THE HAWKER LIBRARY · VOLUME F
BY UNCLE JAMES · A SILICON WOK PROGRAMME

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METHOD, LEVERS AND DATA

How to read the levers, what the models cannot tell us, every parameter and assumption, the data and downloads, and, from the Plan, transparency, the metrics, the choice of pilot centres and the ideas for later; the references are in Sources.

小贩文化 · Warisan Penjaja · உணவுக்கடை மரபு · Hawker Culture

THE HAWKER LIBRARY · THE OPEN REFERENCE ON SINGAPORE'S HAWKER TRADE: ITS HISTORY, ITS PRICES, ITS INCOMES AND ITS SOURCES.

In this volume: F.1 How to read the levers · F.2 Limits and assumptions · F.3 Model parameters · F.4 Data and downloads · F.5 The references, now in Sources · F.6–F.9 From the Plan: transparency, the metrics, choosing the pilot centres and, as an appendix, ideas for later.

VOLUME F · A WORKING PAPER FOR PUBLIC DISCUSSION · VERSION 1.11 · NOVEMBER 2026

COMPANION VOLUME F

This Volume at a Glance

READ THIS IF YOU…

- are a researcher or an evaluator, and want to know how far the numbers can be trusted;
- want to change a setting and see what moves, or rebuild the papers from the repository;
- are checking a figure and want the method behind it (the source itself is in Sources).

THE BOTTOM LINE

1. **Every proposal has dials.** For each: which can be turned, what breaks first, and what the plan falls back to. The levers (a setting the plan can turn up or down) are printed beside the evidence they rest on, and F.1, *How to Read the Levers* says where (F.1).
2. **The model is static.** It shows a year's effect on a stall that stays open, not entry, exit or how many young cooks a better-paid trade would draw (F.2.1, *What the model cannot tell us*).
3. **Some inputs no one has measured.** Singapore has only one early, indicative estimate of how diners respond to hawker prices, a small survey that is not a random sample (Poh, 2026), and supplier margins are unpublished. Each such input is marked as an assumption and varied (F.2.1, F.2.2).
4. **Every parameter is listed.** Sourced, or marked as ours, with the note the model code carries for it (F.3, *Model Parameters*).
5. **Everything is open.** Text and data under CC BY 4.0, the models under MIT; each version is tagged and its PDFs can be rebuilt from the tag (F.4, *Data & Downloads*).

To be sure, a model can be wrong in ways its own ranges do not show. That is why the evaluator publishes either way.

HOW THIS CONNECTS

Where it comes from. The method behind every companion volume: the Follow-the-Plate model (Follow the Plate, Succession Economics), and the Follow-the-Gift funding model (the Budget Book, B.9, *Follow the Gift: Who Pays for the Plan*). It also prints in full what the Plan keeps in short on transparency (§2.10, *Market Transparency*), the metrics (§3.5, *Success Metrics We Can't Fake*), choosing the pilot centres (§6.3, *The Lighthouses and the Pilot Centres*) and the ideas for later (§7.9).

Read with. Any volume whose numbers you want to test; the simulator and the data, listed in F.4.

In this volume. F.1 How to read the levers, and where each is printed · F.2 Limits and assumptions · F.3 Model parameters · F.4 Data and downloads · F.5 The references, now in Sources · From the Plan, in full: F.6 Market transparency · F.7 Success metrics we can't fake · F.8 How the pilot centres are chosen · F.9 Ideas for later, an appendix.

TERMS USED

Lever. A dial on a proposal: a setting that can be turned, with what breaks first and the fallback.

Assumption. A parameter that is ours, not taken from a published source, and varied in the Monte Carlo (the model run thousands of times, its uncertain numbers drawn at random).

Monte Carlo. Running the model 5,000 times per stall type with randomly drawn assumptions.

Demand elasticity. How much custom falls when prices rise; assumed −0.5 and varied from −0.3 to −1.0.

Pass-through. How much of a cost rise reaches the diner's price.

F.1

How to Read the Levers

For each proposal, three questions: which dials can be turned, what breaks first if they are turned too far, and what the plan falls back to. The answers are collected from the Plan and the evidence in the companion volumes; each line names its source. Where the plan has not settled a setting, these pages say so rather than settle it.

The settings in the Plan are a starting point concrete enough to argue with. If you think a dial is in the wrong place, the models and the downloads in F.4, *Data & Downloads* let you try another and see what moves.

Where each lever is printed

Each lever sits beside the evidence it rests on, in the volume a reader of that proposal is most likely to open.

LEVER	IN THE PLAN	PRINTED IN
Rent bands and ballot	§2.2	Follow the Plate, D.9
Price freedom and Makan Vouchers	§2.5	Follow the Plate, D.10
The Relief-Hawker Corps	§2.7	Follow the Plate, D.11
Learning at the master's side	§2.6	Follow the Plate, D.12
Buying Circles	§2.12	Follow the Plate, D.13
The Succession Mortgage	§4.3–4.4	Succession Economics, E.2
The Hawker Protection Floor	§2.11	Hawkers and Social Protection, C.8
Gates, downside mode and sunset	§6.5, §7.8	the Budget Book, B.10
Funding the plan	§7.6–7.7, §7.9	the Budget Book, B.11

F.2

Limits, Assumptions and How This Enters the Plan

F.2.1 What the model cannot tell us

- **It is static.** It shows a year's effect on a stall that stays open. It does not model entry, exit, or how many young cooks a better-paid trade would attract.
- **How diners respond to hawker prices is barely measured in Singapore.** The model assumes that a 10% price rise loses 5% of custom (an elasticity, the measure of that sensitivity, of −0.5), and tests anything from −0.3 to −1.0. Studies of restaurant meals abroad find −1.2 and below; hawker meals are assumed less sensitive, because they are the cheapest cooked option. The one Singapore estimate we found is early and only a guide: a survey of 90 diners, not chosen at random, asking what they say they would do (Poh, 2026). Sensitivity is highest among the young (2.81 at 18–24) and the old (3.92 at 60 and over, from only nine people), and lowest in the middle (1.01 at 45–60). Diners on small meal budgets are more sensitive too (2.09, against 1.1–1.2). If it holds, diners are more sensitive than the model assumes, which would make price freedom (Follow the Plate, D.15, *The Affordability Compact & Makan Vouchers*) costlier for the hawker. That is a reason to measure it properly, not yet to change the parameter.

- **Supplier margins are unpublished.** The split of ingredient spending along the supply chain is an assumption, not data: 35% of the bill to Singapore-side intermediaries, the middle of a 25–45% range. Only its change can be tested, and from 2019 to 2025 it did not widen (Follow the Plate, D.5.3, *The Middlemen: Who Takes a Cut Between the Farm and the Plate*).
- **The coffeeshop and food-court archetypes (a typical stall of one type) rest on listings and company reports**, not official data. The food-court turnover rent is the weakest parameter. Operator-run centres are the most stylised archetype.
- **Stall counts by type are estimates.** No official count of coffeeshop cooked-food stalls exists. The model's 5,800 sits in the middle of a range of about 5,600–7,200, and SFA's 13,893 licensed food stalls outside the centres NEA (National Environment Agency, which runs the public hawker centres) runs cap the total (Follow the Plate, D.3, *One Plate, Six Landlords*).
- **How much of a cost rise stalls pass on to diners comes from one study of NEA centres in 2012–14.** We apply it to every kind of landlord and vary it widely.
- **The share of stallholders under 55 is not published.** The retirement match applies only to them; from 55 the existing MRSS (Matched Retirement Savings Scheme, which matches top-ups from 55) matches top-ups for those who pass its income and home tests, and the plan helps hawkers claim it. Half of all hawkers are 60 or older (MSE, Nov 2024), so fewer than half are under 55; the model counts 50%, an upper bound (the most it could be), so the match's costs are ceilings (Follow the Plate, D.7.5, *The Hawker Protection Floor: one list*).
- **Hawker income is measured once, and not by type of stall.** MOM's figure for 2021 is one median (the middle figure: half are above it, half below), for full-time hawkers who employ no one, read from a chart; the model's estimates are set beside it in Follow the Plate, D.4, *What the Hawker Earns per Hour*, and the reconciliation is ours.
- **A closed stall's cost assumes the regulars come back.** The model keeps the assistant on and lets the regulars return after an illness; if they drift away, the loss is larger than it shows.
- **CPF (Central Provident Fund, Singapore's compulsory savings for retirement, health and housing) does not publish how Workfare (the Government's top-up for low-wage workers) builds up and tails off as income changes.** The model assumes it rises and falls in a straight line. That matters because many hawkers earn close to the $3,000 income limit.

PARAMETER	BASIS
Plate price, plates a day	Calibrated so the tendered NEA stall reproduces NEA's 2022 cost shares; coffeeshop and food-court prices sit above hawker centres, as in IPS's 2023 price survey.
NEA rent	The typical tendered stall pays about $1,250 a month, the median non-subsidised cooked-food rent across NEA's centres, stable for about a decade (MSE, 18 Sep 2023 and 5 Feb 2025; NEA, 4 Nov 2024), and the median assessed market rent given to Parliament. $1,450 is the 2025 median at the NEA centres comparable with the operator-run ones (MSE, 8 Sep 2026): the model uses it only where the text sets NEA centres beside operator-run ones, and as a quoted rent in the rent test (D.4.1).
Centre fees	NEA and operator-run centres: 2025 median conservancy and table-cleaning fees at comparable centres (MSE, 8 Sep 2026). At NEA centres 30% of the fees is treated as landlord income and the rest as services: an assumption, probably high, since MSE says the fees fund 'a significant part' of a centre's running costs (5 Feb 2024); tested at 0-30% with no change to the findings. At operator-run centres the table-cleaning fee is a pass-through of the contractor's price, which operators may not profit from (NEA, 21 Jul 2026), so only the conservancy charge carries the 30%. Coffeeshop O&M fees of $1,000-1,200: commercial sources only; 60% treated as landlord income, the rest as services. Assumption.
Food-court turnover rent	25% of sales; the only data point is about 20% (2014). The weakest parameter. Assumption.

