School of Nursing & Health Sciences
and
Scottish Improvement Science Collaborating Centre

Research Seminar Series

Framework to Real Work: A Realist Tale of Knowledge Mobilization Across a Complex Adaptive System

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DDEC, Frankland Building

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The Health Foundation
Inspiring Improvement

SISCC

Introduction

Knowledge into Action at Scale (KIAAS)

Explore the creation, flow and application of knowledge in support of quality improvement and service redesign.

Ready to Act (R2A) 2016
Transforming AHP services for CYP

Research Aim

How does a government policy transform into individuals creating sharing and actioning knowledge to secure changes in practice.

Adding detail to the journey from policy to practice

Critical Realism: 3 Levels of Reality
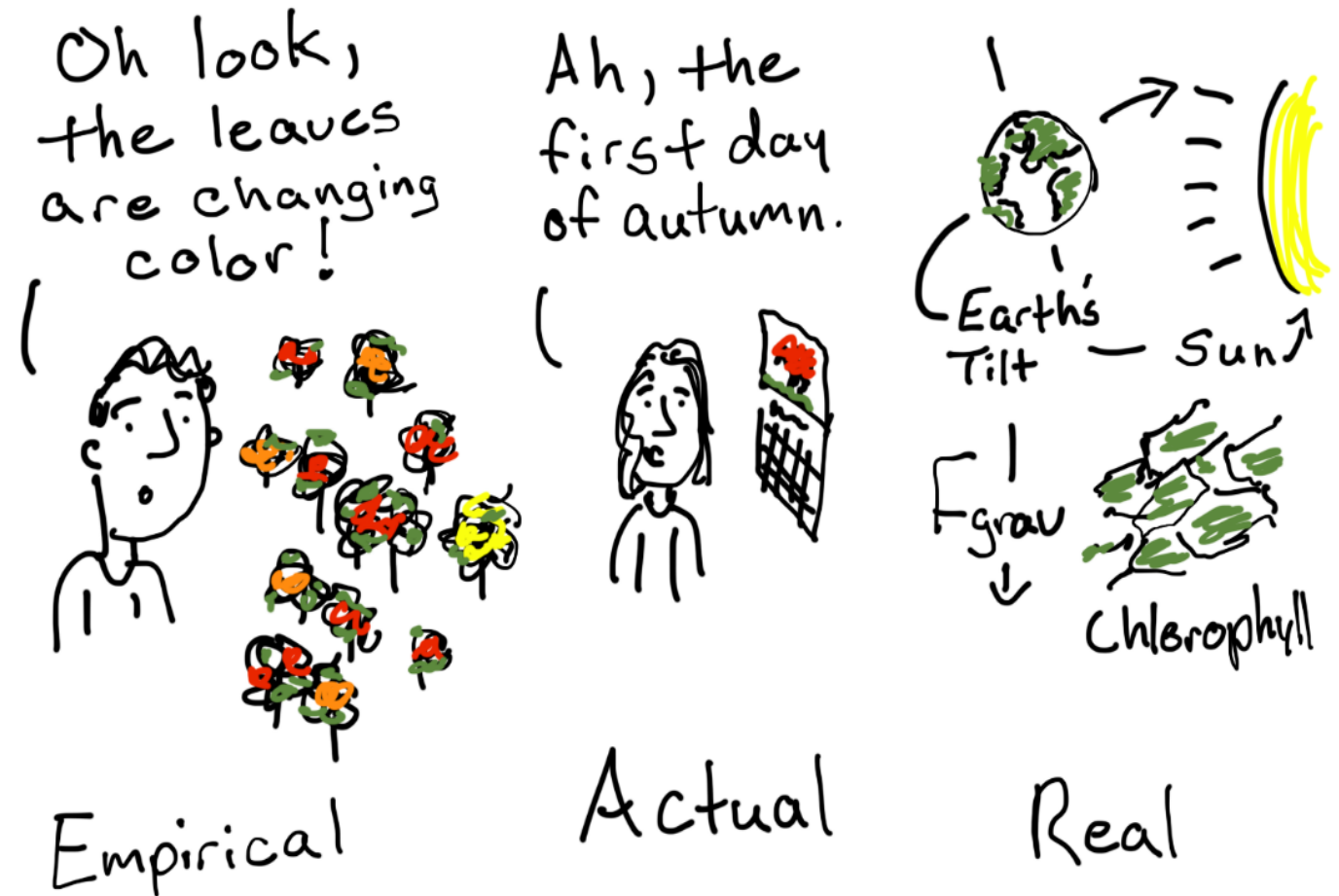
- **Empirical Level**

