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F1F9 eBooks



HOW TO STANDARDISE MODELLING

5 LESSONS LEARNED THE HARD WAY

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***“Spare me the elephants
and the psycho-babble!
Just tell me what I need to do to
sort out the modelling around here.”***



HOW TO STANDARDISE MODELLING

Choose a standard.

We recommend FAST but there are others.

When choosing a standard make sure that:

- a. It is sufficiently evolved and prescriptive (to be recognised when you see it)
 - b. it's easy to teach and learn
 - c. It's open and independent
 - d. It has broad industry backing and involvement
-

Ensure that you have top down sponsorship and awareness.

Modelling standardisation should have backing from the very top. Ensure that model users know what to expect and how to get the best from models built to the standard. Managers and model users should reject models that have not been written to the standard. Increase the chances of adoption by creating a culture where adherence to the standard is an expected part of the job.

Train a critical mass of people upfront to kick start the transition.

These "champions" or "super-users" will play a critical role in spreading the word. If possible, equip them to train others rather than paying for more courses; this does a better job of creating a culture of shared modelling practice and provides people with contacts within the organisation to whom they can go to for help.

Ensure that support continues outside the classroom.

Classroom based learning is the start of the journey, not the end. It's after the course that the real learning occurs, when analysts get back to their desks and try to put what they have learned into action. Select a training programme that includes online self-learning materials (pre and post course), and a support forum (offering answers to questions). Include a programme of testing and certification as part of training.

Invest in re-writing existing models.

If modellers are forced to use legacy models you will not get the benefits that standardisation can bring. Throw out legacy models and rebuild them according to the agreed standard. It's as simple as that. To do otherwise is to send the message that it's OK to keep using poorly built models. It will seem like a lot of work upfront, but not doing so will cause more work over a longer period. If you don't have the capacity to do this with your existing team, bring in some additional modelling support just for this task.

Provide ongoing model compliance checking and individual certification of modellers.

There should be a programme of checking that models comply with the standard. This can be on a random, spot-checking basis and / or for models that are deemed to be of particular importance. The highly structured nature of FAST models means that compliance can be efficiently checked using software tools.

IS THIS BOOK RIGHT FOR ME?

NOT SURE IF THIS EBOOK IS QUITE RIGHT FOR YOU?
SEE IF WHAT YOU ARE ABOUT TO READ MATCHES YOUR REQUIREMENTS

THIS
GUIDE →



FAST FINANCIAL MODELLING

Useful, practical information about FAST financial modelling, managing modelling projects and good modelling practice.



BANKING & ADVISORY

Targeted at, but not exclusive to, banking and advisory practice areas, exploring modelling topics like credit analysis, debt structuring etc...



PROJECT FINANCE

Focussing on the kind of transactional modelling typically associated with the development of infrastructure, PFI and PPP projects.



ENTERPRISE REPORTING & ANALYSIS

Useful information and practical guidance on the application of modelling discipline and standards to improve business decision making.



ENERGY & NATURAL RESOURCES

Insight and practical guidance on the application of good modelling practice specifically related to these often complicated business areas.



**FAST FINANCIAL
MODELLING**



**BANKING
& ADVISORY**



**PROJECT
FINANCE**



**ENTERPRISE
REPORTING & ANALYSIS**



**ENERGY &
NATURAL RESOURCES**

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**“OUR DILEMMA IS THAT WE HATE
CHANGE AND LOVE IT AT THE
SAME TIME; *WHAT WE REALLY
WANT IS FOR THINGS TO REMAIN
THE SAME BUT GET BETTER.*”**

Sydney J Harris



ABOUT F1F9

F1F9 provides financial modelling and business forecasting support to blue chip clients and medium-sized corporates. We also teach financial modelling skills to companies around the world. Our clients have access to high quality, low-cost modelling support delivered by 40 professional modellers.

F1F9 co-developed the FAST Standard that allows modellers and non-modellers to work together and understand financial models. Transparency is the core value that drives our modelling and our business activities.

ABOUT THE AUTHOR

Kenny Whitelaw-Jones is a modelling instructor at F1F9. He worked with some horrific financial models early in his career and vowed to save others from the same fate by teaching them modelling techniques that actually work. That's why he's passionate about raising standards in modelling. When he's not doing that he's usually driving one of his four children to a social engagement. He enjoys sailing and writing about himself in the third person.

Kenny is currently working on the first *crowd-sourced* "Financial Modelling Handbook" based on the FAST Standard. Please join in.

INTRODUCTION

I first came across the FAST Modelling Standard when I was working as a project finance adviser and was sent on a course by my then employer. Although it would not be called the FAST Standard until a number of years later, it was already a well developed modelling methodology.

I could see straight away why it was better than most of the modelling I saw around me at the time. My employer spent a lot of money sending people on modelling courses. It was mostly money wasted.

Why? Because after the course was finished I went back to my desk and had to start working with the same old awful models. There was no budget or time to rebuild them, and the really useful techniques I'd learned on the course just couldn't be applied in these models. After the course, everybody went back to their own way of modelling. The company saw very little return on investment.

