

Audit Committee, 15 June 2016

Internal audit – Review of 5 year plan model functionality and controls - update

Executive summary and recommendations

Introduction

Grant Thornton's approved internal audit plan for 2015-16 included an audit of the 5 year plan model's functionality and controls. They reported their findings to the November Audit Committee meeting. It was agreed that Grant Thornton would be engaged to carry out a further review of the Executive's progress in implementing the responses to the recommendations in the original report.

Decision

The Committee is asked to review and discuss the report. The Committee's attention is drawn particularly to pages 1-28 of the report. Pages 29-61 include detailed observations and management responses on specific calculations in the model, which are available as a record of the work done, but the Executive does not propose to discuss those pages in detail at the Audit Committee meeting.

Background information

The 5 year plan is a financial forecast which helps us to ensure that our finances are sustainable and to plan whether and when fee increases may be necessary. The Plan is updated annually and presented to Council for approval. The next iteration of the Plan will be presented to the July Council meeting.

The Plan is prepared on a Microsoft Excel workbook built to the FAST¹ standard. The workbook contains the Registrant numbers model, the income model and the FTP model as separable modules, which can be worked on independently by the module owners and then reintegrated into the Plan workbook. The integration means that the impact of changes in registrant numbers, for example, can be seen on both income and FTP and Registration department costs, and the whole of HCPC's financial planning can be based on consistent inputs and assumptions.

The Plan workbook was developed for HCPC by external consultants in 2014 but was over-engineered with the result that it was difficult to use and maintain. It also did not enable modelling of the impact of changes in direct debit frequency, which we need to consider as part of the Registration Transformation project, or changes over time in factors such as the FTP case to answer rate.

¹ Flexible, Appropriate, Structured and Transparent. For more information on the FAST standard see http://www.fast-standard.org/document/FASTStandard_02a.pdf

In line with the intention set out in Grant Thornton's original report, the Executive has simplified the income module while also enabling modelling of changes in payment methods, and has adapted the FTP module to enable modelling of the effect of variations in key assumptions over the future period. Grant Thornton's conclusions, on page 27 of their update report, are supportive of the changes made. We have implemented many of the recommendations in their original report, but some recommendations including documenting the model and the rationale for any derogations from the FAST standard are outstanding, and those actions will be completed over the summer.

We also intend to further develop the FTP module so that it can replace other spreadsheets currently maintained within the department for workforce planning purposes.

Resource implications

None

Financial implications

Grant Thornton's fees approx. £38k a year including VAT and expenses.

Appendices

Grant Thornton's internal audit annual report

Date of paper

6 June 2016

Health and Care Professions Council

Internal Audit 2015-16: Review of 5 Year Plan Model functionality and controls - update

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Distribution		Timetable	
For action	Andy Gillies Kirsten Cameron Roy Dunn John Barwick Kelly Holder	Fieldwork completed	29 January 2016 – 2 June 2016
		Draft report issued	2 June 2016
For information		Final report issued	3 June 2016

Introduction

The Health and Care Professions Council (HCPC) is a regulator whose primary objective is "to safeguard the health and well-being of persons using or needing the services of registrants". To achieve this, HCPC maintain a register of health and care professionals who meet their standards for training, professional skills, behaviour and health. As of 31 March 2015, the HCPC regulated c.330,000 individuals, known as registrants, from the 16 professions they regulate, including speech therapists, paramedics and physiotherapists.

The diversity of the registrant groups serviced by HCPC has implications and leads to inherent challenges, such as how to effectively build financial projections of revenue and costs that appropriately accounts for the diversity of fee levels from different registrant groups, direct and variable associated costs etc. To address this point around financial planning and budgetary processes, HCPC has developed and uses the 5 Year Plan Model¹ to forecast income, costs and associated cash flows.

The 5 Year Plan Model was developed using an external firm in line with the FAST financial modelling standard. As a result of applying the standard the model includes a large number of calculations to support forecasting of revenues across 16 professions. We reported on the 5 Year Plan Model functionality and controls in our report dated 17 November 2015. Since that report HCPC has updated and further developed the 5 Year Plan Model. The amendments to the model have been undertaken by HCPC staff, with the exception of some modifications to the Registrant Module calculations where a GT specialists modeller was seconded to HCPC under direction of Roy Dunn.