Events are experienced and observed

- **Actual Level**

Events occurs, whether they are observed or not

- **Real Level**

Mechanisms cause events to occur at a different level

Methodology: Critical Realism

" Research has to answer questions on what are the social and cultural conditions necessary for change mechanisms to operate and how are they distributed within and between programme contexts." **Pawson & Tilley 1998**

CMO Theory
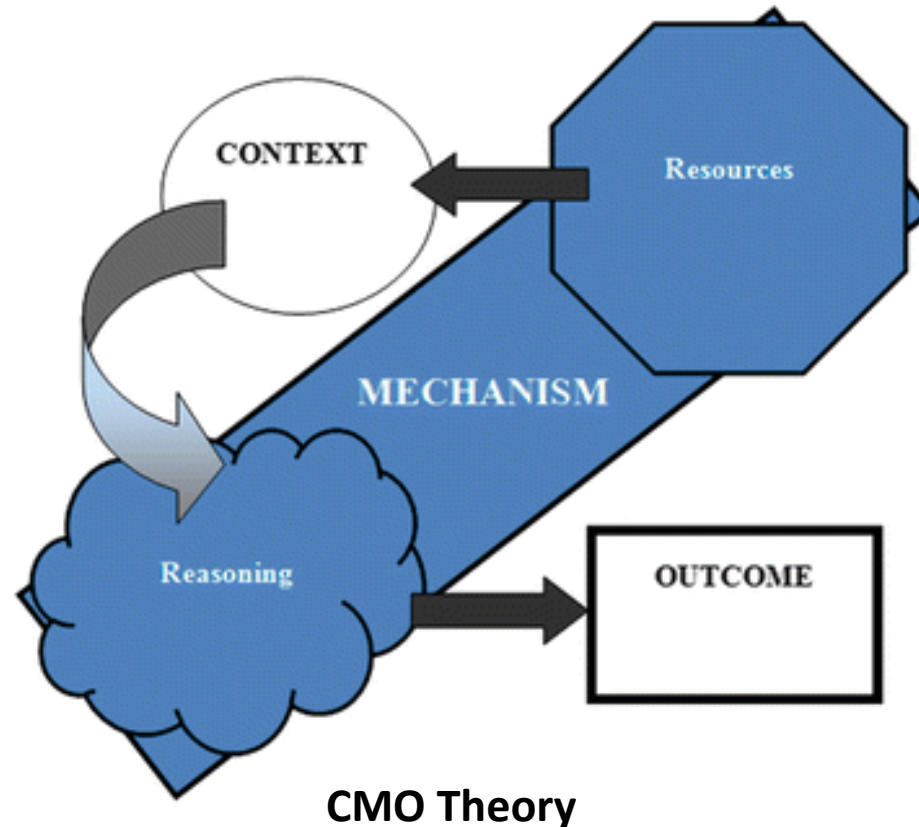
Conceptual Lens

Knowledge Mobilisation

Maximising the impact of knowledge ... on public policy and professional practice.

(Phipps, 2012)

Complexity Theory

Complex Adaptive Systems

- Interconnected components
- Different Starting Points
- Emergent rather than predictable outcomes
- Self-organisation
- Feedback Loops

(Zimmerman, Lindberg, Plsek, 2009)

Conceptual Lens 1: Knowledge Mobilisation

THE INNOVATION
e.g., Relative advantage; Potential for reinvention; Risk; Nature of knowledge required

SYSTEM ANTECEDENTS FOR INNOVATION
e.g., Structure; Size/maturity; Absorptive capacity for new knowledge; Pre-existing knowledge/skills base; Receptive context for change; Leadership and vision

SYSTEM READINESS FOR INNOVATION
e.g., Tension for change; Power balances; Monitoring and feedback

