

Methodological Implementation of Innovation in AstraZeneca ODSAI Using the Strategyzer Framework

Executive Summary

This proposal recommends the adoption of a systematic, Strategyzer-inspired innovation methodology within AstraZeneca's ODSAI department to accelerate the discovery, testing, and scaling of data-driven research and operational solutions in oncology. Through structured tools such as the Business Model Canvas, Value Proposition Canvas, and iterative validation, the initiative aims to deliver scientific breakthroughs, enhance clinical outcomes, and reinforce AstraZeneca's position as a leader in oncology innovation.

1. Background & Rationale

The oncology landscape is rapidly evolving, driven by advances in data science, artificial intelligence, and clinical insights. As the ODSAI department seeks to maximize its impact, a unified and repeatable innovation methodology is critical. Strategyzer principles—emphasizing evidence-based design, co-creation, and scalable validation—provide a robust foundation compatible with AstraZeneca's commitment to scientific rigor and patient-centricity.

2. Objectives

The implementation aims to:

- Establish a transparent process for identifying, designing, and scaling innovations.
- Foster cross-functional collaboration among scientists, clinicians, data engineers, and external partners.
- Maximize the effectiveness and scalability of AI, analytics, and data platforms in oncology R&D.
- Minimize risk through early validation and continuous iteration.

3. Methodological Framework

The approach comprises eight integrated stages, each mapped to Strategyzer tools and AstraZeneca priorities:

3.1. Discovery & Opportunity Mapping

Initiate with strategic workshops and semi-structured interviews to identify unmet needs and strategic challenges in oncology. Use the **Business Model Canvas** to map the current state and potential innovation areas, pinpointing key partners, patient segments, value propositions, channels, and resources.

3.2. Ideation & Co-Creation

Facilitate multi-day ideation sessions involving diverse stakeholders. Apply the **Value Proposition Canvas** to articulate the pains, gains, and jobs-to-be-done for each segment. Document ideas as clearly defined opportunity spaces.

3.3. Hypothesis Formulation & Solution Design

For each prioritized opportunity, document core assumptions using Hypothesis Sheets. Design initial solution architectures—such as machine learning models, visualization tools, or workflow enhancements—using Strategyzer’s Lean Business Model documentation.

3.4. Experimentation & Validation

Develop minimal viable prototypes (MVPs) and run rapid pilot studies, focusing on high-value, testable hypotheses. Use **Testing Cards** to structure each validation experiment, specifying metrics, methods, success criteria, and stakeholder involvement.

3.5. Review & Iteration

Regularly review pilot outcomes against predefined hypotheses. Incorporate feedback through continuous iteration cycles, updating canvases and solution designs as learnings are generated.

3.6. Scale-Up & Integration

Progress validated solutions through an implementation pipeline, integrating into ODSAI’s existing platforms. Collaborate with IT, clinical teams, and enterprise architects to ensure seamless scaling. Define adoption metrics and post-launch impact tracking (e.g., clinical value, user satisfaction, operational efficiency).

3.7. Governance & Oversight

Embed innovation management into the ODSAI governance model. Form an Innovation Steering Committee to oversee project prioritization, resource allocation, and methodology adherence. Define escalation paths for challenges and maintain living documentation.

3.8. Culture & Capability Building

Develop tailored capability programs (workshops, e-learning) on Strategyzer methods and innovation best practices. Recognize and reward innovative behaviors to embed a culture of experimentation and continual improvement.

4. Implementation Timeline

Month 1–2: Opportunity Mapping, Stakeholder Workshops

Month 2–3: Ideation & Co-Creation Sessions

Month 3–4: Hypothesis Design & MVP Development

Month 4–5: Experimentation & Validation Pilots

Month 6: Iteration, Review & Scaling Decisions

Month 7+ : Full Scale-Up, Continuous Governance, and Capability Rollout

5. Expected Outcomes & Metrics

This initiative will achieve:

- A repeatable, evidence-based innovation pipeline for ODSAI.
- Acceleration of high-impact oncology AI/data initiatives from concept to scale.
- Concrete deliverables such as validated MVPs, business model documentation, and adoption dashboards.
- Enhanced collaboration and innovation culture across AstraZeneca’s oncology ecosystem.

KPIs may include:

- Number of innovations initiated, validated, and scaled
- Stakeholder engagement rates
- Time from ideation to implementation
- Scientific and clinical impact measures (e.g., model accuracy, workflow improvements)

6. Risks & Mitigation

Potential risks include resource constraints, misalignment of priorities, and slow adoption. Mitigation strategies include strong executive sponsorship, phased rollouts, regular stakeholder engagement, and clear communication.

7. Governance Structure

An Innovation Steering Committee will guide the initiative, comprising representatives from ODSAI leadership, clinical operations, IT, and enterprise innovation. Regular reporting and review cycles will ensure transparency and accountability.

Conclusion

By integrating Strategyzer methodology into the AstraZeneca ODSAI innovation framework, the department can systematically foster, validate, and scale impactful solutions that advance oncology research and care. This proposal presents a robust roadmap to harness cross-functional expertise, reduce risk, and maximize value for patients, clinicians, and AstraZeneca.