PARAMETER	BASIS
Manpower	$2,920 a month: one assistant at the $2,220 PWM benchmark plus 17% employer CPF ($2,597), and about $320 of part-time help. Matches NEA's 20% manpower share. The PWM does not bind hawker stalls, so actual pay may be lower.
Delivery	Commission of 30% of a delivered order: GrabFood's published service fee, before GST (Grab, Oct 2026); foodpanda does not publish its rate. Varied 25-35% in the Monte Carlo. Deliveroo went offline in Singapore after 4 March 2026. Grab said in 2020 that it kept about 5% of an order as its own fee, the rest paying riders (Vulcan Post, 17 Apr 2020). Delivery is 8% of sales: an assumption, since no share is published for hawker stalls.
Pass-through	MTI 2015: a 1% rise in raw-material cost goes with a 0.56% price rise, and 1% rent with 0.03%. To turn these into dollars: ingredients are 44.5% of the plate's price, so 0.56 / 0.445 = 1.25, and each extra dollar of ingredient cost raises the plate by $1.25. Rent is 8% at an NEA stall, so 0.03 / 0.08 = 0.38, about 38 cents for each extra dollar of rent; the model rounds this down to 0.35 and applies it to every kind of landlord. MTI sampled NEA centres only (2012-14), so the coffeeshop and food-court rates are our extension of it.
Landlord capture	Share of any help paid to a stall that its landlord takes back at the next renewal: 0% subsidised, 5% tendered, 15% operator-run, 35% HDB-rented coffeeshop, 85% private coffeeshop, 95% food court. assumption by type of landlord.
Unwanted closures	10 days a year lost to illness or exhaustion; varied 4-16. Assumption.
Demand elasticity	One early Singapore estimate (Poh, 2026: a survey of 90 diners, asking what they say they would do, not a random sample) finds diners more sensitive, 1.0-3.9 by age; not yet used. Restaurant studies abroad find -1.2 and below; hawker meals assumed less sensitive at -0.5, varied -0.3 to -1.0. Assumption.
Workfare	Work Year 2025: the self-employed maximum is $3,267 at age 60 and over, for incomes of $500-3,000 a month, and MediSave must be paid; 10% is paid in cash and 90% into MediSave. CPF does not publish how Workfare builds up and tails off with income, so the model assumes straight lines. One hawker in twenty is assumed to be behind on MediSave, with or without the Protection Floor. A hawker cannot renew the SFA stall licence while behind on MediSave unless he is on a GIRO plan, an automatic monthly bank deduction (SFA; CPF, 4 Nov 2025), so the one in four of all self-employed persons who are behind (MOM, Feb 2025) does not describe hawkers. The Protection Floor therefore adds no Workfare in the model.
Supply-chain split	Assumption, not data. No published margins for importers, wholesalers, distributors or central kitchens (SingStat publishes no margins by food sub-industry). The model puts 65% of the ingredient bill at the border (farm or import value and freight) and 35% with the Singapore-side intermediaries, the central case of a 25-45% range. Only its change can be tested: from 2019 to 2025 retail food prices rose 18.5% and food import prices 20.9% (SingStat; our arithmetic), so the middle's share did not widen (D.5.3). A Plate Ledger indicator (D.8).
Landlord split	Head landlord vs operator shares of coffeeshop rents: assumption; HDB said in January 2026 that it would begin collecting stall-rent data. Operator-run centres: the operator keeps about 10% of rent and landlord fees, derived from MSE's average operating surplus of about $100,000 a centre a year (2019-23, 15 Oct 2024) at an assumed 48 stalls; at least half of the surplus must be reinvested in the centre or its stallholders, so 10% is an upper bound.
Coffeeshop rents	HDB-rented $3,400 and private $6,000 a month: assumptions. No official stall-rent data exist; a commercial guide puts HDB coffeeshop stall rents at $4,000-10,000 (Home & Decor, 1 Apr 2026), so the base is conservative. HDB rents 374 coffeeshops and 402 are privately owned (Enterprise Singapore, MND and HDB, 1 Jul 2024): at about 7.5 cooked-food stalls each, about 2,800 and 3,000 stalls.

PARAMETER	BASIS
Relief cooks	A Corps cook is an employee, so the Employment Act limits his working day to 12 hours. In a week of more than five days, as a stall's is, hours beyond the normal 8 a day are overtime, paid at 1.5 times the hourly rate (MOM). He is paid the Progressive Wage rate for a Cook (QS), $12.95 an hour from July 2026: 8 hours at that rate and 4 at 1.5 times, equal to 14 hours' pay, plus the employer's 17% CPF, about $212 a day in 2026, rising with the PWM path ($13.69 from July 2027, $14.42 from July 2028). Where the stall's day is longer than 12 hours (13 in the typical case), the stall's own assistant does the first hour's prep, as on any day. The hawker co-pays $80 a day.
Cost shocks (D.6)	Wages: every wage the stall pays follows the PWM path, +12.6% from July 2026 to July 2028, employer CPF included; 30% passed on (assumption). Energy: electricity rose from 27.27 to 31.91 cents a kWh in Q3 2026 (SP Group) and town gas from 21.92 to 23.48 cents (City Energy, as reported) after the Middle East conflict; in Q4 they fell to 28.59 and 21.45 cents; SP Group has not said where they go next, and one analyst expects a single-digit rise in Q1 2027 (Rystad Energy, as reported, 30 Sep 2026). Utilities are 60% electricity and 40% gas (assumption). A rise hits every stall at once, so we assume stalls pass half of it on to diners: MTI 2015's gas-price effect (0.0486) divided by a utilities share of about 9.3%. A fall is assumed not to lower prices (assumption).
Closed-stall cost	A day shut for illness loses a day's sales; rent, centre fees, the assistant, utilities and other running costs continue, as for every unwanted closure in the model. The assistant is kept on and the regulars are assumed to come back; if regulars drift away the true loss is larger, and the model does not count it. NEA may waive the rent of a stall closed for medical reasons (MSE, 10 Mar 2025); a Corps cook on medical leave costs the hawker $40 a day (the Plan, §2.7). Derived.
Newcomer's rent path	NEA's renewal rule from November 2024, for new tenancies: the winning bid for three years, halfway to the assessed market rent at the first renewal for the next three, the assessed market rent from the seventh year (The Online Citizen, 15 Sep 2026; NEA, Nov 2024). NEA does not publish a stall's valuation, so the $1,450 and $1,250 set against the $1,800 bid are illustrative.
Hawker income check	MOM's labour force survey put the median gross monthly income of full-time resident hawkers and stall holders who employ no one at about $1,470 in 2021 (in the Advisory Committee on Platform Workers' report, 2022, Fig. 1.1), read from a bar chart, so derived. For the self-employed it is profit before tax, as the model's net is. We converted it to 2026 money using SingStat's hawker-food price index (102.8 in 2021 and 122.8 in January-September 2026, where 2019 = 100) and compared it with the model's simulated stalls of every type, counting each type by its number of stalls (D.4).
Retirement match under 55	The Protection Floor's $1,200 match applies only to stallholders under 55; from 55 the existing Matched Retirement Savings Scheme already matches cash top-ups up to $2,000 a year for those who pass its income and home tests, and the plan helps hawkers claim it. The share of stallholders under 55 is not published; the median hawker is 60 (MSE, Nov 2024), so fewer than half are under 55. The model counts half, an upper bound, so the match's cost is a ceiling. Hospital-cash cover is not scaled.

F.2.2 Ranges in the Monte Carlo

Plates a day: lognormal centred on the base, σ 15%. Plate price: lognormal, σ 6%. Rent: lognormal centred on the sourced median (σ 12% tendered NEA, 10% operator-run, 20% HDB coffeeshop, 30% private coffeeshop), correlated 0.5 with plates a day; coffeeshop fees σ 25%; food-court turnover rent 20–30%. Ingredient share of sales 40–49%. Manpower and utilities 85–115% of base. Hours 11–15 a day; days 24–28 a month. Delivery 0–16% of sales at 25–35% commission. Unwanted closures 4–16 days a year. Elasticity −1.0 to −0.3. Pass-through: ingredients 1.05–1.45, rent 0.12–0.45. Landlord capture ±10 points. Triangular unless stated; 5,000 draws per stall type; fixed seed. An independent check of the model's code and parameters prompted the pass-through calibration, the split between cash and savings, the voucher accounting and the centred distributions used here.

F.2.3 How this enters the plan

PLAN SECTION	CHANGE MADE OR PROPOSED
the Plan, §1.1	Puts a modelled estimate behind the "2nd decile" income cell: most hawkers earn less per hour than the benchmark for their assistant (Follow the Plate, D.4). Sets the one official income figure, about $1,470 a month in 2021 for full-time own-account hawkers, beside the model's $3,169 for the typical tendered stall in 2026, and reconciles them (Follow the Plate, D.4).
The Plan, §2.1, Follow the Plate, D.14	Treats the three NEA rents ($1,250, the median across NEA's centres and the typical tendered stall; $1,450 at the centres comparable with the operator-run ones, 2025; $1,800 bid, 2023) as a range: without the package the typical hawker falls below the assistant's benchmark above about $610 of rent, with it above about $2,450, or $2,150 without the named deputy, and the stall loses money only above about $4,420 (Follow the Plate, D.4.1).
Follow the Plate, D.14	Shows the newcomer's rent path under NEA's November 2024 renewal rule: a $1,800 bid against a $1,450 valuation pays about $18,900 above the valuation over six years before it reaches it (illustrative, Follow the Plate, D.4.1).
Hawkers and Social Protection, C.10, the Plan, §2.7	Prices a closed stall: each day the typical tendered stall is shut for illness costs its hawker about $372, because rent, fees and the assistant continue; six weeks cost $13,400, 35% of the year's net. A rent waiver saves about $48 a day of it; a Corps cook on medical leave turns it into the $40 co-pay (modelled, F.2).
Follow the Plate, D.15	Adds the voucher-cover test: at one stall in five, a $120 voucher covers an eligible household's extra cost two to five times over (Follow the Plate, D.7.3).
Follow the Plate, D.14	The table-cleaning fee subsidy: $200 a stall a month paid by the Government at the pilot centres, $0.98M a year at three, an upper bound tested by re-tendering the cleaning contracts with whoever holds them, the hawkers' association at a Town Council centre (Follow the Plate, D.2.2, D.5.4, D.7.4).
F.6	Adds the Plate Ledger and its twenty-one indicators, among them the margin spread and the floor cost by type of centre (Follow the Plate, D.5.4, D.8).
Follow the Plate, D.16	The Buying Circles' 3% is a lower cost of serving many small buyers, shared between supplier and cook, not a transfer from margins; delivery is counted at a 25% group rate against GrabFood's 30%, with 15% the target. Asks NEA to bar compulsory designated suppliers at operator-run centres (Follow the Plate, D.5.3).
Succession Economics, E.4	Adopted: each month the successor pays the lower of 8% of takings and 30% of verified profit, but never less than $600, and never so much that the successor is left with less than $1,500 a month. We have reworked the worked example and its expected cost (Succession Economics, E.1.4).
Succession Economics, E.5	Adopted: the royalty starts when the Succession Mortgage is paid off, respects the same protected income, and runs for ten years at most, with a buy-out at any time at a published multiple; within the test's ten-year horizon the cap never binds (Succession Economics, E.1.4).
Succession Economics, E.4, the Plan's Part VII	Proposed: the first-loss reserve is one lump sum, topped up as it pays out, never a yearly spend; it is kept at or above the amount that covers the open mortgages' losses in 95 futures out of 100 (P95) and topped up from operating surpluses and the escrow fee. The Years 1–3 money safely covers about 74 mortgages at P95 and 25 through a 2020-style crisis, enough for a pilot of 5–20 (Succession Economics, E.1.5).
The Budget Book, B.6	Tests the funding stack and adds a trigger to the draw rule: if continuing gifts fall below half their Year 3–5 average for two years running, the draw falls to 3% (the Budget Book, B.9.4). Adds the Heritage Plate's Seed Bank share to continuing gifts from Year 3 (the Budget Book, B.9.2).

PLAN SECTION	CHANGE MADE OR PROPOSED
The Budget Book, B.7	The HDB tender lever is not zero to HDB: operators bid less rent to fund the commitment, so HDB may give up up to about $1.7M a year at half take-up, offered as its possible annual contribution to hawker heritage. Only its under-55 part, about $0.8M, counts towards the Protection Floor's coffeeshop match, since the part for stallholders of 55 and over goes into their own savings beside MRSS; it is not an extra benefit, and is phased in as coffeeshops are re-tendered (Follow the Plate, D.7.5, the Budget Book, B. 9.5).
The Budget Book, B.7	Lists the retirement match as an optional ask of Government, for stallholders under 55 only: from 55 the existing MRSS already matches top-ups (up to $2,000 a year) for those within its means tests, so the plan helps hawkers claim it rather than paying twice, and the costs are ceilings ($4.14M a year for the base, $7.92M for the stretch). Giving and the Heritage Plate cover about 40% of the base ($14.7M short over Years 4–10) and 21% of the stretch; the decision is left for later (Follow the Plate, D.7.5, the Budget Book, B.9.5).
Hawkers and Social Protection, C.7	Puts numbers on the rule that help should go to the person, not the property: about 37% of any help paid to the stall would go back to landlords nationally, 30% to operators and private owners (Follow the Plate, D.7.2).