COMMUNICATION AND INFLUENCE
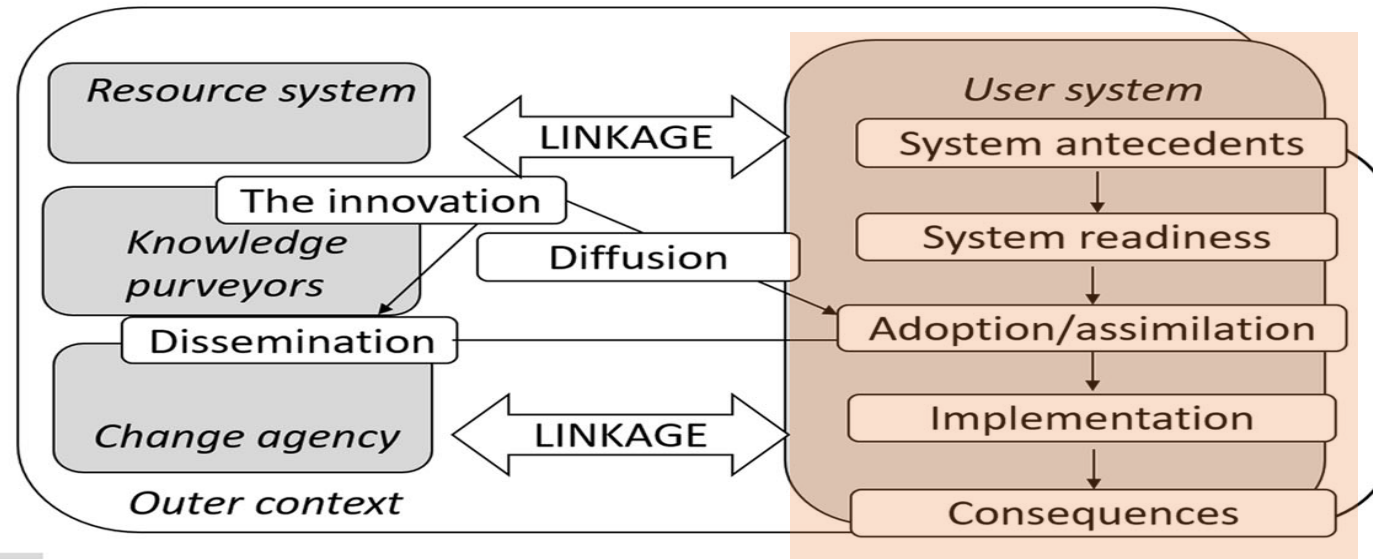DIFFUSION (informal, unplanned)
Social networks; Homophily; Peer opinion

Marketing; Expert opinion; Boundary spanners; Change agents

DISSEMINATION (formal, planned)

THE ADOPTER
Needs; Motivation; Values and goals; Skills; Learning style; Social networks

ASSIMILATION
Complex, non-linear process
'Soft periphery' elements

THE OUTER CONTEXT
e.g., Socio-political climate; Inter-organizational norm-setting & networks

THE IMPLEMENTATION PROCESS
e.g. Decision-making devolved to front line teams; Hands-on approach by leaders and managers

**LINKAGE**
Design stage: Shared meanings and mission; Effective knowledge transfer
Implementation stage: Communication and information

Conceptual model of determinants of diffusion, dissemination and implementation of innovations in health services

(Greenhalgh et al 2004)

