operating surplus from cash flow and exclude financing, tax and capital expenditure where stated.