THE THROUGH-LINE

Follow the plate and three things become clear. The supplier's share is large but shared with the diner. The landlord's share is smaller but lands on the hawker, and it is largest where the state does not set the rent. And the hawker, the only party who cannot pass anything on, is the one the trade most needs to keep. The plan pays the person, not the property; the model shows that this is also where each public dollar does the most.

F.3

Model Parameters

Every parameter of the two models that is not taken directly from a published source, with the note the model code carries for it. Anything marked as an assumption is ours, and is varied in the Monte Carlo (F.2.2, *Ranges in the Monte Carlo*).

MODEL	PARAMETER	BASIS
Follow the Plate	Plate price, plates a day	Calibrated so the tendered NEA stall reproduces NEA's 2022 cost shares; coffeeshop and food-court prices sit above hawker centres, as in IPS's 2023 price survey.
Follow the Plate	NEA rent	The typical tendered stall pays about $1,250 a month, the median non-subsidised cooked-food rent across NEA's centres, stable for about a decade (MSE, 18 Sep 2023 and 5 Feb 2025; NEA, 4 Nov 2024), and the median assessed market rent given to Parliament. $1,450 is the 2025 median at the NEA centres comparable with the operator-run ones (MSE, 8 Sep 2026): the model uses it only where the text sets NEA centres beside operator-run ones, and as a quoted rent in the rent test (D.4.1).
Follow the Plate	Centre fees	NEA and operator-run centres: 2025 median conservancy and table-cleaning fees at comparable centres (MSE, 8 Sep 2026). At NEA centres 30% of the fees is treated as landlord income and the rest as services: an assumption, probably high, since MSE says the fees fund 'a significant part' of a centre's running costs (5 Feb 2024); tested at 0-30% with no change to the findings. At operator-run centres the table-cleaning fee is a pass-through of the contractor's price, which operators may not profit from (NEA, 21 Jul 2026), so only the conservancy charge carries the 30%. Coffeeshop O&M fees of $1,000-1,200: commercial sources only; 60% treated as landlord income, the rest as services. Assumption.
Follow the Plate	Food-court turnover rent	25% of sales; the only data point is about 20% (2014). The weakest parameter. Assumption.
Follow the Plate	Manpower	$2,920 a month: one assistant at the $2,220 PWM benchmark plus 17% employer CPF ($2,597), and about $320 of part-time help. Matches NEA's 20% manpower share. The PWM does not bind hawker stalls, so actual pay may be lower.
Follow the Plate	Delivery	Commission of 30% of a delivered order: GrabFood's published service fee, before GST (Grab, Oct 2026); foodpanda does not publish its rate. Varied 25-35% in the Monte Carlo. Deliveroo went offline in Singapore after 4 March 2026. Grab said in 2020 that it kept about 5% of an order as its own fee, the rest paying riders (Vulcan Post, 17 Apr 2020). Delivery is 8% of sales: an assumption, since no share is published for hawker stalls.
Follow the Plate	Pass-through	MTI 2015: a 1% rise in raw-material cost goes with a 0.56% price rise, and 1% rent with 0.03%. To turn these into dollars: ingredients are 44.5% of the plate's price, so 0.56 / 0.445 = 1.25, and each extra dollar of ingredient cost raises the plate by $1.25. Rent is 8% at an NEA stall, so 0.03 / 0.08 = 0.38, about 38 cents for each extra dollar of rent; the model rounds this down to 0.35 and applies it to every kind of landlord. MTI sampled NEA centres only (2012-14), so the coffeeshop and food-court rates are our extension of it.

MODEL	PARAMETER	BASIS
Follow the Plate	Landlord capture	Share of any help paid to a stall that its landlord takes back at the next renewal: 0% subsidised, 5% tendered, 15% operator-run, 35% HDB-rented coffeeshop, 85% private coffeeshop, 95% food court. assumption by type of landlord.
Follow the Plate	Unwanted closures	10 days a year lost to illness or exhaustion; varied 4-16. Assumption.
Follow the Plate	Demand elasticity	One early Singapore estimate (Poh, 2026: a survey of 90 diners, asking what they say they would do, not a random sample) finds diners more sensitive, 1.0-3.9 by age; not yet used. Restaurant studies abroad find -1.2 and below; hawker meals assumed less sensitive at -0.5, varied -0.3 to -1.0. Assumption.
Follow the Plate	Workfare	Work Year 2025: the self-employed maximum is $3,267 at age 60 and over, for incomes of $500-3,000 a month, and MediSave must be paid; 10% is paid in cash and 90% into MediSave. CPF does not publish how Workfare builds up and tails off with income, so the model assumes straight lines. One hawker in twenty is assumed to be behind on MediSave, with or without the Protection Floor. A hawker cannot renew the SFA stall licence while behind on MediSave unless he is on a GIRO plan, an automatic monthly bank deduction (SFA; CPF, 4 Nov 2025), so the one in four of all self-employed persons who are behind (MOM, Feb 2025) does not describe hawkers. The Protection Floor therefore adds no Workfare in the model.
Follow the Plate	Supply-chain split	Assumption, not data. No published margins for importers, wholesalers, distributors or central kitchens (SingStat publishes no margins by food sub-industry). The model puts 65% of the ingredient bill at the border (farm or import value and freight) and 35% with the Singapore-side intermediaries, the central case of a 25-45% range. Only its change can be tested: from 2019 to 2025 retail food prices rose 18.5% and food import prices 20.9% (SingStat; our arithmetic), so the middle's share did not widen (D.5.3). A Plate Ledger indicator (D.8).
Follow the Plate	Landlord split	Head landlord vs operator shares of coffeeshop rents: assumption; HDB said in January 2026 that it would begin collecting stall-rent data. Operator-run centres: the operator keeps about 10% of rent and landlord fees, derived from MSE's average operating surplus of about $100,000 a centre a year (2019-23, 15 Oct 2024) at an assumed 48 stalls; at least half of the surplus must be reinvested in the centre or its stallholders, so 10% is an upper bound.
Follow the Plate	Coffeeshop rents	HDB-rented $3,400 and private $6,000 a month: assumptions. No official stall-rent data exist; a commercial guide puts HDB coffeeshop stall rents at $4,000-10,000 (Home & Decor, 1 Apr 2026), so the base is conservative. HDB rents 374 coffeeshops and 402 are privately owned (Enterprise Singapore, MND and HDB, 1 Jul 2024): at about 7.5 cooked-food stalls each, about 2,800 and 3,000 stalls.

MODEL	PARAMETER	BASIS
Follow the Plate	Relief cooks	A Corps cook is an employee, so the Employment Act limits his working day to 12 hours. In a week of more than five days, as a stall's is, hours beyond the normal 8 a day are overtime, paid at 1.5 times the hourly rate (MOM). He is paid the Progressive Wage rate for a Cook (QS), $12.95 an hour from July 2026: 8 hours at that rate and 4 at 1.5 times, equal to 14 hours' pay, plus the employer's 17% CPF, about $212 a day in 2026, rising with the PWM path ($13.69 from July 2027, $14.42 from July 2028). Where the stall's day is longer than 12 hours (13 in the typical case), the stall's own assistant does the first hour's prep, as on any day. The hawker co-pays $80 a day.
Follow the Plate	Cost shocks (D.6)	Wages: every wage the stall pays follows the PWM path, +12.6% from July 2026 to July 2028, employer CPF included; 30% passed on (assumption). Energy: electricity rose from 27.27 to 31.91 cents a kWh in Q3 2026 (SP Group) and town gas from 21.92 to 23.48 cents (City Energy, as reported) after the Middle East conflict; in Q4 they fell to 28.59 and 21.45 cents; SP Group has not said where they go next, and one analyst expects a single-digit rise in Q1 2027 (Rystad Energy, as reported, 30 Sep 2026). Utilities are 60% electricity and 40% gas (assumption). A rise hits every stall at once, so we assume stalls pass half of it on to diners: MTI 2015's gas-price effect (0.0486) divided by a utilities share of about 9.3%. A fall is assumed not to lower prices (assumption).
Follow the Plate	Closed-stall cost	A day shut for illness loses a day's sales; rent, centre fees, the assistant, utilities and other running costs continue, as for every unwanted closure in the model. The assistant is kept on and the regulars are assumed to come back; if regulars drift away the true loss is larger, and the model does not count it. NEA may waive the rent of a stall closed for medical reasons (MSE, 10 Mar 2025); a Corps cook on medical leave costs the hawker $40 a day (the Plan, §2.7). Derived.
Follow the Plate	Newcomer's rent path	NEA's renewal rule from November 2024, for new tenancies: the winning bid for three years, halfway to the assessed market rent at the first renewal for the next three, the assessed market rent from the seventh year (The Online Citizen, 15 Sep 2026; NEA, Nov 2024). NEA does not publish a stall's valuation, so the $1,450 and $1,250 set against the $1,800 bid are illustrative.
Follow the Plate	Hawker income check	MOM's labour force survey put the median gross monthly income of full-time resident hawkers and stall holders who employ no one at about $1,470 in 2021 (in the Advisory Committee on Platform Workers' report, 2022, Fig. 1.1), read from a bar chart, so derived. For the self-employed it is profit before tax, as the model's net is. We converted it to 2026 money using SingStat's hawker-food price index (102.8 in 2021 and 122.8 in January-September 2026, where 2019 = 100) and compared it with the model's simulated stalls of every type, counting each type by its number of stalls (D.4).
Follow the Plate	Retirement match under 55	The Protection Floor's $1,200 match applies only to stallholders under 55; from 55 the existing Matched Retirement Savings Scheme already matches cash top-ups up to $2,000 a year for those who pass its income and home tests, and the plan helps hawkers claim it. The share of stallholders under 55 is not published; the median hawker is 60 (MSE, Nov 2024), so fewer than half are under 55. The model counts half, an upper bound, so the match's cost is a ceiling. Hospital-cash cover is not scaled.

MODEL	PARAMETER	BASIS
Follow the Gift	Operating budget, Years 0–3	the Budget Book, B.2–B.5, part A of each ledger: the operating budget, the institution's own burn. The core team, which carries the first Lighthouse's own roles as before, with one pilot-centre coordinator, shared, at $78,000 a year from Year 1 (assumption); the interim project lead and research assistants in Year 0; office, legal, audit and insurance, communications and events, the independent evaluator; Hawker Council fees and elections; and the shared national platforms (the Taste Council and its feedback platform, the digital repository). Each other pilot centre adds its own staff, the evaluator's fieldwork, Taste Council tastings and community events (each centre's sizing, the Budget Book, B.9.6). Every pilot centre, in the year before it opens, adds the stall baseline (the Plan, §6.1): a two-week till count at every consenting stall, orders a day, plates an order, dollars an order and the share of orders from the regulars the hawker names, by dish type, gathered by the listening teams through oral interviews and a tally sheet. Costed at every cooked-food stall as a ceiling (assumption): 3 interviewer hours a stall (an opening interview, two check-ins, a closing interview) at the listening sessions' rate, the $150 participant fee for a session taken as three hours ($50 an hour), $20 of tally sheets a stall at print cost, and a data assistant at the research assistants' $4,000 a month, a month for about every 80 stalls: $50,420 at Chinatown Complex and $14,710 at Geylang Serai in Year 0, $28,230 at Tekka in Year 1, before contingency. Its first use is to set plates an order and the Regulars' List's share thresholds by dish type before the first listing; its second, the Plate Ledger's first stall-level numbers. It reaches no hawker as money, so it sits here, in A. The Buying Circles (Follow the Plate, D.16) from Year 1, the Seed Bank's small part in them: a part-time partnerships role (assumption: 0.5 FTE at the plan's $78,000 rate for centre staff, $39,000 a year), the open price board on the Plate Ledger's cost data with standard group-order templates (assumption: $10,000 to set up in Year 1, then $4,000 a year), and honoraria for each centre's circle leads, usually hawkers (assumption: four circles a centre at least, for rice, oil, poultry and gas, and a lead for about every 30 stalls, at $100 a lead a month: 8 at Chinatown Complex, 4 at Geylang Serai and 4 at Tekka). The circles are the hawkers' own: the Seed Bank never buys, stocks, sets prices or picks suppliers, and never takes title to goods or money, so there are no supplier rebates and no member fee, and the circles do not pay for themselves at three centres. The Regulars' List (the Plan, §3.6) from Year 1, national, at all 123 government hawker centres. A 10% contingency on every line.