Later on they asked why they'd spent so much money on training and yet saw so little improvement in their modelling.

Lesson No.1

TRAINING IS NOT ENOUGH

WHEN COMPANIES APPROACH US FOR TRAINING, IT'S OFTEN BECAUSE THEY ARE STRUGGLING WITH CHAOTIC, POORLY STRUCTURED AND HARD-TO-READ MODELS.

Sometimes these models have been built by modellers on their team who developed their own approach; often they are using models built by multiple advisers with no common approach between them.

They often approach us for training thinking that this will solve their problems...

We frequently have to advise those clients that training is only part of the solution. As Nathan Goode, partner at Grant Thornton, explains in [this video](#): increased professionalism in modelling requires not just a training course, but a related change management process.

We often tell clients that sending analysts on a £2,000 training course is a waste of money if they then return to an environment that does not encourage (or preferably expect) a disciplined, structured approach to modelling.

If you are responsible for how modelling is done in your organisation, training is not the only thing you need to think about. While we're happy for you to send people on courses, we recommend that you look at the bigger picture first. As Nathan Goode describes in his video, Grant Thornton approached improving modelling as a full change management process, of which training was only one part.

People who "do financial modelling" often do a lot of it. It's usually a pretty big part of their job. Sometimes it is their whole job. If you are going to ask them to change the way they do modelling, that's a lot of behaviour you are asking them to change. And the longer they've been doing it, the harder it's going to be to change those habits.

Lesson No.2

**ARTICULATE
CRYSTAL CLEAR
DIRECTIONS &
EXPECTATIONS**

“WE BECOME OVERLOADED. CHOICE NO LONGER LIBERATES, IT DEBILITATES. IT MIGHT EVEN BE SAID TO TYRANNIZE.”

Barry Schwartz, The Paradox Of Choice

Several years ago, upon returning from a trip to Afghanistan with a charity I was supporting, I became completely overwhelmed in the toothpaste aisle of the supermarket. The choice was, as Barry Schwartz said, debilitating. The problem lay in the contrast between how trivial the decision was (given the terrible conditions I had so recently experienced) and the huge amount of choice I had. I simply could not choose.

As financial modellers, when we are using Excel as our modelling tool, we have complete “freedom of choice” in how we put models together. Excel is a completely blank canvas.

It is counter intuitive that this amount of freedom is mostly unhelpful.

It’s when we reduce the amount of choice that really good modelling emerges.

As Chip and Dan Heath put it in their book *Switch*:

“Ambiguity is the enemy of change. Any successful change requires a translation of ambiguous goals into concrete behaviours. In short, to make a switch, you have to script the critical moves”.

It turns out that it’s not enough just to say “we have to build better models” or “models should be easier to read”. We have to be very specific about how to achieve that.

The FAST Standard is sometimes criticised for being too prescriptive. Companies that have implemented it find that it is actually *in its level of prescription and comprehensiveness* that the power of FAST lies.

When modellers no longer have to spend time deciding how to construct the model, they are free to put more of their mental capacity to work in pursuit of more value added activities. In this way standardisation does not reduce creativity, but in fact increases it.

Lesson No.3

**BEHAVIOURAL
CHANGE IS
ALWAYS HARD**

A black and white silhouette of a person riding an elephant. The elephant is facing right, and the rider is seated on its back, holding a long stick or staff. The background is a light, clear sky, and the bottom edge shows a dark silhouette of a landscape with trees.

**“IF YOU WANT TO MAKE ENEMIES,
TRY TO CHANGE SOMETHING”**

Woodrow Wilson

DESPITE WHAT WE MODELLING GEEKS MIGHT LIKE TO THINK, PEOPLE ARE BOTH RATIONAL AND EMOTIONAL.

Psychologist Jonathan Haidt likens our emotional side to an elephant, and our rational side to its rider. Sitting on top of the elephant, the rider seems to be in charge. But any time the rider and elephant disagree about which way to go, the elephant is going to win. As Chip and Dan Heath put it:

"Most of us are only too familiar with situations in which our Elephant overpowers our Rider. You've experienced this if you've ever slept in, overeaten, dialed up your ex at midnight, procrastinated, tried to quit and failed, skipped the gym, said something you've regretted. Good thing no one is keeping score."

In "The Heart of Change", John Kotter reports on a study he undertook with Deloitte Consulting on how change happens in large organisations. He noted that in most change situations, managers initially focused on strategy, structure, culture or systems, which leads them to miss the most important issue:

"... the core of the matter is always about changing the behaviour of people, and behaviour change happens in highly successful situations by speaking to people's feelings. This is true even in organisations that are very focused on analysis and quantitative measurement, even among people who think of themselves as smart in an MBA sense."

So behavioural change is hard. It is also exhausting.

When a golfer is working on improving her swing, she will exercise considerable "self-supervision". She will be constantly watching herself to make sure she is "doing it properly", trying to remember the training she has received. Compared to the more "automatic" functioning of walking or driving long distances, psychologists have discovered that, a. self-control of this nature is an exhaustible resource and, b. exercising it is hard and very draining.

