

Open-Loop Careers Suite:

• A Reflective Toolkit for Adaptive Career Design

Insights from Future of Innovation Lab x
Lee Kuan Yew Centre for Innovative Cities

OPPORTUNITY

That process of becoming requires self-knowledge that most people don't yet have when they arrive at a transition. The Open-Loop Careers (OLC) Suite is built to draw it out, closing the Self-Discovery Gap before AI enters the picture so that what AI generates is rooted in the whole fabric of a person's life, not just their employment history.

NEED

AI acceleration, trade volatility, climate pressures, demographic shifts, and new regional realities are rapidly reshaping work. Career paths are no longer linear or predictable, and individuals must pivot repeatedly under uncertainty. Yet most career tools still frame transition as a one-off, rational choice rather than an identity-rich, ongoing process of becoming.

01 OLC Suite Development x IAL/SSG-funded research

Multisensory, narrative-based, AI-enabled career navigation

02 Trial Phase (200+ participants)

Workshops & 1:1 coaching
(age range 20-70)

03 Pilot Series x WSG (373 participants)

Scalable model. 98% satisfaction; 91%
career clarity; 79% uncertainty resolved.

BIG TOPIC:

How can AI make a real difference in career transitions and what does it need to know about you first?

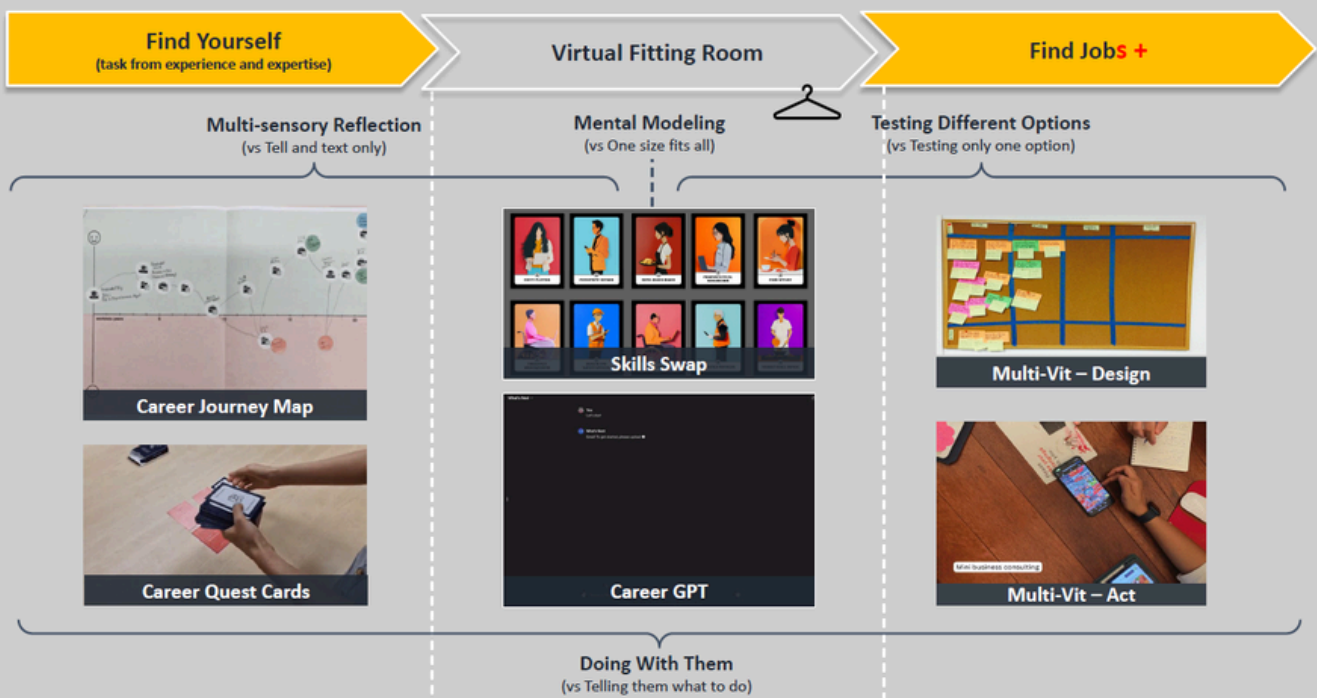
Career planning has long focused on rational decisions such as skills assessments and job matching (Hall, 2002). Yet modern transitions are shaped by uncertainty and identity change. As people face burnout, caregiving duties, job loss, or sector shifts, they need tools that support not just planning, but becoming (Savickas et al., 2009).