MODEL	PARAMETER	BASIS
Follow the Gift	The Regulars' List	Assumption: the Regulars' List (the Plan, §3.6), the light first tier of the Endangered Dish Registry, national from Year 1. A stall is listed when 20 of its regulars ask, or its centre's hawkers' association nominates it, and it leaves only if the hawker chooses to or the stall closes. There is no yearly re-test, so after the listing visit there are no more visits to pay for. Listings ramp to 300, 600 and 800 by the end of Years 1, 2 and 3, about 13% of the more than 6,000 cooked-food stalls in government centres. Each new listing costs $40: the listing visit by a trained volunteer or the centre staff ($10 travel, no stipend), the counter decal at print cost ($5), the stall's Registry page in the regulars' own words ($20 to edit and photograph) and the thank-you notes to the regulars who nominated ($5). The decal carries the stall's tier and its year of listing, so a stall that moves up a tier gets a new one at the same print cost, about one in ten listed stalls a year. Each centre's yearly booklet and map, about 250 copies at $1 ($250), is costed at all 123 centres as a ceiling, on a template that costs $6,000 in Year 1 and $2,000 a year to update. Then one coordinator (1 FTE, $78,000 a year) and the place on the open price board and in the Buying Circles' order book, the increment only ($6,000 in Year 1, then $2,000 a year). Nothing is paid to the stall, and no stall pays for its decal. All of it sits in the operating budget: it is the cost of keeping the list, not money that reaches hawkers. The at-risk count is separate and never names a stall. It counts a listed stall whose hawker says, at listing or at any time after, that no successor is in view and that he intends to stop within three years, and any stall a public fact flags (a closure notice, a lease ending); it is published only as national and per-centre totals, in line with the PDPA. The five-centre sample flagged 8 of 55 heritage-worthy stalls (15%), a floor; assume 15–25% of listed stalls, about 120–200 by Year 3.

MODEL	PARAMETER	BASIS
Follow the Gift	Programme budget, Years 0–3	the Budget Book, B.2–B.5, part B of each ledger: the programme budget, the grants and expenses that reach hawkers, shown for each pilot centre and sized by its own shape (the Budget Book, B.9.6). Master Fellowships, apprentice wages, Graduate Landing Packages, documentation and its field equipment, the Relief-Hawker Corps, the second-station grants at Fellows' stalls, partner-kitchen sessions, the group critical-illness pool for stallholders aged 55+, the first-loss reserve and succession escrow, and the listening honoraria, participant fees and co-design sessions at each centre. A 10% contingency on gross, less programme revenue (assumption: Corps co-pays, masterclasses and licensing, $10,000, $14,500 and $25,000 a Fellowship in a centre's first, second and third years, the former Lighthouse rates of $40,000 for 4, $87,500 for 6 and $204,000 for 8, rounded down). Learning at the master's side (Follow the Plate, D.18): apprentices learn at the master's own stall as registered stall assistants, the documentation test runs on the Relief Corps' days at his stall, and the Taste Council and retired masters book licensed partner kitchens by the session. Assumption: a one-off second-station grant (a burner, a spare wok, a chiller shelf) of $3,000 at the stall of each new Fellowship; and 24 partner-kitchen sessions a centre a year at about $300 ($7,200), from the year the centre's loop starts. The share of spend reaching hawkers directly is B as a share of A + B. The cost of building and upgrading the centres is not in this budget. NEA and the Town Councils repair and upgrade them: NEA now repairs and redecorates each centre every six to eight years (the Minister said five to seven in November 2018), and the Hawker Centres Upgrading Programme 2.0 will spend up to $1 billion over 20–30 years from March 2025, ventilation included. Keeping a stall's own exhaust duct clean is the stallholder's legal duty (Hawkers and Social Protection, C.10). The gap the plan does not fill is a stall's own equipment and duct upkeep since the Hawkers' Productivity Grant's current phase ended on 31 March 2026.

MODEL	PARAMETER	BASIS
Follow the Gift	Sizing each pilot centre	Assumption: every pilot centre is costed from its own shape, at the same rates. Heritage-worthy stalls (the Budget Book, B.9.6, a proxy) set the heritage lines: one Master Fellowship for each stall in the planning count over the centre's first three years, as a ceiling, with unspent money returned to the endowment; phased 30%, 35% and 35% at a centre that opens in Year 1, and 40% and 60% over the two years a centre that opens in Year 2 has in the window; each Fellowship's three years budgeted in the year it starts, as the apprentices' cycles are: a teaching year at $2,500 a month ($30,000), then a 24-month stewardship at $1,000 a month ($24,000), the completion grant ($15,000) and health cover up to $15,000, with employer CPF on the whole $54,000 stipend at the 12.5% rate for a worker above 60 to 65, since Fellows are veteran hawkers over 60 ($6,750 a Fellow, $90,750 in all; a ceiling, since the rate is 9% above 65 and 7.5% above 70; a Fellow under 60 would cost 16–17%, $8,640–9,180; CPF Board, 2026); two apprentices a Fellowship, each paid the Progressive Wage for a food/drink stall assistant for the full 18-month cycle, $2,360 a month from July 2027 and $2,500 from July 2028 (MOM, 16 Mar 2026), plus 17% employer CPF, and the whole cycle budgeted in the year the cohort starts: $50,684 an apprentice who starts in Year 1, $52,650 in Years 2 and 3 (assumption: Year t runs from July 2026 + t, and pay holds at the July 2028 rate once MOM's published path ends); one documented dish a Fellowship at $18,000 (the Year 1 rate, $90,000 for five dishes); landings for about 30% of the centre's apprentices, from its second year, at about $20,000; a second-station grant and $15,000 of first-loss reserve and succession escrow a Fellowship (the former ledgers' $570,000 for 38). The stall count sets the rest: the critical-illness pool covers about 70 in 120 stallholders (those aged 55+) at about $750; the Corps has about 10 relief cooks for every 100 stalls, two-thirds of it in the centre's first year, at $40,000 a bench plus a member's cost of $12,500 at the former $190 day rate, indexed to the PWM rate for a Cook (QS) for a 12-hour day, the Employment Act's limit, with the 4 hours beyond the normal 8 paid at 1.5 times, and 17% employer CPF ($224 a day in Year 1 and $236 from Year 2: $14,753 and $15,539 a member); centre staff are 1.5 FTE for every 120 stalls, rounded down to the nearest half and never fewer than 1.5, at $78,000. In the year before a centre opens: the pool, listening and co-design ($70,000 of honoraria and sessions at a Lighthouse, over Year 0, with $35,000 of pilot documentation; $35,000 at a later centre, over six months; and participant fees of $150 each for about 1.25 participants a cooked-food stall, as for the 150 at the 120-stall centre the ledgers were first drawn for: 283 at Chinatown Complex, 79 at Geylang Serai, 149 at Tekka), a liaison officer for six months ($39,000) and the evaluator's baseline ($30,000); then the evaluator's fieldwork ($25,000), Taste Council tastings ($15,000) and community events ($10,000) a year. Each Lighthouse buys a $30,000 capture kit in Year 1; the kits are portable, and the later centres borrow them. Chinatown Complex's own roles sit in the core team, as the first Lighthouse's did; at 226 stalls it adds one more centre staff. The add-ons, in order: Old Airport Road, then Maxwell, each opening in Year 2.
Follow the Gift	Tekka, the centre that opens in Year 2	Tekka Centre, the pilot centre that opens in Year 2, costed like any other pilot centre: what its hawkers' veto at the end of Year 1 would save from Year 2 on.
Follow the Gift	The two Lighthouses alone (downside mode)	the Budget Book, B.8: the two Lighthouses and the national institution alone, the downside mode if the campaign stalls at the first close: Chinatown Complex and Geylang Serai keep running, with the core team and the pilot-centre coordinator, and Tekka defers.

MODEL	PARAMETER	BASIS
Follow the Gift	Add-on centres beyond three	Add-on pilot centres beyond the central three: 0 in the plan, 1 for four (Old Airport Road) or 2 for five (and Maxwell). No more than five open before the independent evaluator certifies the the Plan, §6.5 gate criteria across all the pilot centres; going beyond five is not costed.
Follow the Gift	Tekka voted down	1 if Tekka's own hawkers veto it at the end of Year 1 (the Plan, §6.2). Its Year 1 deposits are spent, because the Security Package is given, not traded; its Year 2–3 and later costs, operating and programme, are not. The Lighthouses vote in Year 0, and a Lighthouse that declines is replaced by a centre with a similar cuisine strength, so its cost stays in the plan. Assumption in the Monte Carlo: Tekka passes its vote with a chance of 80%.
Follow the Gift	Costs from Year 4	Assumption: from Year 4 the costs follow the heritage logic, not the Year 3 envelope. By the end of Year 3 every pilot centre's planning count has been offered, so new Master Fellowships continue at a maintenance rate fed by the at-risk count (the Plan, §3.6): about 10% of the centre's planning count a year, at least one, until the count gives real numbers (3, 1, 1 a year at Chinatown Complex, Geylang Serai and Tekka; 2, 1 at Old Airport Road and Maxwell). Each carries its two apprentices, its dish, its second-station grant and its reserve, with landings for about 30% of the year's apprentices and revenue at the mature $25,000 a Fellowship. What follows the stall count stays at its Year 3 level: the cover, the full Corps bench, the kitchen sessions, the centre staff, the evaluator, the tastings and the events; so does the national core, the Regulars' List with it. Both parts are indexed to inflation from Year 3 prices. No part of Year 3 is gate-dependent: the gate governs going beyond five centres, from Year 4. The at-risk count comes from what hawkers choose to tell: no successor in view and a plan to stop within three years, plus closure notices and leases ending. It is a stock on a three-year horizon, so about a third of it falls due each year: at 15–25% of listed stalls, 5–8% a year. The 10% rate sits above that, because not every hawker will say, and a closure can come without notice; and it is a ceiling, since a Fellowship is offered only to a hawker who wants to teach, and money not spent returns to the endowment. The 10–40% sensitivity (the Budget Book, B.9.4) shows what a faster flow would cost.
Follow the Gift	Each add-on from Year 4	Assumption: from Year 4 each add-on runs its own maintenance year on the same rule, indexed to inflation.
Follow the Gift	Year 0 foundation grants	the Budget Book, B.6: research and heritage foundation grants in Year 0, NHB's among them, sized to the Year 0 net requirement less the gifts for spending. Half is counted as public money because NHB is a statutory board (assumption).
Follow the Gift	Government anchor	the Budget Book, B.6: $15M Government anchor. Timing (half at launch, half by the second close) is an assumption.
Follow the Gift	Matching fund	the Budget Book, B.6: $10M 1:1 matching pool, sought first from MCCY's Cultural Matching Fund (cash gifts only; rent rebates are not matched).
Follow the Gift	Draw rate	the Budget Book, B.6: 3.5% of the start-of-year value, then of the three-year average.
Follow the Gift	Bond ladder	Treasury bills near 1.9% and the 10-year SGS at 2.30% (27 Aug 2026 auction); a three-year ladder at about 2.1%.