Chip and Dan Heath conclude that it's not true to say that change is hard because people are lazy. It's hard because people wear themselves out:

"When people try to change things, they're usually tinkering with behaviours that have become automatic, and changing these behaviours requires careful supervision by the Rider. The bigger the change you're suggesting, the more it will sap people's self control."

Lesson No.4

**IF YOU WANT
PEOPLE TO
PAY ATTENTION
IN CLASS...
*SET A TEST***

ONE AREA THAT SOME OF OUR CLIENTS HAVE FOUND HELPFUL IN CREATING CHANGE AMONG THEIR MODELLERS IS THE FAST PROGRAMME OF CERTIFICATION.

FAST offers testing for modellers which provides them with accreditation as a FAST certified modeller. Our clients tell us that this testing has a number of important benefits:

Modellers are more focused during training, knowing that they will be tested.

Modellers realise that the company is serious about this change process and understand that, if their colleagues are going to have this certification, they will need it also.

It provides a clear reward for good performance and an incentive to practice (which is critical to the acquisition of any new skill).

In short, testing taps into some emotions that are helpful in creating effective behaviour change; the negative—*I don't want to be the only one of my colleagues that fails this*—and the positive—*having this certification will look good*. This may still not be enough to make the change stick. We also need to look at the organisational culture and context in which modelling is happening.

Lesson No.5
**CONSIDER
THE CULTURE
AROUND
MODELLING**

“WHAT WE BELIEVE IS HEAVILY INFLUENCED BY WHAT WE THINK OTHERS BELIEVE”

Thomas Gilovich,

How we know what isn't so: The fallibility of reason in everyday life

Is modelling a team sport, or an activity for a few gifted individuals?

If modelling ability is limited to one, or a small number of “modelling geniuses” it’s going to be hard to change. It’s likely that they have been receiving a considerable pay off for being “the modelling guru”. Standardisation is a threat to their power base.

Is modelling seen to be a “black art”—something extremely clever and sophisticated that requires a very high level of intelligence?

Modelling is actually a repeatable, learnable process. It’s made mysterious and complex by people doing things their own way. The sophistication and complexity lies in knowing what to model – i.e. how the business / transaction or project works commercially.

Are you adopting a risk minimisation approach to modelling?

Modelling is *inherently* risky.

Standardisation deals with some but not all of the risks. In organisations where modelling risks are considered and evaluated, it’s hard to argue for a “do it my own way” approach to modelling.

Here are some horror stories about organisations that perhaps didn’t adopt a risk based approach to modelling:

READ OUR EBOOK
*THE DIRTY DOZEN:
12 MODELLING
HORROR STORIES*

At F1F9 we have an online risk assessment app which we use to evaluate the risk of modelling assignments. We also make this available to our clients.

WHEN IT COMES TO FINANCIAL MODELLING THERE ARE A NUMBER OF ORGANISATIONAL FACTORS THAT WILL HELP CHANGE STICK:

Management awareness.

When a model is built using FAST, the way the model has been built does not come in between the reviewer and her understanding of what's happening commercially. The structure of the model aids readability in a way that has to be experienced to be fully understood. In many of the organisations that we have seen where effective modelling practices are embedded, managers simply refuse to review models that have not been built to the standard. This kind of management "pushback" quickly focuses attention and helps reinforce positive, constructive habits.

Clear processes and protocols.

This point was emphasised by Nathan Goode of Grant Thornton. He noted that although this was hard work, getting the process documentation and clear modelling protocols in place was a critical part of the transformation of their approach to modelling. A key part of this involves building effective checklists that let people know what should be in their models. To learn more about what makes a good checklist, read the excellent "Checklist Manifesto" by Atul Gawande. (It's actually much more interesting than it sounds!)

Legacy models.

Throw them out and rebuild them according to the agreed standard. It's as simple as that. To do otherwise is to send the message that it's OK to use poorly built models. It will seem like a lot of work upfront, but not doing so will cause more work over a longer period. If you don't have the capacity to do this with your existing time, bring in some additional modelling support just for this task. When asked to deliver a training programme, we will often also provide short term model build support to transition legacy models.

Hopefully by now you understand why training alone is not enough. Don't let that put you off. If done properly, implementing a modelling standard will prove to be the best change management investment you've ever made.

CHECK OUT OUR OTHER EBOOKS...

10 PRINCIPLES OF
AGILE FINANCIAL MODELLING

S-CURVE (CAPEX) MODELLING
IN OIL & GAS

WHY FIXED PRICE CONTRACTS
ARE BAD FOR EVERYONE

OPEX MODELLING
IN OIL & GAS

THE DIRTY DOZEN:
12 MODELLING HORROR STORIES

OIL & GAS
MODELLING CHECKLIST

THE BUSINESS
ANALYSIS LIFECYCLE

ESSENTIAL
MODEL OPTIMISATION

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F1F9 eBooks

F1F9 builds and maintains financial models used by leading corporates, advisors, banks and funds.

We also train our clients to build better models themselves through courses delivered worldwide.

To discuss how our team can help you deliver better models in less time, please call

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