Conceptual Lens 2: Complexity Theory

2018 Map of the Complexity Sciences
by Brian Castellani
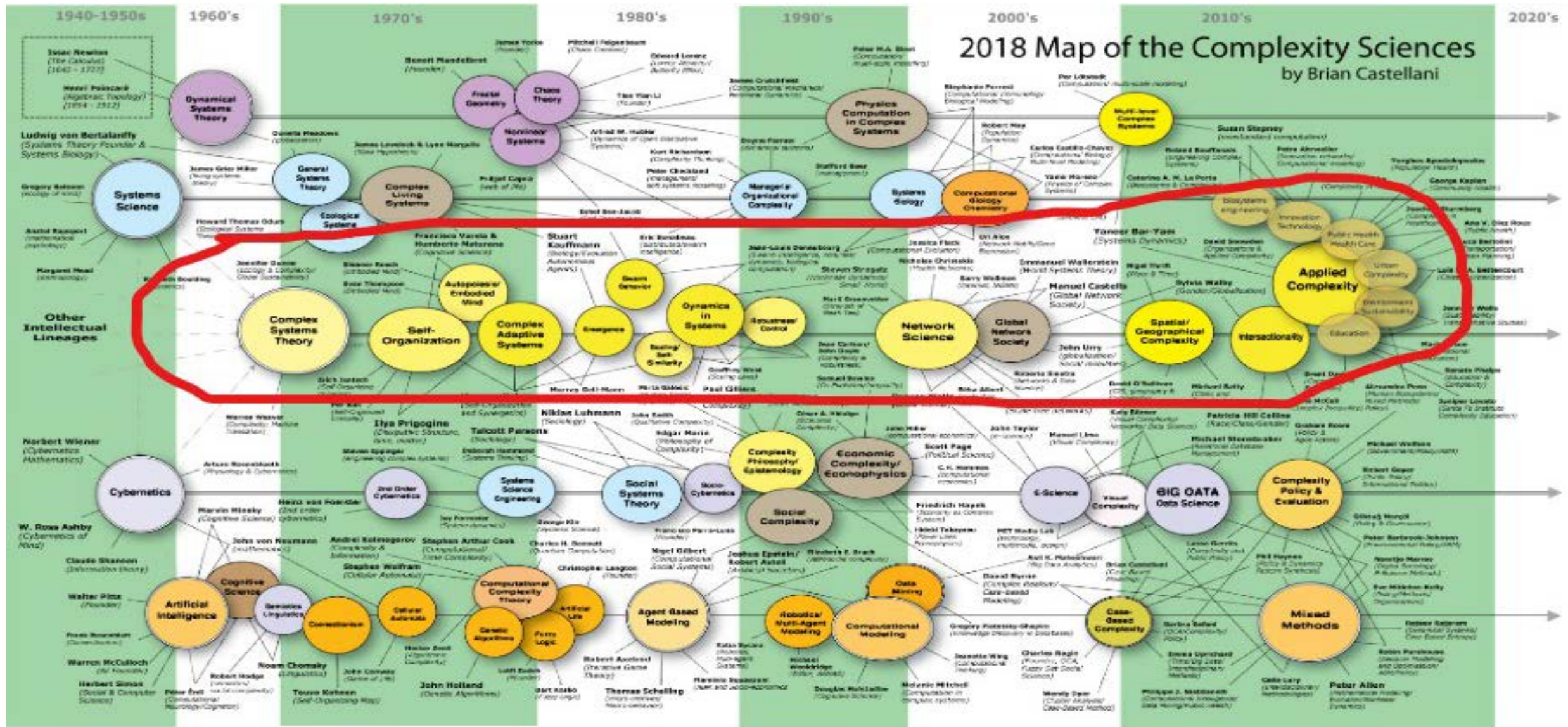
Background

Scotland's Public Services workforce plays a key role in responding to opportunities and challenges associated with Public Sector Reform.

Quality Improvement (QI) has been applied in health care in Scotland since 2007 and has seen areas of sustainable change. Our challenge is to build on that learning to spread and embed a QI approach across Scotland's public services, expanding from Health into Social Care, as part of integration, and beyond e.g. Government and Education, to improve outcomes for Scottish people.

Ambition

NES has worked with national and local partners to develop a suite of QI education resources targeted at different areas of the public-sector workforce across Scotland.

Key components of this ambition were to build in sustainability from the outset by:

- Starting to build capacity at all levels of the system and not focusing on a single staff group
- Developing core Scottish Faculty to deliver the programmes wherever possible, reducing reliance on external providers and utilising limited financial resources effectively
- Aligning the development of the programmes and ensuring the right content is developed for the right people, and delivered in the most effective way
- Making high quality resources freely accessible to QI communities across Scotland to avoid duplication of effort, e.g. e-Learning resources

Scottish Improvement Foundation Skills (SIFS) programme

SIFS is a new innovative QI learning programme delivered entirely in a virtual learning environment. It is designed for anyone working in the public sector in Scotland, including the third and volunteer sector, who wants to learn how to contribute to the improvement of local services.

By completing the programme people can:

- Explain what quality improvement is and why it is important
- Describe commonly used improvement science concepts and tools for understanding systems, developing aims changes and measures and reporting improvements
- Practically apply key quality improvement concepts to a small local project
- Contribute to local improvement work with more confidence

Scottish Leading and Coaching for Improvement (SCLIP) programme

The Scottish Leading and Coaching for Improvement Programme is a 3-month QI learning programme designed for people who will coach and facilitate improvement teams to support achievement of improvement strategies within their organisation.