The Open-Loop Careers Suite answers this question. It emerged from the Open-Loop Careers research programme at the Lee Kuan Yew Centre for Innovative Cities (LKYCIC), Singapore University of Technology and Design, supported by the Workforce Development Applied Research Fund (WDARF) and the Institute for Adult Learning (IAL).

The Open Loop Careers framework is grounded in experiential learning (Kolb, 1984), narrative identity theory (Savickas, 2013), and embodied cognition (Marshall, 2016). Rather than narrowing down options prematurely, it guides users through three interlinked stages (Figure 1):

- **Find Yourself:** Reflect on values, experiences, and life events.
- **Virtual Fitting Room:** Try on imagined roles using games and generative AI.
- **Find Jobs+ (Do With):** Prototype low-stakes actions to move forward.

Figure 1. Open Loop Careers Framework.



The OLC suite's three stages (Find Yourself, Virtual Fitting Room, and Find Jobs) scaffold individuals through a cycle of reflection, exploration, and supported action.

This open-loop approach aligns with the design thinking cycle (diverging, converging, prototyping) and treats career development as an iterative, human-centred process (Christensen & Richardson, 2017).

01

Stage 1 - Find Yourself

Tools: Career Journey Map + Career Quest Cards

The first stage surfaces the fabric of a person's life — what they value, what has shaped them, what they are actually carrying into this transition — before any AI tool enters the picture.

Career Journey Map is a timeline-based worksheet that invites users to map turning points and emotional highs/lows across life and work (Figure 2). Using stickers and visual markers, participants create a symbolic narrative of their career trajectory, surfacing patterns of motivation, resilience, and identity (Marx, 2023; Ibarra, 2004).

Figure 2. Example of Career Journey Map.



Career Quest Cards facilitate value clarification through a tactile sorting exercise (Figure 3). Participants arrange cards representing career-related priorities (e.g., autonomy, mentorship, flexibility) into four quadrants based on personal relevance. This externalizes tacit values and encourages self-awareness (Mello & Wattret, 2021; Deterding et al., 2011).

Figure 3. Example of Career Quest Cards.



02

Stage 2 - Virtual Fitting Room

Tools: Skills Swap + What's Next GPT

Stage 2 tests that fabric against possibility, expanding horizons through role-play and imaginative exploration.

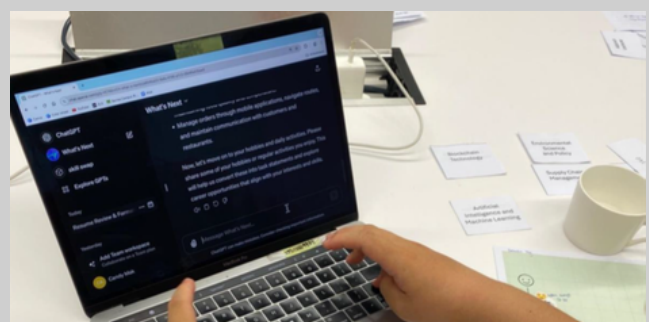
Skills Swap is a card-based activity that helps individuals apply existing skills to unexpected roles (Figure 4). It encourages experimentation beyond their usual scope (Markus & Nurius, 1986; Ibarra, 2004).

Figure 4. Example of Skills Swap.



What's Next GPT is an AI-assisted tool that takes this further, offering customized role suggestions with tailored rationales (Nayak et al., 2024) (Figure 5). Because it draws on what the person has already discovered about themselves and not generic market data, the options it generates feel earned rather than assigned.

Figure 5. Example of What's Next GPT.



03 Stage 3 - Find Jobs (Do With)

Tool: Low-risk Career Prototyping

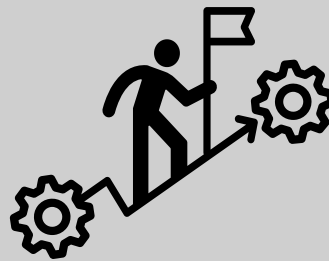
The final stage focuses on movement. It helps users translate reflection and role-play into real-world action without the fear of failure.