MODEL	PARAMETER	BASIS
Follow the Gift	Heritage firms' profits	Latest annual profit after tax of listed coffeeshop operators and heritage snack chains (Kimly FY Sep 2025 $33.3M; Old Chang Kee FY Mar 2026 $9.6M), grossed up at 17% tax.
Follow the Gift	Other F&B profits	Jumbo (FY Sep 2025 $8.7M after tax) plus 20% of Singapore-based regional groups (F&N $210.4M, Food Empire US$68.6M, Super Hi US$36.3M; the 20% Singapore share is an assumption) plus $50M for unlisted profitable firms (assumption), grossed up at 17%.
Follow the Gift	Partner take-up	Assumption. Companies that give typically give about 1% of pre-tax profit across all causes (CECP median 0.92%).
Follow the Gift	Households	SingStat: 1.49 million resident households (1,487,100 in 2025).
Follow the Gift	F&B sales	SingStat retail and F&B services release (July 2025): F&B services sales about $1.0 billion a month.
Follow the Gift	Opt-in at the till	Assumption: share of bills at participating outlets that add the dollar when asked.
Follow the Gift	The 250% deduction	250% tax deduction for gifts to IPCs, extended by Budget 2026 to 31 Dec 2029; assumed renewed thereafter. Tax forgone is counted at 17% for companies and, for major donors, 23%, the middle of the 22–24% top bands of resident income tax (IRAS, YA2024 onwards; the bands in plate_model.py).
Follow the Gift	Investment returns	Assumption: return and risk of each investment policy after fees; inflation 1.5% a year.
Follow the Gift	Heritage Plate outlets	Assumption: Heritage Plate licensed outlets (restaurants, hotels, caterers, airlines) of 15, 80, 220 and 400 in Years 3–6, then flat. The mark launches in Year 3, when the first masters are certified (about ten Fellows by then), so it starts small. Low case half, high case double.
Follow the Gift	Certified plates an outlet	Assumption: 1,000 certified plates an outlet a month.
Follow the Gift	Heritage Plate fee	Assumption: 50 cents a certified plate, priced in and shown on the menu, fixed in nominal terms.
Follow the Gift	Heritage Plate packaged goods	Assumption: retail sales of Heritage Plate packaged goods of $1M, $4M, $10M and $20M in Years 4–7, then flat, with a 3% royalty.
Follow the Gift	Heritage Plate licensees that fail	Assumption: in any year a third of the licensed outlets and packaged lines fail, closing or dropping the certified dish, and pay nothing; the mark signs new ones to hold the outlet counts, so income is two-thirds of the licensed figure. Nigel Chua's study of six hawker brands that expanded found that most of the licensed or acquired expansions shrank or closed: Kay Lee's planned central kitchen and ten outlets never happened, and it ended as one shop; First Street's and Puay Heng's outlets closed; and the one licence that paid the founders a share of profit, Lao Chaozhou's, paid nothing before its outlet closed in November 2023 (Nigel Chua, IPS, June 2024, pp. 31–48). The Heritage Plate is a fee on certified plates and a royalty on packaged sales, not a profit share, and its licensees are going restaurants, not new outlets, so the model takes a third, not most. Tested at none and half.
Follow the Gift	Heritage Plate split	Licence income is split 40% to the master's family, 40% to the retirement match and 20% to the Seed Bank, where it joins the continuing gifts.

MODEL	PARAMETER	BASIS
Follow the Gift	Gifts earmarked for the match	Share of continuing gifts above the programme's needs earmarked for the retirement match from Year 4 instead of joining the corpus: 0 in the adopted plan; 0, 0.5 and 1 in the match scenarios (the Budget Book, B.9.5).
Follow the Gift	The match: stallholders under 55	The match applies only to stallholders under 55; from 55 the existing Matched Retirement Savings Scheme already matches cash top-ups $1 for $1, up to $2,000 a year, for those within its means tests, and the plan helps hawkers claim it rather than paying twice. The share of stallholders under 55 is not published; the median hawker is 60 (MSE, Nov 2024), so fewer than half are under 55. The model counts half, an upper bound, so the match's costs are ceilings. It scales the match only, not the hospital-cash cover.
Follow the Gift	The retirement match	Base retirement match: $1,200 a year for every public-centre stallholder under 55, at most half of 6,900, $4.14M (plate_model.py, Follow the Plate, D.7.5); stretch $7.92M with every stallholder under 55 at 70% enrolment ($5.96M) and hospital-cash cover for every enrolled stallholder ($1.95M). Indexed to inflation after Year 3.
Follow the Gift	The match at the Lighthouses	Off in the plan: the match is costed but not asked for, and starts only if and when it is adopted, with national roll-out from Year 4. Switched on, it would run at the two Lighthouses in Years 1–3 for stallholders under 55: at most half of their 289 stalls at $1,200 a year ($173,400), with no funder named.
Follow the Gift	The match: roll-out	Assumption: the national match reaches 25%, 50%, 75% and 100% of its full cost in Years 4–7.
Follow the Gift	Government match on licences	Assumption: Government matches Heritage Plate licence income 1:1 for its first three years, up to $2M a year, paid to the retirement match.
Follow the Gift	HDB's possible contribution	HDB's possible contribution: the tender rent it may forgo under the tender lever, up to $1.68M a year at half take-up of 2,800 HDB-rented coffeeshop stalls (plate_model.py), if HDB agrees. Operators pay $1,200 for every stallholder, but only the part for stallholders under 55 can stand in for the match, so the model counts the $1.68M times the share under 55 (half, about $0.84M at full roll-out) towards it; the part for those 55 and over goes into their own retirement savings beside MRSS. It is a way to pay for the stretch's match at HDB-rented coffeeshops, not an extra benefit, so it offsets the stretch only. It bites only as coffeeshops are re-tendered (HDB's six-year rent holds, Hawkers and Social Protection, C.12): assumption of 25%, 50%, 75% and 100% of the $1.68M in Years 4–7, and never more than that year's match for HDB-rented coffeeshop stallholders under 55 ($1.18M at full roll-out, indexed like the stretch).

F.4

Data & Downloads

Everything behind these pages is open: the text and data under CC BY 4.0, the model code under MIT. The repository is `github.com/motochan/sg-hawker-heritage`; each version is tagged, and its PDFs can be rebuilt from the tag. Every change from version 1.0 onwards is recorded in the Version and Change Control Log, one of the thirteen documents.

WHAT	WHERE
Follow the Plate model	`src/model/plate_model.py`, with its results in `src/model/results.json`
Succession stress test	`src/model/succession_lab.py` and `succession_results.json`
Follow the Gift funding model	`src/model/funding_model.py` and `funding_results.json`; its browser port is tested line for line against it
Simulator	`src/model/simulator.html`, one file that runs offline in a browser
Datasets	`data/`: proposals, key figures, glossary, sources, the Plate Tracker and the funding flows
The documents' text	`content/`, one Markdown file per section, and on the website at hawker.siliconwok.com

The layers timeline, 1966–2026

Behind Follow the Plate, D.5.4, *The Plate Over Time: How a Stall's Costs Changed, 2013–2026*: every layer we found between the State and the wok, when it came or went, and what it did to a stall's costs or takings. Published facts unless marked; the sources are those of D.5.4, listed in Sources. Five service or operator layers were added after 2015 and three removed (reserve rents, the sub-landlord, owned stalls). The largest cost the State controls, rent, was held for a decade while the subsidised layer ran down by itself.

WHEN	LAYER	WHAT IT DID TO COSTS OR TAKINGS	SOURCE
Mar 1966	Licensing and the Hawkers' Code	A licence fee; hawkers kept off busy streets	NLB
1971–1986	Resettlement: about 18,000 street hawkers moved into more than 110 centres; the State becomes the landlord	Low, subsidised rents; a concentrated, captive footfall	NLB; MTI 2015
1980, 1989 or 1990 (sources differ)	The hardship scheme ends	New entrants pay tender rent	MTI 2015; NEA via WIEGO; MSE 2021
1990s, none after 1998	About 400 HDB coffeeshops sold: a private landlord layer added	Stall rents set by private owners, and unmeasured	MND 2022
1994–97	Stall Ownership Scheme: about 2,000 stalls in 15 centres, about 600 of them cooked food, sold on 20-year leases	No monthly rent for the owners	NEA via WIEGO; MTI 2015
2001 on	Hawker Centres Upgrading Programme	Subsidised rents rise after upgrading ($160 to $192; $320 after rebuilding); better centres	NLB; MSE 2023
2005	NEA's conservancy charge for a cooked-food stall set at $140	Held there until 2024	NEA 2023
2010–14	Rents in the F&B trade outside hawker centres rise 7.4% a year	Operators' costs up; the hawker-food index peaks at 3.0% in 2014	DOS via MTI 2022
Mar 2012	Reserve rents removed: the tender loses its floor	Tendered rents fall; about 39% let below the old floor, some at $1	MTI 2015; NEA 2020
1 Apr 2012	No subletting or assignment; personal operation required, after a three-year grace	The sub-landlord goes; a stall loses its exit value; the rule caps hours	MTI 2015; NEA via WIEGO
2011 on	New hawker centres, the first since 1985; about 20 by 2027	More stalls, more competition	MTI 2015; NLB
2014–17	The ownership leases run out at 15 centres; owners once on subsidised rent may return to it, hand the stall back for an ex-gratia payment or assign it at market rent, and the rest pay market rent	Former owners pay rent again	MTI 2015; NEA via WIEGO; Official Report, 12 Mar 2013
2014	Cleaners' Progressive Wage made mandatory through cleaning licensing (date not re-checked)	Table-cleaning contracts rise over time	MOM