Participants are expected to apply the principles of coaching and leadership to support a team or teams to apply improvement methodology and share their experiences with other programme participants

Following completion of the programme individuals will be expected to contribute to the development of others through local improvement team coaching and facilitation

Working together to drive improvements

Scottish Improvement Leader (ScIL) programme

The ScIL Programme is a key part of Scotland's innovative approach to address increasing demands across our public services by developing mid-level QI capacity and capability.

The 10-month Programme blends structured study with workplace learning and mentor support, while enabling participants to develop support networks.

ScIL enables individuals to:

- design, develop and lead improvement projects
- lead and generate support for change
- provide expert QI support and advice in their organisations throughout the improvement journey

Scottish Quality and Safety Fellowship (SQSF) programme

The Fellowship is an international programme which over 10 successful years has developed more than 220 Fellows, enhancing their individual capacity for leadership in patient safety and quality improvement

The Fellowship is targeted at Clinicians looking to develop the skills to transform care delivery and is delivered over a 10-month period.

By completing an individual project, participants demonstrate skills acquired, and the impact the improvement work has had, focusing on the people who benefit.

Samantha Smith, Senior Project Officer – Safety and Improvement, NHS Education for Scotland
Laura Allison, Head of Quality Improvement, NHS Education for Scotland

For more information visit the QIZone
QIzone.nes.nhs.scot

The SIS Improvement Science Learning Activity

- SIS Learning activity bespoke, preceded the development of the SIFS virtual learning programme.

- Focused on the practical application of IS tools and methods

- Improvement projects were identified prior to the start of the course

- Variety of approaches used to recruit participants to each of the project workstreams

Participant Groups

Request for Assistance (RFA)

- 6 different AHPs
- Geographically dispersed
- Develop common ground
- Difficult task
- Formed basis for next forum

Job Planning (JP)

- Already established
- Common understanding
- Able to advocate for the group
- Commitment beyond SIS

Provisional CMO Theory

- **Policy Level:** building the knowledge and skills of local practitioners supporting the spread of innovation.

- **NHS Level:** a forum of multi -professional learning will enable practitioners to collaborate to create practice innovations.

- **Practitioner Level:** increasing skills will help develop innovative practice within our profession.

Data Collection

	Tranche 1 April –Sept 17	Tranche 2 Dec 17- Feb 18	Tranche 3 April 18-Aug 18
Interviews	5	4 +3*	7 +3*
Focus Groups	2	1	1
Observations	1540 mins	360 mins	1200mins
Documentary Analysis	Early Intervention Docs/policies	Financial Doc & Policies	Local/National Outcomes

Data Analysis : Coding Process

Empirical Code (Indigenous)	Analytical Themes	Theoretical Concepts
Communication top-down targets Very little guidance expectation to fit it in, hidden agenda	Top-Down/ Bottom Up Leadership perspective, practitioner perspective, conflict between learning activity and policy ambitions, voluntary participation, directed participation, complexity features,	**Distributed Leadership**
Time pressures, reduce scope of task to fit time constraints, wasted time, primary drivers, unreal timescales, I can make sense of the indicators	Fidelity to learning, adaptation to context, fidelity to policy ambitions, epitaph comments,	**Feedback Loops**
Trying to make us all the same People wanting to make it as effective as we can get it need to be working within your own service Feeling as if your getting something done	Allocentric / professioncentric	**Interconnectivity**

Findings - Antecedents

Distributed Leadership

- Emerged over time
- Caused discomfort
- Move matrix leadership
- No consensus

Findings - Antecedents

Allocentric Disposition

- Habit, way of being
- Opposite of profession-centric
- Consensus is not necessary
- Evolves through dialogue
- Develops over time

Sustaining Factors
Trajectory & Feedback Loops

Feedback Loops:

Artefacts

" Forging points of connection from the mental model to the phenomena"

Goodyear 2017

Social Artefacts

Social rituals; gestures; behaviours

SIS learning activity; meetings; national network; **seating positions**

# Linguistic Artefacts: language, symbols

APPLE Mnemonic; vocabulary (referral /request for assistance);**epitaph comments**