The 5 Year Plan Model is part of a wider modelling suite which includes within the spreadsheet:

- o Registrant model²
- o FTP Caseload Model³ - note that for the purposes of this review we have been provided with calculations in a standalone spreadsheet – "FTP alternative model 31-5-16.xlsx"

¹ The filename of the file supplied to us is " HCPC 5 Year Plan 2016-2021 10-05-16 with transition experiment plus FTP mods.xlsb"

² The worksheets making up the Registrant model are RegInp_A, RegInp_M, RegTime_M, RegWrk_A, RegWrk_M

³ The worksheets making up the FTP model are FTPInp, FTPQuant, FTPCost, FTPQuant_moving_fcast and FTPQuant_HandC_suppl

As part of the Grant Thornton 2015/16 Internal Audit Plan, we agreed with the Audit Committee and management that we would undertake a review of the overall coherence of key planning model and potential risks in their use.

The modelling suite is or will be used by several individuals within HCPC:

- 5 Year Plan Model - Andy Gillies / Kirsten Cameron / Tian Tian
- Registrant model – Roy Dunn
- Salaries Model – Teresa Haskins
- FTP Caseload Model – John Barwick / Kelly Holder

This report follows on from the ‘Internal Audit 2015-16: Review of 5 Year Plan model functionality and controls’ report issued to HCPC on 18th November 2015 (the Previous Report). The Previous Report highlighted some logic, formatting and FAST compliance issues with the 5 Year Plan model. This report provides an update on the work we have undertaken on the revised models and how the recommendations raised in our previous report have been addressed.

Scope of engagement

HCPC has updated the logic and data flow in several key areas of the 5 Year Plan Model following our Original Report. Specifically our work has considered the following:

Area of review	Objective
<p>Income calculations within 5 Year Model</p> <p>Specifically those set out in worksheet "IncWrk - AS3"</p>	<p>Review the approach to which the income calculations have been modified for a sample profession (Arts Therapists – "AS" code) to consider the extent to which they remain consistent with the approach adopted in the previous model and address the issues and queries identified in our last report.</p> <p>Review the amended model calculations to consider the extent to which they reflect financial modelling, and in particular the FAST standard or where derogations are being applied.</p>
<p>Fitness to Practice Costs within 5 Year Plan Model</p> <p>As provided in a standalone file "FTP alternative model 31-5-16.xlsx"</p>	<p>Reviewed the amended FTP calculations to consider the extent to which they address the issues and queries identified in our last report.</p> <p>Review the amended model calculations to consider the extent to which they reflect financial modelling, and in particular the FAST standard or where derogations are being applied.</p> <p>Undertaken analytical testing to identify trends in key outputs and changed the inputs within the input sheet to determine whether these were impacting the model as intended, on a sample basis.</p>

The review and this report is limited to the sheets referred to above, and we note that there will remain an exercise to replicate the workings for the Arts Therapists for the other professions within the 5 Year Plan Model. Our review is limited to the calculations and structure of the model, we make no comment upon the underlying assumptions utilised by the model. While we have informed HCPC of any potential logical errors in the 5 Year Plan Model that we have

found solely in the course of the agreed scope of our work, given the agreed scope of our work, our work should not be read as providing assurance the Model is completely error free.

Our agreed scope of review of model functionality and controls provides an opportunity to highlight the issues, concerns and challenges that may arise from the ongoing use of a financial model. These can be particularly useful where the requirements of a model have changed or if its results are no longer in line with expectations.

With any financial model they are designed as an approximation of reality as it is neither realistic nor desirable to construct a model that covers every potential detail and variable that may impact on future forecasts. Not least because the model would become very complex and likely require a large number of inputs to collate and input. In our experience useful financial models adopt simplifying assumptions to focus on the key cost and revenue drivers, however it is recommended to keep these under review to ensure they remain valid. This approach is the same as that used by the FAST standard, a financial modelling standard which we also use at Grant Thornton.