WHEN	LAYER	WHAT IT DID TO COSTS OR TAKINGS	SOURCE
20 Sep 2015	First operator-run centre, Ci Yuan; the operator is "managing agent and master tenant"	Higher floor costs (about $580 a month more at the 2025 median), tied suppliers, app discounts; value meals (5–20% of meals sold) lower the average ticket	NEA 2016; MSE 2026; ST 2025
2015–19	Rents in the F&B trade outside hawker centres fall 2.6% a year	Operators' costs fall	DOS via MTI 2022
2018	Incubation Stall Programme	15 months at a reduced rent for new entrants	MSE 2023
Sep 2018	HDB scores coffeeshop tenders on price and quality (quality 50%, later 60%)	Lower, steadier operator rents; budget meals at about $3 cap part of the menu	MND 2022, 2024
Nov 2018 – Aug 2019	Operator-run centres reviewed: rents staggered at 80% and 90% in a new centre's first two years; tenders weigh stallholders' total costs	Lower rents in the early years	ST 2019; MSE 2025
1 Jan 2019	Centralised dishwashing compulsory at new centres, co-funded by NEA at first	A fee, offset by less of the stall's own labour; no fee series published	NEA 2020; MSE 2022
2019, 2024, 2026	Carbon tax at $5, $25 and $45 a tonne	About a cent a plate by 2026	NCCS
20 Jan 2020	Hawkers' Development Programme	Entry aid; no direct cost or revenue effect	NLB; MSE
2020–21	COVID-19 support: rent waivers, cleaning and dishwashing subsidies, one-off grants	Costs much lower; sales collapsed (the FSI's eating places fell 18% in 2020)	MSE 2021; SingStat
2020–25	Hawkers Go Digital: SGQR, with fees waived to 2023 and subsidised to the end of 2025	About 0.1 cents in each dollar; cashless sales	Enterprise Singapore 2024
2020–21	Delivery platforms, helped by the $500 Food Delivery Support Scheme (about 1,400 stalls)	25–30% of delivered sales; new delivered sales	MSE 2021; Grab
1 Sep 2021	Tray return enforced at hawker centres (late 2021 at coffee shops and food courts)	Diners take on a task; it sets up a repricing of cleaning	NEA 2021
1 Jan 2022	Hawkers Succession Scheme	Exit aid	NLB; MSE 2025
Jul 2022 – Jul 2026	Cleaners' Progressive Wage at hawker centres, $1,312 to $2,080	Cleaning costs, though fees at four NEA centres were flat before GST, 2022–24	MOM; NEA tender notices
1 Mar 2023	Food Services Progressive Wage; individually run stalls exempt	The going rate for assistants rises	MOM 2023, 2026
2023–24	GST to 8%, then 9%; hawkers under $1M stay unregistered	About 5 cents a plate embedded in inputs	IRAS
Jan and Jul 2024	NEA's conservancy charge to $155, then $175, at its 27 centres	$35 a month more (+25%)	NEA 2023
Nov 2024	Staggered renewal: second-term rents move halfway to the assessed rent, the full rent from year 7; tools for bidders from 2025	Higher rents in years 4–6 for overbidders; deters high bids	NEA 2024
1 Jan 2025	Long-term visit pass holders may work as assistants, family ties or not	A wider labour pool; longer hours possible	MSE 2025
Mar 2025	Hawker Centres Upgrading Programme 2.0 for older centres	Rents after upgrading not stated	MSE 2025
10 Jan 2026	HDB: budget meals optional, a 5% rent discount for three years if offered, six-year rent holds for new tenders, stall rents collected	The operator's mark-up will be measured; the menu cap loosens	HDB, via Malay Mail
Sep 2026 – Feb 2027	$200 a month support for every cooked-food stall	$200 a month less	NEA
2012–23, throughout	Subsidised stalls run down: 53% of cooked-food hawkers in 2013, about 40% in 2020, about 30% in 2023	The average rent paid rises with the mix, while the median stays flat	MTI; NEA; MSE

F.5

References: Now in Sources

The references for all thirteen documents are in Sources, S.1–S.474; the data and downloads are F.4, *Data & Downloads*. Until version 1.4 this section printed three lists one after another: the Plan's, then those of Hawkers and Social Protection, then those of the Follow-the-Plate model. A source cited in more than one place appeared in more than one list, and a reader of one volume had to know which list to search.

Sources prints each of the 474 once, under the document that cites it first, with its body, title, date, where in the thirteen documents it is used and its web address, and an index by body. Each companion volume still lists its own sources in short, with the S-number beside each. The models' own sources are named beside each parameter in F.3, *Model Parameters*, and the Technical Paper prints every parameter with its source and its mark (G.1, *Inputs and Sources*).

F.6

Market Transparency

INDEPENDENTLY PUBLISHED

Every quarter the independent evaluator (the Plan's Part VI) – never the programme itself – publishes the range of takings by dish category, ingredient price indices, typical cleaning and utility costs, and how often stalls change hands, so the market's data and the institution's report card stay in separate hands. Aggregate data only; no individual stall identifiable; voluntary revenue reporting compensated at $25 per quarter. The yearly at-risk count of the Plan, §3.6, *The Regulars' List and the Endangered Dish Registry* keeps the same rule: national and per-centre totals only, from signals hawkers choose to give. Sunlight, not surveillance.

Follow the Plate (D.8, *The Plate Tracker*) specifies what to publish: twenty-one indicators across diners, stalls, landlords, suppliers and the public purse, of which Singapore publishes three regularly today, and a one-page yearly **Plate Ledger** showing where a typical plate's dollar goes, by type of landlord (Follow the Plate, D.8). Most of the missing figures are already held by NEA, HDB (Housing & Development Board, Singapore's public-housing landlord) or CPF.

Prices are already counted; costs are not. The IPS (Institute of Policy Studies) Makan Index, Prof Ivan Png's indices built from NEA tender bids, CASE's Price Kaki and NEA's own published top bids already track what diners pay and what stalls fetch (the Record, A.1.2, *Beyond Government: Who Else Already Helps*). Publishing them works: MTI (Ministry of Trade and Industry) found that one more stall selling the same dish goes with prices about 8.4% lower, and its 2015 list of measures included an online platform to publish the prices and locations of affordable food (MTI, 2015). The Plate Ledger licenses or partners for that price data rather than collecting it again. Its contribution is the other side of the plate: ingredients, rent and wages. No one publishes them regularly; only one-off medians and cost shares exist: MTI's cost shares of 2015, the shares from NEA's yearly cost survey that MSE (Ministry of Sustainability and the Environment, NEA's ministry) has quoted for 2022, 2023 and 2024, and medians for rent, service charges and table cleaning given in a reply to Parliament (MTI, 2015; NEA, 2022; MSE, 4 Aug and 8 Sep 2026). The Government has said as much. Answering Victor Lye of the People's Action Party on 7 October 2026, Dr Tan See Leng, answering for MTI, said that "comparative data on the prices of these cooked food items across types of food establishments are not available" (Official Report). That is the gap the Ledger's site-cost and price lines fill.

One line for the question readers ask most. Are the middlemen taking more? The Plate Ledger answers it every quarter with a **margin-spread indicator**, which sets the retail and wholesale prices of hawker staples against the price of imported food: if the gap widens, the middlemen are taking more (Follow the Plate, D.8). So far the evidence says no. From 2019 to 2025 retail food prices rose 18.5% and food import prices 20.9% (SingStat; our arithmetic), so the Singapore end of the chain charged about the same share of a bigger bill. If that ever changes, the spread will show it first, and the plan will not need to guess. A second new line prices the stall's site itself: rent, conservancy (the monthly charge for cleaning and upkeep of a centre), table cleaning and dishwashing a month, before GST (goods and services tax), by type of centre (Follow the Plate, D.5.4, D.8). In 2025 rent, conservancy and table cleaning alone came to a median of about $2,750 at operator-run centres against $2,170 at comparable centres (MSE, 8 Sep 2026; our sum), and MSE warns that the two are not directly comparable. Tracked each year, that gap is measured rather than argued about. MSE published three charges in September 2026: rent, conservancy and table cleaning, which together come to 1.6 times the rent at operator-run centres and 1.5 times elsewhere (our arithmetic). It did not

publish dishwashing, point-of-sale or the other fees asked about. Hawkers and their advocates say those can take the total to double the rent (Follow the Plate, D.14, *Rent Bands & Ballot*). The Ledger records each charge separately, so that the argument can be settled with numbers.

WHAT WE COUNT, AND WHY NOT THE MEDIAN

The record hides the trade's trouble in medians. The median rent has held near $1,250 for a decade while the subsidised share fell and newcomers paid their bids (the Plan, §2.1, Follow the Plate, D.14). The median age has been about 60 since 2018, across a trade of veterans and newcomers who entered at a median of 46 (the Plan, §1.1, *The Crisis in Five Numbers – and a Blank*). The one official income figure is a median for hawkers who work alone, and the measures of success the agencies report are occupancy, satisfaction and enrolment. So the Ledger publishes **the whole spread**, not one figure: for rent, fees, income and hours, the lowest quarter, the middle, the top quarter, the average and the poorest tenth, by stall type and centre type. It publishes **movement**: stalls opened, stalls closed within three years, how long a vacant stall takes to let, how many hand-overs have a successor in place, and every closure by its stated reason. And it publishes **health**: days closed a year for illness or injury, whether MediSave (the part of CPF that pays for health care) is paid up, cover held, and the share of stallholders over 65 with no successor in view (Hawkers and Social Protection, C.9.2, *How This Enters the Plan*). The Year 0 starting count is published as a spread from the start (the Plan, §6.1, *The Sequence: Give, Listen, Build*), and the Regulars' List adds orders a week, the regulars' share of them and the spread of grades, by centre (the Plan, §3.6). Each line is set out in Follow the Plate, D.8, and none is ever published by stall.

Its first stall-level numbers. The Ledger should start from what stalls actually sell, not from the model's guess. In Year 0 the listening teams run a two-week till count at every consenting stall at the pilot centres: orders a day, plates an order, dollars an order, and the share of orders from people the hawker names as his regulars, by dish type (the Plan, §6.1). It is published only by dish type and centre, never by stall. Its first use is to set the Regulars' List's thresholds (the Plan, §3.6); its second is to give the Ledger its first stall-level line, against which every later year is read (Follow the Plate, D.8).

F.7

Success Metrics We Can't Fake

INDEPENDENTLY GRADED · PUBLISHED EITHER WAY

Participation counts and willingness surveys measure consent to begin, and they remain exactly that – tests for launch (the Plan's Part VI). The programme itself is graded, by the independent evaluator, on outcomes no press release can manufacture:

METRIC	TARGET	DEFINITION
Sustained hawker-years	≥40 by end Yr 5	Cumulative years of post-programme stall operation across all graduates and Fellows' successors.

METRIC	TARGET	DEFINITION
Graduate retention	≥70% at 5 yrs	Graduates running a stall five years after opening it. There are two HDP starting points, not one. Of the 566 who finished classroom training, 29 started a stall in a hawker centre (5%); of those 29, 16 still operate (55%) (MSE, Jul 2024; the reply counts hawker-centre stalls only, so a trainee who opened in a coffeeshop is not in either figure). Version 1.2 set ≥60% against the first; against the 55%, 60% would hardly be ambitious, so the target rises to 70%, for graduates who open with a package the HDP's did not have. A third starting point is the Incubation Stall Programme's: 37 of 99 stalls allocated by June 2025 became full hawkers (MSE, 2025), up from 8 of 34 in 2021 (MSE, 10 May 2021).
Young cooks coming through	≥2 practitioners under 45	For every dish at the top rescue priority (Priority 1) in the Endangered Dish Registry, by end Year 5.
Graduate income	Median ≥$3,400/mo net	At month 24, after the income top-up ends. The evaluator also reports take-home per hour worked – preparation and cleaning included – so a cheap meal is never quietly subsidised by invisible hours.
Trust index	≥60% agree	"This institution is on our side" – annual anonymous hawker survey, published verbatim.
Hawker health	Published yearly; target once the first year's count is in	Days a year each enrolled stall closes for illness or injury; musculoskeletal pain on the standard Nordic questionnaire; MediSave status and cover held; by age band, at each pilot centre (Hawkers and Social Protection, C.9.2). The first year is the starting point: no study of Singapore hawkers' own health exists to set a target against.
Movement, not snapshots	Published yearly, against comparable centres	Stalls opened; stalls closed within three years; how long a vacant stall takes to let; hand-overs with a successor in place; and every closure by its stated reason, health among them. Each is published as a spread by stall and centre type, never by stall (F.6).

For the policymaker, this table is the political insurance: whatever is announced at launch, the only numbers that will matter in five years are these – and they are designed to be checkable by anyone with a copy of the evaluator's report and an appetite.

F.8

How the Pilot Centres Are Chosen

The Plan names the three pilot centres and says why these three, §6.3, *The Lighthouses and the Pilot Centres*. This is the method behind the choice: why any government hawker centre is eligible, how the centres are ranked, the four conditions every one must meet, and why one centre would have been too few.