Rather than pushing users to leap into new careers, the OLC suite encourages low-risk micro-prototypes: short, exploratory tasks that simulate career moves. These include:

- Reaching out to someone in a desired role
- Creating a short pitch or prototype portfolio
- Attending a relevant event or informational interview

This stage draws on behavioral activation and social learning theory (Bandura & Walters, 1977; Sheeran et al., 2005), emphasizing action in socially supported environments. It's about doing "with", not being told what to do.

The experience often feeds back into earlier tools. For example, after testing an action, users may update their Career Journey Map or re-sort their values. In this way, the suite models open-loop learning, where reflection and experimentation reinforce each other.



Initial Trial

Tried with over 200 participants in Singapore, the suite was tested through group workshops and 1:1 coaching. Participants gained clearer work-life identity, discovered value-aligned career options, and felt more motivated to experiment in real life.

The OLC Suite stands out through:

- **Multisensory Engagement:** Tools like stickers, cards, AI, and timelines support hands-on, reflective learning (Grosse-Hering et al., 2013).
- **Narrative Identity Focus:** Encourages personal storytelling and meaning-making (Savickas et al., 2009).
- **Scaffolded Action:** Builds confidence and momentum through small, supported steps.

- **Inclusive Design:** Valid across ages 21-70 and varied learning styles.
- **Hybrid Technology:** Blends AI and human facilitation without losing empathy (Nayak et al., 2024).

The Singaporean context, marked by national initiatives in lifelong learning (e.g., SkillsFuture), provided a fertile testbed (Gog et al., 2024). But the OLC suite's principles are globally applicable: people everywhere need more holistic, experiential, and adaptive tools for career navigation.

IMPACT & IMPLEMENTATION

Workshop Rollout

“What’s Next: Reimagine Your Career Using Design-AI” was a workshop series developed in partnership with Workforce Singapore (WSG) to bring the Open-Loop Careers framework to mature professionals navigating career transitions – a population WSG identified as needing something beyond conventional skills training.

The Open-Loop Careers approach had previously been featured in the SkillsFuture Future Economy Report as a model for adaptive career navigation in a rapidly evolving labour market (SkillsFuture Singapore, 2025, p.62) (Figure 6), and these workshops represent its first sustained practical implementation.

Figure 6. Skills Demand for the Future Economy Report 2025 (SkillsFuture Singapore, 2025, p. 62)

Research Insights



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Flex and flexibility, finding yourself, virtual fitting rooms, and embodied cognition. These are new tools¹⁸ designed for successful multiple job transitions, termed Open Loop Careers in a recent research that we completed. The study emphasised that individuals must flex (i.e. demonstrate) their ability to perform in new jobs or roles, instead of claiming they can or have the qualifications. Workers also need to develop flexible work identities, identifying with their next position during career transitions.

Both flex and flexibility are challenging. To address this, we designed localised tools to engender earlier change and smoother transitions.

To exercise flexibility, we designed tools to find yourself:

- Career Quest Cards¹⁹: A gamified, fun and tactile self-discovery/assessment of trade-offs to clarify priorities
- Career Journey Maps: A tactile, visual, active reflection similar to reminiscence therapy and functional medicine

To exercise flexing, we built virtual fitting rooms that include:

- Skills Swap: A role-playing game to expand work options to the unfamiliar or unusual, yet plausible.

18 Singapore University for Technology and Design, 2024.
19 Kickstarter, 2024.
20 Carmen Simon, 2024.

- What’s Next GPT: Uses GenAI to map creative options to the whole-of-person i.e. work, life, and wellbeing

These tools engage multiple senses to engender earlier change, because when we “set the body in motion, the brain follows”²⁰. They adopt the cognitive science view of “embodied cognition” where brain, body, and environment are engaged in thinking and decision-making, unlike the conventional focus on the brain as a computer where change happens by “installing instructions”.

These tools also enhance other resources such as the Employability Self-Assessment for Older Adults, which reveals areas where flex and flexibility in work are enhanced.

Moreover, when stacked in sequence – where the output of one tool becomes the input for another – individuals feel a sense of progress, further engendering change. This approach increases the likelihood of successfully making multiple transitions.