Tranche 1	"So to me it would actually about doing what we said. And delivering"
Tranche 2	"I think it's probably about being a leader who encouraged staff to be in a positive place or supported staff and encouraged staff to be in a place where they could feel ownership of the changes"
Tranche 3	"Rather they thought I was a leader. That would be great. Cos sometimes you get management. That's very much that operational dictating. So if anybody thought I was a leader, I would take that as a complement. That would probably be it"

Material Artefacts

Driver Diagrams; **R2A Policy;** interim report to Scot Gov 2018
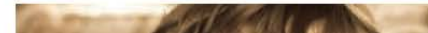
Refined CMO Theories

Context

Multi-professional Learning activities

Mechanism

structured to allow space for the development of allocentric dispositions

conducted in a context of distributed leadership supports agents to self-organize

conducted in a context of distributed leadership lead to the creation of feedback loops

Outcome

enable transdisciplinary knowledge mobilisation

create changes in practice (M) which deliver the wider organisational ambitions

which maintain the trajectory of change across interconnected CAS

Contributions

- **Theoretical**

Combining complexity & KMb revealed how the attributes of a complex system were harnessed to mobilise knowledge and deliver outcomes

- **Practice**

Complexity theory to explain variations in outcomes across the system gave practitioners a language to express concerns

- **Management**

Need to balance distributed leadership which fosters innovation with formal authority to provide stability

Contributions

- **Policy**
  - Co-constructed policies provide roadmap for the trajectory of change
  - Flexibility to recognise unanticipated positive outcomes and negative events.
  - Be aware of the potential negative impact of relying on normative measures alone.

- **Empirical**
  - A focus on people as KMb agents rather than considering process, context or intervention.
  - Looking at an under researched group within Health & Social care.

Conclusions

o Where knowledge is a catalyst for changes in practice, scale up and spread is facilitated through micro processes of feedback. These feedback loops are nurtured and evolved within social processes and need to be considered as a key feature of any implementation plan.

o Policy ambitions and research ambitions were different. This research provides an adjunct to the measure of change capture by the SG.
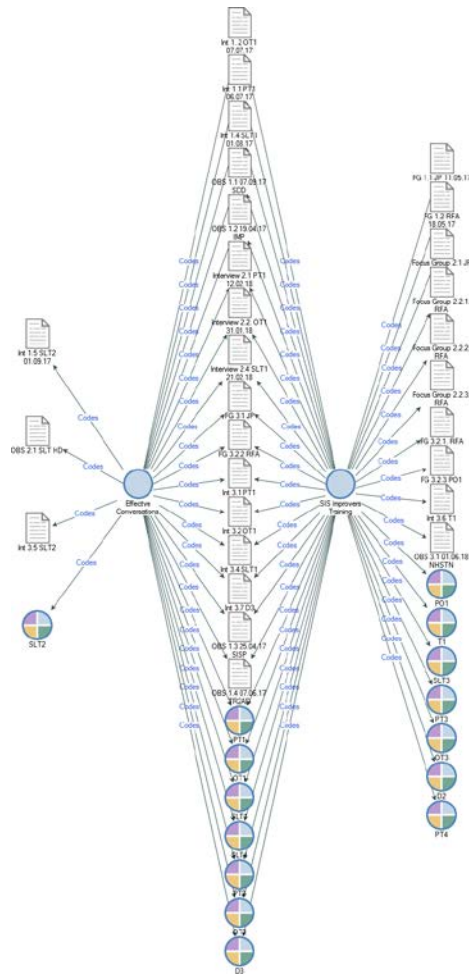
Any Questions?

Data Analysis : Nvivo Queries

Node Comparison EC-SIS

Coding Summary

Name	Number Of Sources Coded	Number Of Coding References
Changing professional culture	3	9
Complexity Features	8	51
Deliberate Learning Activities	1	138
Effectve Conversations	7	27
Epitaph Comment	7	15
Evolution of RTA	4	10
Feedback Loops	8	47
Job Planning Workstream	2	4
New Node	0	0
RFA Workstream	3	4
SIS Improvers Training	9	110
Structural Maintainance- Innovation	12	79
Top down - Distributed Leadership	10	100
Uni-professional - AHP	11	125