Rather than launching thin programmes across many centres, the plan starts with everything at two, side by side: **Chinatown Complex and Geylang Serai Market and Food Centre, the two Lighthouses (the first two pilot centres, Chinatown Complex and Geylang Serai)**, opening together in Year 1. Two, and these two, for balance and for inclusion. One is deep in Chinese cooking and the other in Malay, so from its first day the plan is tested on more than one community's food, and halal stalls are in it from the start. **Tekka Centre** is the third pilot centre and opens in Year 2. Each remains subject to its own hawkers' vote (the Plan, §6.2, *Co-Design With Veto*). If one declines, the plan seeks another centre with a similar cuisine strength, not simply another willing one.

Any of Singapore's 123 government hawker centres can host a pilot centre, whoever runs it: NEA's list of 17 August 2026 counts 27 that NEA manages (26 of them open), 80 that Town Councils manage and 16 run by socially-conscious enterprise operators that NEA appoints. All of them are eligible, and none is favoured for who runs it. Only privately owned coffeeshops and food courts are left out for now; one may join only if the board recommends it and the hawker-elected Hawker Council does not veto it (the Budget Book, B.14, the Plan, §6.2). What decides the order is the heritage itself: the plan goes first where the heritage-worthy stalls (the stalls that food guides and heritage records already name) are most likely to be found in numbers, because that is where a Fellowship, an apprentice and a documented dish are most likely to be needed, and most likely to be taken up.

Why the wider rule still works. NEA regulates the tenancies at all 123 centres, and it remains the tenancy landlord at every centre that it or a Town Council manages, so at those 107 centres rents, the rent bands, the ballot and the tenancies work the same way. Town Councils manage and maintain the HDB-owned centres, and the Minister said on 5 August 2026 that there are no plans to change that. There the Town Council looks after the common property and collects the conservancy charge, and the centre's hawkers' association manages the table-cleaning service on the stallholders' behalf (NEA tender notices, Dec 2022 and Aug 2024), so both become partners: the association re-tenders the cleaning contract, with the Town Council's agreement; the fee subsidy is the Government's (Follow the Plate, D.14, the Budget Book, B.7). Whatever a pilot centre needs from whoever runs it is listed in the Budget Book, B.7 as an ask. Wherever the centre, the first step is the support of its own hawkers' association.

At each Lighthouse, every mechanism runs simultaneously and visibly: the rent-band and ballot pilot for vacant stalls, with the table-cleaning fee subsidy and the re-tendered cleaning contract; the first Buying Circles; the first Master Fellowships – eight at Chinatown Complex and two at Geylang Serai in Year 1 – each with two apprentices learning at the master's own stall; the first relief cooks, proving each recorded dish on the masters' days off; the Taste Council tasting blind at a partner kitchen; the Security Package renewing; the evaluator measuring.

How the pilot centres are chosen. By one ranking and four conditions. The ranking is the expected count of heritage-worthy stalls at each centre. In Year 0 that is a stand-in measure, which sizes the budget: the stalls the MICHELIN Guide, the Hawker Heritage Awards and the heritage records already name, with an allowance for the ones they miss (the Budget Book, B.1, *Reading the Ledgers*). Once the Regulars' List has run a year, it is the List's own count at each centre, which reaches stalls no guide has noticed (the Plan, §3.6, *The Regulars' List and the Endangered Dish Registry*). Centres are taken in that order, subject to four conditions:

- **A government centre**, any of the 123; a privately owned one only by the exception above.
- **Every community's cooking.** Between them, the pilot centres must cover Chinese, Malay and Indian cuisine, with halal stalls among them; Geylang Serai is included from the start, as the centre where Malay cooking and the plan's halal arrangements are tested. Hawker culture belongs to every community that cooks it, and a pilot that tested one community's food would have tested too little.
- **No major works** in a centre's first year as a pilot centre, or a start timed after them.
- **Consent**: the support of the centre's own hawkers' association, then its hawkers' vote (the Plan, §6.2), and the agreement of NEA or the Town Council (the Budget Book, B.7).

The three pilot centres, and two add-ons. Read in that order, Chinatown Complex comes first: it has the most heritage-worthy stalls of the five centres we counted, 27 on the planning count. Geylang Serai, with 8, is included from the

start, for Malay cooking. Tekka, with 9, has fewer than Old Airport Road (16) or Maxwell (13), and I should say so plainly: the community condition, not the count, puts it third, because it is where Indian cooking is tested. Old Airport Road and Maxwell come next by count, which is why they are the add-ons. One test is still open: the works test is not yet met at Chinatown Complex (below). All five below are among the twelve centres whose heritage NEA and NHB (National Heritage Board) have marked with heritage boards. Old Airport Road and Maxwell are examples of a fourth and a fifth centre, not choices, each subject to its own hawkers' vote; if the Regulars' List's count at the end of Year 1 puts another centre ahead of them, that centre moves ahead of them.

CENTRE	RUN BY; STALLS	WHY IT IS IN THE PLAN
Chinatown Complex *Lighthouse, Year 1*	Jalan Besar Town Council; 226 cooked-food stalls	The deepest heritage of the five: Ann Chin Popiah (founded in the 1940s), Lian He Ben Ji claypot rice (1979, now with the second generation) and Pan Ji, reported as the last hawker making sachima by hand. An MRT interchange; tourists, office workers and elderly residents; its own hawkers' association. Its repairs are due: an extensive three-month repairs and redecoration was reported in March 2025 as starting in March 2026, but we have not found that it happened – the centre closed only for spring cleaning, on 23–25 March 2026, and NEA's schedule in October 2026 does not list it. Its last R&R ended in May 2019. So Year 0 fixes the dates with NEA, HDB and Jalan Besar Town Council, and Chinatown Complex's start is timed after its works. The ledgers assume those works are done before Year 1 begins in July 2027; if they slip, Chinatown Complex's lines move back with them.
Geylang Serai Market and Food Centre *Lighthouse, Year 1*	NEA; 63 cooked-food stalls	NHB records that it was considered the place where Singapore's largest variety of Muslim food could be found; its stalls are where Malay cuisine, and the plan's halal arrangements, are tested. Gerai Nenek Obek cooks there: founded in 1963, now in its fourth generation, it won a Hawker Heritage Award in January 2021. Refurbished in 2024 as a pilot of NEA's Hawker Centres Transformation Programme, so no major works are due in the pilot window.
Tekka Centre *Year 2*	Tanjong Pagar Town Council; 119 cooked-food stalls	A multi-ethnic mix in Little India: the largest cluster of Indian-Muslim stalls under one roof (NHB), with North Indian, Pakistani, Malay and Chinese cooking among it, and visitors' footfall. Allaudin's Briyani, founded in 1968, is in the MICHELIN Guide (2023).
Old Airport Road (Blk 51) *Add-on*	Marine Parade–Braddell Heights Town Council; 168 stalls	A large heartland catchment, and stalls of 50 years and more: Nam Sing Hokkien Fried Mee is reported as dating from 1963.
Maxwell Food Centre *Add-on*	NEA; 103 stalls	Next to Chinatown Complex, and a warning: China Street Fritters closed in 2023 after 81 years, with no successor.

To be sure, the five are not the same size: Chinatown Complex has 226 cooked-food stalls and Geylang Serai 63. So the ledgers (the plan's year-by-year cost tables) do not cost an average centre. Each is costed from its own shape – its heritage-worthy stalls for the Fellowships, apprentices and dishes, its stall count for the cover, the relief cooks and the fee subsidy (the Budget Book, B.1). Chinatown Complex costs the most. That is where the heritage is.

One centre, though, is one data point, and I have come to think it is too few. Not every hawker is going to be willing to try our schemes out, and a loop that closes at one centre may have closed because of that centre – its association, its mix of cuisines, its regulars – rather than because of the design. So the plan opens two Lighthouses at once and, in

Year 2, widens to three centres, with Tekka beside them, and five at most. Each is chosen by the same tests, with its own hawkers' association behind it. Each must pass the same co-design veto, with its own hawkers willing (the Plan, §6.2). Each gets its gifts first: the Security Package, the listening and the co-design run before it opens – through Year 0 at the Lighthouses, and in the six months before Tekka opens, in the second half of Year 1. And each runs the full loop (the whole chain at one centre, from master to paid-off successor), not a thin copy of it: Master Fellowships with apprentices at the masters' own stalls, a pool of relief cooks, the Security Package, the rent-band and ballot pilot, and the evaluator. I call all of them the pilot centres; the Lighthouses are simply the first two. What stays national is what should: the Taste Council, the repository and the core institution, which grow a little to serve more centres.

Granted, three centres cost more than one, and the Plan's Part VII prints how much: the four-year programme comes to $19,683,808, and the add-ons would cost $5,586,777 for Old Airport Road and $4,412,940 for Maxwell (the Budget Book, B.1). Yet a pilot that cannot tell a good design from a lucky centre is not cheap at any price. Tekka runs the loop one year behind the Lighthouses – master → documentation → apprentice → graduate's own stall → a stall that lasts → succession signed – so the evaluator can watch the same joints at different centres and at different ages. If the loop closes at all three, scaling is replication with evidence. If it closes at one and not the others, Singapore learns which joint failed, and where – in public, because the evaluator publishes either way. For the visitor, each centre is something better than a policy: it is a place. You can eat the programme.

F.9

Ideas for Later

These ideas came up in discussion and are not yet part of the plan. Each needs testing, a partner or both before it earns a line in a ledger.

- **A voucher bonus at certified heritage stalls.** A Makan Voucher dollar would go further at a certified heritage stall, with the bonus paid from gifts, not the Budget. It needs the CDC voucher (Government vouchers for every household) system to support a stall-specific bonus.
- **A procurement pledge.** Companies commit part of their catering and meal allowances to hawker centres and certified stalls. That is new revenue for hawkers at no public cost, earned by cooking.
- **Secondments under the Corporate Volunteer Scheme.** A company that seconds staff to an IPC (Institution of a Public Character, a charity whose donors get a tax deduction) deducts 250% of the cost, until the end of 2029. Once the Seed Bank is an IPC (the Budget Book, B.6.2, *A not-for-profit with a charity's safeguards*), hotel chefs could serve in the Relief-Hawker Corps (the Plan, §2.7) and accountants could help verify Succession Mortgages (Succession Economics, E.4).
- **Matched payroll giving.** Staff give a small sum each month through payroll, and the employer matches it. This was chosen over an automatic deduction like the Chinese Development Assistance Council (CDAC) fund's, which would need a change in the law and would read as a tax on every worker.
- **Pledges from mall landlords and real estate investment trusts (REITs).** Landlords that host food courts keep about 26 cents of every dollar a food-court stall takes in the Follow-the-Plate model: the largest landlord's share of any kind of stall, and twice what the hawker keeps (Follow the Plate, D.3, *One Plate, Six Landlords*). They are natural Founding Plate Partners (the Budget Book, B.6.1, *Who gives: diners and the businesses that feed them*).
- **A Government match on Heritage Plate licence income.** Government could match licence income dollar for dollar in the mark's first three years, up to $2M a year: about $1.4M in all at the central case, net of failing licensees (the Budget Book, B.9.5). The money would go to the retirement match, so it is a Government cost, and it only helps if the match is adopted. It is shown as a column in Hawkers and Social Protection, C.8.1, *The retirement match: costed, and left for later* but is not an ask.