Importantly, these new tools complement, recognise, and leverage existing skills like communication, collaboration, and problem-solving that are crucial when making job transitions. Together with these foundational competencies, the combinations provide a strong basis for adapting to new roles and industries, giving individuals a significant advantage in their career shifts.

Throughout the workshop series, participants progressed through the three stages of the OLC framework—Find Yourself, Virtual Fitting Room, and Find Jobs (Do With). Using cards, timelines, and AI-assisted exploration, they reflected on past experiences, tested possible future roles, and prototyped small career actions.

Workshop Participants:

- Head count: 373
- Age range: 50-78 (median 58)
- Degree status: 76% degree holders
- Interested in part-time/gig: 51%

Implementation:

- Period: 16 sessions (Oct 2025-Mar 2026)
- Data Collection: Surveys, pre-post baselines, facilitator observations

Workshop Impact Overview:

98%

Satisfied

98%

AI is career-relevant

+8.4%

Self Trust

80%

Uncertainty resolved

01 AI Demystification: From Spectator to Builder

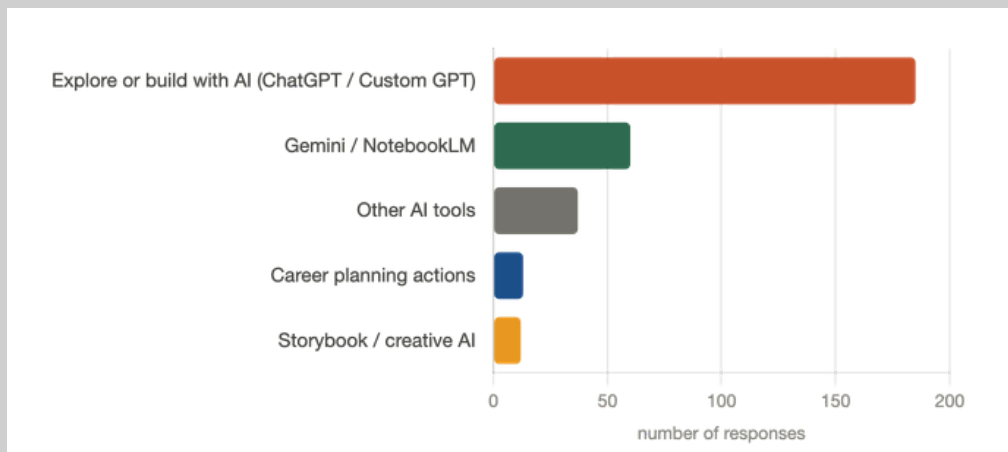
AI activities scored highest across both workshop days (**98-99%** agreement on career-specific items). The signature arc — Day 1 guided demos, Day 2 building a Custom GPT — moves participants from passive recipients of AI output to active builders who use AI to articulate what they already know. Every participant leaves having created an AI tool encoded with their own domain knowledge and career priorities. That is what changes what people think is possible for themselves.

Two differentiators emerged from the sessions:

- **Applied building over passive learning:** One participant attended 2 AI courses and a digital transformation course but “*none of them introduced custom GPTs*”. Another participant paid for a prior course, “*didn’t learn much*”. Here, she created 2 GPTs.
- **Converting sceptics:** A participant arrived believing AI meant “*one doesn’t use brains.*” She stayed up past 10pm exploring and bought a ChatGPT subscription.

Figure 7 shows a visual graph of what participants said they’d try after the workshop.

Figure 7. Exploring and building with AI dominated post-workshop intentions, with ChatGPT and Custom GPT creation accounting for the majority of responses.



02 Career Clarity From Ambiguity to Direction

91% identified meaningful career goals post-workshop. Across all programme components, agreement on career clarity outcomes ranged from **93-99%**, with the AI segments scoring highest on helping participants see their existing experience as a career asset. Of 69 participants initially “undecided” about retirement plans, 55 (**80%**) left with a defined direction, the majority choosing to continue in work in some form.

Four impact pathways emerged: **affirmation** of existing goals, **reframing** transferable skills, first-time **direction-setting**, and **correction** of role-related misconceptions.