References

- *Alexion '25 Spring Innovation Accelerator Program:*
https://azcollaboration.sharepoint.com/sites/25SpringAlexionInnovationAccelerator2/_layouts/15/Doc.aspx?sourcedoc={0e371aad-61ba-46c5-96f0-0e35c120a55d}&action=edit&wd=target%28EpiVerity.one%7Cc0d61aff-661e-4772-9a07-c25d0bf8accd%2FSponsor%20Intro%20Meeting%203%5C%2F17%5C%2F25%7Cd3dae5a1-cf1a-4632-9e78-d00729ca439b%2F%29&wdorigin=NavigationUrl
- *Stratagyzer: We guide companies to build innovation capabilities across all departments and roles* <https://www.strategyzer.com>

Example Pilot Project Proposal: AI-Driven Radiomics for Early Prediction of Treatment Response in Lung Cancer Clinical Trials

1. Project Overview

This pilot aims to develop and validate an AI-based radiomics solution to predict early treatment response in lung cancer patients enrolled in AstraZeneca clinical trials. By leveraging advanced image analytics and machine learning, the project intends to enhance decision-making, reduce trial duration, and improve patient outcomes.

2. Strategyzer Framework Application

2.1. Discovery & Opportunity Mapping

• **Unmet Need:** Current imaging biomarkers for early response are limited, delaying critical trial endpoints and impacting patient management. • **Business Model Canvas Snapshot:**

- *Key Partners:* Radiology teams, machine learning engineers, clinical operations, trial investigators
- *Customer Segments:* Clinical trial sponsors, trial participants, radiologists, oncology clinicians
- *Value Proposition:* Early, evidence-based identification of responders/non-responders for adaptive trial designs and personalized therapy decisions
- *Channels:* Integrated into clinical trial IT platforms and radiology workflow
- *Revenue/Impact Streams:* Accelerated trial timelines, reduced costs, improved trial outcomes

2.2. Ideation & Co-Creation

• Conducted a cross-functional workshop involving data scientists, radiologists, trial managers, and patient advocacy representatives. • Developed several AI concept scenarios. The group selected radiomics prediction due to high scientific impact and feasibility with available trial image datasets.

2.3. Hypothesis Formulation & Solution Design

• **Hypothesis:** An AI model trained on baseline and follow-up CT images can predict patient response to investigational therapy by cycle 2 with clinically actionable accuracy. • **Minimal Viable Prototype (MVP):**

- A machine learning pipeline extracting radiomic features

- Predictive modelling module using historical trial data
- Visualization dashboard integrated within the trial management software
 - **Assumptions Documented:**
- Adequate image quality and annotation
- Regulatory and data privacy compliance
- Sufficient sample sizes for model training and validation

2.4. Experimentation & Validation

• Design Pilot Study:

- Retrospective cohort: Use existing CT scan data (baseline + follow-up) from ~150 AZ lung cancer trial participants
- Develop, train, and test predictive models
- Primary metric: AUC, sensitivity/specificity for early response prediction
- **Testing Card:**
 - *What will be tested?* Accuracy of prediction at cycle 2
 - *How will it be measured?* Comparison against radiologist assessments and clinical outcomes
 - *Who is involved?* AI team, radiologists, trial statisticians
 - *Success Criteria:* Model achieves ≥ 0.80 AUC for early prediction without overfitting

2.5. Review & Iteration

- Initial results, errors, and feature importance shared with stakeholders.
- Regular review meetings to iterate imaging feature extraction methods and model architecture based on feedback and test results.

2.6. Scale-Up & Integration

- If pilot succeeds, initiate prospective validation in an ongoing AZ lung cancer trial with automated integration into data management workflows.
- Develop change management and training materials for radiology and operations teams.

2.7. Governance & Oversight

- Project overseen by ODSAI Innovation Steering Committee, with monthly reporting and milestone reviews.

2.8. Culture & Capability Building

- Outcomes shared across the ODSAI and clinical communities, with lessons learned documented in an internal knowledge repository.
- Host a workshop for clinicians and data scientists on radiomics and AI deployment in trials.

3. Timeline

- **Month 1:** Opportunity mapping, stakeholder onboarding, data access confirmation
- **Month 2:** Workshop, hypothesis definition, MVP design
- **Month 3–4:** Model development, training, and validation
- **Month 5:** Pilot results review, iteration, and final report
- **Month 6:** Recommendation on scale up to live trial integration

4. Expected Outcomes & Metrics

- Validated AI pipeline for radiomic prediction of treatment response in lung cancer trials
- Clear business model documentation and stakeholder alignment
- Impact metrics: reduction in trial endpoint determination time, model performance (AUC), and user adoption rates

5. Risks & Mitigation

Risks include insufficient data quality, regulatory hurdles, and low stakeholder adoption. Mitigation plans involve early data audit, compliance review, and continuous engagement with key users.

6. Governance & Communication Plan

Innovation Steering Committee holds reviews, and findings are presented to AZ oncology, clinical trial operations, and AI user group.

Conclusion

This pilot exemplifies how AstraZeneca ODSAI can leverage Strategyzer methodology to rapidly test, validate, and potentially scale innovative AI solutions that accelerate clinical research and patient impact. If you would like to explore a different use case—perhaps related to genomics, real-world evidence, or operational optimization—please let me know your interests or requirements for the next pilot.