- **A Hawker Apprentice Work Pass.** Version 1.2 proposed a restricted pass for one foreign apprentice a stall (the Plan, §2.8, *Hawker Apprentice Work Pass*): structured training in a master's documented dish, with the curriculum and sign-offs run through the Seed Bank; pay at or above the Progressive Wage (the pay ladder the Government sets for lower-wage jobs) for a stall assistant, $2,220 a month from July 2026 and $2,360 from July 2027, a minimum that would bind any stall that hired a foreign worker; a pilot of 50 passes across the pilot centres; and a stall eligible only after it had looked for a local apprentice. The idea is not mine alone. On 13 November 2024 Leong Mun Wai, then a Non-Constituency MP, proposed one work permit holder per stall, and Dr Koh Poh Koon, the Senior Minister of State, replied that it was "not inconceivable", while warning that full liberalisation "may alter the nature of our hawker centres significantly". Others across the House have asked for versions of it: Louis Chua in the same debate, Dr Tan Yia Swam in 2023, Jessica Tan and Foo Cexiang in 2026, and Jamus Lim on 6 October 2026 (the Record, A.7, *What Only This Plan Does – and Where It Builds on Others*). On 10 September 2026 the Government left its rules as they are. Kenneth Tiong of the Workers' Party asked why work permit holders may work in coffeeshops and food courts but not in hawker centres; the Minister, Grace Fu, replied that "Hawker centres are a unique part of Singapore's cultural heritage and it is important to preserve the local identity", kept stallholding to citizens and permanent residents who run their own stalls, and said: "We will continue to monitor the situation and review our policies where necessary" (MSE, 10 Sep 2026). MOM (Ministry of Manpower) had given the rule in February: "To preserve the local identity of our hawker culture and heritage", only citizens and permanent residents may be stallholders (MOM, 25 Feb 2026). Meanwhile the local route is open: since January 2025 stallholders may hire long-term visit pass holders, about 170 of them in the first six months and about 300 at 1 August 2026. Two rules would have to change, not one. NEA would have to let a foreign apprentice work at the pilot stalls, which today only citizens, permanent residents and long-term visit pass holders may do; and MOM would have to create a new kind of work pass outside the quota – a one-person stall cannot qualify for a quota – and set its levy. My answer to the heritage objection would be that an apprentice trained in a master's documented dish carries the heritage rather than diluting it. Still, the position is recent and plain, and the local route is growing. The idea waits until the evaluator can show whether the local channels – the long-term visit pass route, Hawker Boys, Dignity Kitchen, the Yellow Ribbon–NYP route and the apprenticeship (the Budget Book, B.15) – fill the stalls that need hands.
- **Brand stalls and the foreign-worker rule.** I asked whether the rule that keeps hawker stalls local hands the chains an edge; Nigel Chua was the first to raise it (IPS, 2024). MOM's own rules answer it. Inside a hawker centre, it does not: only citizens and permanent residents "are allowed to operate and work in hawker centres managed by the National Environment Agency (NEA) or NEA-appointed operators" (MSE, 21 Apr 2023), and since January 2025 long-term visit pass holders too, so an operator's stall at a socially-conscious enterprise centre is staffed under the same rule as the family stall beside it. Outside the centres the edge is real, but narrow. A stall that holds only a food stall licence, in a coffeeshop or a food court, may not hire a foreign worker. The main operator, which holds the food shop licence, may, for the stalls it runs itself, within the services quota of one foreign worker to two locals (MOM, FAQ, 14 Mar 2024; MOM, 25 Feb 2026). Granted, it is a rule about licences, not brands. Still, two stalls at the same table hire under different rules. The Government was asked about the contrast between coffeeshops and hawker centres on 10 September 2026 and kept its rules (MSE, 10 Sep 2026). I record it here as a fact, not an ask.
- **Why the endowment alone cannot fund the retirement match.** At a 3.5% draw, the base match of up to about $4.1M a year would need a corpus (the endowment's invested capital) of about $120M, three times the $40M target. The endowment can help at the edges; the match itself is a decision for the Budget (Hawkers and Social Protection, C.8.1).
- **The Government has answered the question behind it.** On 10 September 2026 Kenneth Tiong of the Workers' Party asked why work permit holders may work in coffeeshops and food courts but not in hawker centres, and whether that would be reviewed. The Minister, Grace Fu, left the rules as they are. Her reply keeps stallholding to citizens and permanent residents who run their own stalls, lets them hire long-term visit pass holders, says that

"Hawker centres are a unique part of Singapore's cultural heritage and it is important to preserve the local identity", and adds: "We will continue to monitor the situation and review our policies where necessary" (MSE, 10 Sep 2026). It does not mention work permit holders in so many words. MOM gave the same rule in February: "To preserve the local identity of our hawker culture and heritage", only citizens and permanent residents may be stallholders (MOM, 25 Feb 2026). The position is recent and plain, and a pilot built against it would spend goodwill (what a stall's name, recipes and regulars are worth when it changes hands) the rest of the plan needs.

- **A local route is already open, and growing.** Since 1 January 2025 hawkers may hire long-term visit pass holders as assistants: about 170 were hired in the first six months, and about 300 were working as stall assistants in cooked-food stalls at 1 August 2026 (MSE, 22 Sep 2025 and 10 Sep 2026).
- **It was not new.** Leong Mun Wai proposed one work permit holder per stall in the debate of 13 November 2024, and the Senior Minister of State called the idea "not inconceivable" (the Record, A.7).

SOURCES

Sources for This Volume

The references for all thirteen documents are in Sources, each printed once and numbered, with where it is used; F.5 says so, where the lists used to be.

What we could not confirm. Every claim in the library was checked again on 28 October 2026. Each companion volume's sources note names the claims in it that could not be confirmed independently; in this volume, the behavioural inputs – how diners respond to prices, how the chain and the landlords split the money, and how many days illness closes a stall – have no Singapore data good enough to calibrate on (for diners, one survey of 90, not a random sample), and are marked as assumptions and varied (F.2, F.3). One record is still sought: the Official Report of March 2010 in which, we believe, the Government first gave the rule that only citizens and permanent residents may work at hawker stalls. The sitting we were pointed to (SG Parliament, debate 20156, 19 Jul 2010) is a question on foreign-worker dormitories, not hawkers, so Sources does not cite it.

Document Control

Document	The Hawker Library — Method, Levers and Data
This version	1.11 · 2 November 2026
Status	Working paper for public discussion
Stall	Stall 01 · The Hawker Library, version 1.11. Its changes are recorded in the Library Change Log (0L).
Initiated by	Uncle James
Contributors	None yet. The project began with one person and hopes to grow into a team that cares; contributors will be credited here by name.
Hawker Heritage	1 Executive Summary 1.11 · 2 The Plan 1.11 · A The Record 1.11 · B The Budget Book 1.11 · C Hawkers and Social Protection 1.11 · D Follow the Plate 1.11 · E Succession Economics 1.11 · F Method, Levers and Data 1.11 · G The Technical Paper 1.11 · S Sources 1.11 · Your Table 1.11
Source	`src/doc_F_method_levers_data.html` in github.com/motochan/sg-hawker-heritage, tag `library-v1.11`
Licence	CC BY 4.0 for the text and data; MIT for the model code
Independence	Hawker Heritage is an independent Silicon Wok programme. It is not affiliated with the National Environment Agency, the Housing & Development Board or any government agency, and it is not an official consultation. Model figures are estimates, not measurements.

Version history

VERSION	DATE	WHAT CHANGED	TAG
1.11	2 November 2026	Its own version: the Hawker Library (A, C to G, Sources and Your Table) is versioned and logged on its own, starting at 1.11; until 1.10 it shared one version with the Plan. No proposal, figure or claim changes.	library-v1.11
1.10	2 November 2026	Two stalls: the Hawker Library and the Saving our Hawker Heritage Plan, by Uncle James, a Silicon Wok programme; a graded estimate of what hawkers earn above the median, with a note in G.3, a line in D.1 and three uses in the Plan; no proposal or model figure changes.	—
1.9.3	1 November 2026	Plain that the time-bound body was the UNESCO nomination committee, not FMAS, which is a standing federation; MCCY's reply of 7 Oct 2026 stated exactly; a constructive tone towards NEA; no proposal or figure changes.	v1.9.3
1.9.2	1 November 2026	Uncle James on every cover, in place of the full name; no proposal or figure changes.	v1.9.2
1.9.1	1 November 2026	The site address and contact are Silicon Wok's; no proposal or figure changes.	v1.9.1
1.9	1 November 2026	The library is stewarded by Silicon Wok; no proposal or figure changes.	v1.9
1.8	31 October 2026	A pen name, Uncle James, and an anonymised note from the author; no proposal or figure changes.	v1.8
1.7	30 October 2026	Plain words: nine numbers settled and the 285 hardest sentences rewritten; no proposal or figure changes.	v1.7
1.6	30 October 2026	Four open calls settled: NEA already staggers the rent on assignment, so the HSS ask narrows to writing that stagger into the Scheme's terms; the 2012 Panel reported in April 2012; MOM's own rules answer the foreign-worker question, so it is recorded as a fact; and Liang Eng Hwa's 2018 question on hawkers managing their own centres is credited.	v1.6
1.5	29 October 2026	Three doors: the Plan cut from 72 pages to 44, with a card for every proposal; A becomes The Record; volume G, The Technical Paper, comes from the models; Your Table is for diners.	v1.5
1.4	29 October 2026	The record: the Government's own panels, Official Reports and UNESCO report read first, hawker pay ($1,470 a month in 2021) and a day shut for illness ($372) reckoned, ten reassurances answered, the count kept as distributions with one body to own it, the Regulars' List counted in orders with a Year 0 baseline, and the Government's match now covering part of the base (40%).	v1.4
1.3	29 October 2026	Grounded: the library's claims checked against sources (314 checked; corrections made where the evidence differed); four proposals change to fit the evidence; Follow the Plate adds the middlemen and the plate over time.	v1.3
1.2	28 October 2026	Restructured, with no change to any proposal, figure or claim, as a library of standalone documents: the Executive Summary, the Plan (the case and the proposals, Part VII in brief) and six companion volumes, A to F, each opening with who should read it, its bottom line and how it connects. The Main Paper and the Technical Paper end; their sections move, with new ids, into the Plan and the volumes.	v1.2

VERSION	DATE	WHAT CHANGED	TAG
1.1	27 October 2026	First revision: who already helps hawkers beyond Government, and where the plan joins, defers or fills (§1.3.1–§1.3.2); hawkers' protection compared with four other kinds of worker in the Executive Summary; the retirement match applies under 55, beside the existing scheme from 55; the pilot widens from one Lighthouse Centre to two Lighthouses from Year 1, Chinatown Complex and Geylang Serai, and Tekka from Year 2, five at most before the gate, each costed from its own heritage-worthy stalls and size: $14,990,340 over four years in two-part ledgers (operating and programme); the plan pays for no hawker-centre infrastructure, and apprentices learn at the master's side instead of in a prep co-operative; hawker-led Buying Circles (§2.12), a table-cleaning fee re-priced for tray return at the pilot centres and a named deputy for an hour a day join the package; a Heritage Watchlist (§3.6) opens at every government hawker centre from Year 1 and counts each year the stalls at risk, and from Year 4 each centre funds new Fellowships at a maintenance rate fed by that count.	v1.1
1.0	27 October 2026	First edition: one document in three papers, the Executive Summary, the Main Paper and the Technical Paper.	v1.0

Each stall of Hawker Heritage has its own version: the Hawker Library and Saving our Hawker Heritage. Until 1.10 they shared one. Versions are numbered major.minor. A new major version is a new edition, made with contributors or reviewers beyond the initiator; a minor version changes a proposal, a term or a headline figure, or restructures the documents by the initiator alone; a third digit marks a correction to wording or sources that changes none of them. A change to a source bumps every stall whose documents it changes. Each version is tagged in the repository, and its PDF can be rebuilt from that tag. The PDF's file name never changes; the version on the cover, in the footer and on this page is the one that counts. Every change since 1.0, with the sections it touches and why, is recorded in the Library Change Log, The Hawker Library — Version and Change Control Log, one of the thirteen documents.