

What Is a Semantic Core?

Neal McCormick

Semantic Foundry

The previous four pieces in this series have been describing an absence.

An organisation that cannot read itself. Knowledge that gets reconstructed at great expense because it was never preserved in a form that survived the people and programmes that produced it. Discovery phases that consume months and budgets before anything gets built. A middle layer between strategy and execution that everyone can feel the absence of and nobody has found a way to make persistent.

This piece names the thing that fills the absence.

Not a methodology. Not a framework. Not a technology platform. An artefact. A specific kind of governed model that occupies a position that has always been empty — and that changes what is possible for any organisation that builds it.

—

The easiest way to understand what a semantic core is, is to start with what it is not.

It is not a data model. Data models describe the structure of stored information in a specific system. They answer the question: how is the data organised? They do not answer the question: what does this data mean to the business, and what governs how it is used?

It is not a process map. Process maps describe how work flows through the organisation under current conditions. They capture what happens today. They do not capture what the organisation needs to be able to do — the capability, independent of how it is currently being carried out.

It is not a capability map. Capability maps describe what the organisation needs to be able to do at a strategic level. They are useful for planning conversations. They do not contain the execution detail — the business rules, the calculations, the workflows — that makes the capability real enough to implement.

It is not a requirements document. Requirements describe what a system should do, scoped to a specific project, owned by the programme that commissioned them, and retired when the programme ends. They are project artefacts. The semantic core is a permanent organisational asset.

Each of these artefacts captures a partial view of the same underlying reality. The semantic core is what they were all partial views of. It unifies them — not by replacing them, but by providing the thing that none of them individually is: a complete, coherent, governed specification of what the business does.

The semantic core is the canonical model of what an organisation actually does — expressed at the level of precision required for governance, and at the level of abstraction required for independence from any particular implementation.

Within each capability domain, it contains the business entities the organisation needs to track and act upon. The business rules that govern when and how things are permitted or required. The business events that trigger action. The calculations that derive the values the business needs. The workflows that carry the capability out from trigger to outcome.

All of it expressed in business language. Not in the language of any particular technology. Not in notation that requires a specialist to interpret. In the vocabulary the business actually uses — the terms that carry precise meaning within the domain, that the people who run the operations would recognise immediately as their own.

The operations director can read the workflow for the capability their team runs and say whether it is correct. The compliance officer can read the business rules for the regulatory capability they are responsible for and confirm whether they reflect current requirements. The CEO can look at the capability map and recognise the organisation they intended to build.

No translation required. No technical intermediary. The model belongs to the business because the business can read it.

Two properties make the semantic core genuinely different from every artefact that has come before it.

The first is the combination of precision and abstraction. The model is precise enough to govern — precise enough that when an implementation decision is made, it can be evaluated against the model and found to be either consistent or inconsistent. And it is abstract enough to endure — abstract enough that it survives the replacement of every technology, every process design, every organisational structure that currently implements it. The same model governs today's implementation and tomorrow's.

The second is that it occupies a previously empty position. It sits at the exact point between strategic intent and operational execution where the translation from one to

the other has always happened — informally, imperfectly, and at great cost. It makes that translation explicit, governed, and permanent.

When the semantic core exists, several things change.

The discovery phase disappears. The programme that previously spent its first six months reconstructing knowledge the organisation already possessed starts instead from the governed model. The knowledge is already there. The blueprint is in hand. The work begins on day one.

The key person risk dissolves. The domain expert who retires is not taking the operating model with them. The operating model is in the governed artefact, maintained by whoever holds the domain authority, readable by anyone authorised to read it. The knowledge survives the person.

The strategy-to-execution gap closes. When the board sets a new direction, the capability implications are visible immediately. The domains that need to change are identifiable. The implementations that serve those domains can be updated from the model. The chain from strategic decision to operational consequence is traceable.

And when a technology reaches end of life, the organisation does not face an existential modernisation programme. It faces an engineering task. The model already says what needs to be built. The new implementation is derived from it. The knowledge stays. The technology changes.

The semantic core is not an invention. It is a recognition.

Every organisation has always had an operating model. The capabilities, the rules, the decisions that govern how it serves its customers — all of it has always existed. The semantic core is what happens when that operating model is made explicit, governed, and owned by the business for the first time.

Not locked in systems that nobody fully understands. Not distributed across people whose departure creates operational risk. Not reconstructed at great expense every time the organisation wants to change something.

Explicit. Governed. Owned. Durable.

Once you have seen what becomes possible when the operating model exists in this form, it is difficult to accept the alternative as inevitable.

Once you have seen it, you cannot unsee it.

Neal McCormick is the author of The Last Great Dig.