““

“Being able to spot what is the best choice for my next lap within a short 2 days and learning how AI can be helpful in the process.” (Session 6 participant)

“How my old skills are still relevant in a new field” (Session 5 participant)

“Career Quest was an excellent self-discovery process to identify my priorities and whether aligned with my vocation” (Session 8 participant)

“Alternative career I never thought I would do” (Session 11 participant)

03 Mindset

They Came Ready; We Built Their Trust to Act

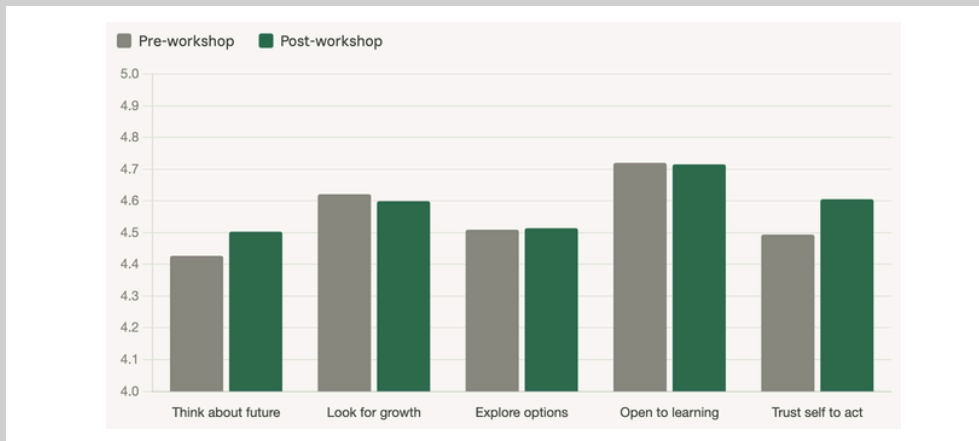
Pre-post baselines reveal participants arrived with strong growth mindsets; four of five items showed no change. The one item that moved: “I trust myself to take charge and move forward, even when things are uncertain” — Strongly Agree rose from 56.5% to 64.9% (+8.4pp). The workshop did not just change mindsets but also changed confidence to act (Figure 8).

“

“Course provided the motivation to take action in areas not previously thought about” (Session 8 participant)

“Confident during my next interview after this workshop” (Session 12 participant)

Figure 8. Pre- and post-workshop mindset scores.



04 Human Connection

The Enabler

Delivery quality scored highest (95-97% agreement). But free-text reveals what that means: **feeling respected, supported, and not left behind.**

The 1-facilitator-per-table model was the most cited structural element. Peer solidarity created the safety that made AI learning and honest career reflection possible. Facilitators who have navigated their own difficult transitions, sitting with someone a generation older, produce a form of attention participants rarely receive elsewhere: serious, curious, and without condescension.

“

“What stood out wasn't the content. It was the learning design. What's Next took a very different approach from conventional career programmes. Instead of expert talks or prescriptive advice, the experience was built around sense-making, experimentation and guided reflection... Career transitions, especially later in life, need more than advice. They need well-designed experiences that respect lived experience and translate insight into next steps.” (Session 6 participant)

Figure 9. Photographs from the workshop.



05 Community Demand & Forward Momentum

99% would recommend the workshop. 53% volunteered specific visions for a post-workshop community. The top requests: job and gig sharing, continued AI learning, accountability buddies, and ageing-well interest groups.

The signal is clear. What was started here needs somewhere to go, especially peers who open doors that no programme alone can open: referrals, encouragement, and the specific solidarity of someone at the same life stage navigating the same uncertainty.

“

“This is one of the best courses I've attended because it is practical, participative, motivational and engaging. It helped us to scope up a better understanding of ourselves visually with all the physical tools. The AI tool presented is easy to pick up and useful. It also helped you to want to begin working on actionable stuff when we go back to our daily lives. It would be great if we could be added to a chat group to help us to follow up with one another so that we help to keep each other motivated.” (Session 15 participant)

The Bottom Line

This is what it looks like when Design-AI works at its best. AI enters only after a person has done the harder prior work: discovering what they value, understanding what their experience has made them capable of, and beginning to see what kind of life and work fits who they are becoming.

The programme's tools do the work that AI cannot do alone, and AI does what the tools alone cannot: synthesizing everything discovered into a personalized, explorable future that the person could not yet see for themselves. What it reflects back is the person, more fully known to themselves.

Figure 10. Group photographs post-workshop.



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