Grant Thornton approach

Following our Previous Report we have been provided with updated workings for the Arts Therapists (AS) revenue calculations and have feedback comments on an iterative basis (documented in Appendix 2) with a meeting on 12 May 2016 attended by Grant Thornton representatives and members of the HCPC modelling team including:

- Andy Gillies, Director of Finance
- Kirsten Cameron, Interim Finance Business Partner

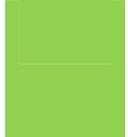
The review of the updated Fitness To Practice calculations was undertaken off-site based upon revised files provided to us.

Overall view of the HCPC 5 Year Plan Model functionality and controls

Our previous report concluded that the individuals involved were generally comfortable with the model and how it operates. However there were a number of concerns identified in respect of the model size and the flexibility of the model to be adapted for different assumptions as the business changes – for example in forecasting Fitness to Purposes tests and alternative direct debit arrangements. In addition several structural changes had been implemented within the model in order to increase the functionality but were not implemented in a manner which was fully consistent with the FAST standard – primarily this related to income calculations to reflect different direct debit timings.

The revised workings for the revenue calculations provided for the Arts Therapists address the issues raised in our previous report. We note that in order to reduce the file size and length of worksheets a number of derogations have been made to the FAST standard. Specifically FAST standard 2.02-01 "All ingredients must be presented as links immediately above the calculation with consistent calculation order and appearance in the formula." The 5 Year Plan Model and FTP workings frequently refer to "ingredients" further up the worksheet to minimise filesize. We recommend that this derogation is clearly documented in the model and accompanying user guides, noting that the potential impact of reduced filesize is considered to outweigh the reduced ease of reading the model calculations.

We note that the amended workings for the Arts Therapists revenue will require replicating for the other professions within the 5 Year Plan Model

Grant Thornton Comment	Rating	Updated Model Comments
1 Income calculations within 5 Year Plan Model (for Arts Therapist)		<p>The updated model is significantly smaller in size and the calculation logic is easier to follow as a result of the amended calculation methodologies.</p> <p>The issues raised in our previous report have been closed subject to the Arts Therapist workings being</p>

Grant Thornton Comment	Rating	Updated Model Comments
2 Registrant calculations within 5 Year Plan Model	Green	<p>replicated for the other professions</p> <p>In our previous report we identified a number of points arising from a comparison to a Basic Model. We understand that going forward an updated Registrant Model will be used which is integral to the 5 Year Plan Model and so these outstanding points are no longer relevant. The forecasting methodology in the Registrant model has been updated to include dynamic reforecasting based upon the actuals entered into the model.</p>
3 Fitness to Practice Costs within 5 Year Plan Model	Yellow	<p>The Fitness to Practice Costs model has been redeveloped however a number of actions remain outstanding:</p> <ul style="list-style-type: none"> • The FTPQuant_moving_fcst worksheet needs completing as the sheet is currently blank • There remains unreferenced inputs and calculations which should be removed or link to model outputs • Confirming the “Actuals” flag is dynamic when included in the 5 Year Plan Model (in the separate file it is a hardcoded value) • Consider adding a tracker and checks to the model • Other best practice comments can be found in Appendix 3 and the table below.
4 Overall review of 5 Year Plan and framework for updating / modifying versions and the individual components.	Yellow	<p>Additional checks have been added and the errors from the structural changes appear to be resolved. However the latest version does report some errors which should be investigated if they remain once the amended Arts Therapist workings have been replicated</p>

Interpreting the assessment categorisation

Rating	Summary	Description
Green	Areas of strength	General adherence to planning and modelling best practice
Amber	Suggested area of management focus	<p>General adherence to planning and modelling best practice, but with areas of deviation.</p> <p>Potential issues identified within the model or planning process which may increase risk of errors or achieving objectives in the most efficient and appropriate manner. Focussed attention in stated areas is recommended otherwise, in our opinion, the robustness of the 5 Year Plan may be at risk if areas highlighted are not appropriately addressed.</p>
Red	Requires immediate attention	An issue is identified which may have a significant impact on 5 year forecasts or where the robustness of the 5 Year Plan is at significant risk due to lack of, or inappropriate, control mechanisms. Management action required.

Green = areas of strength, Amber = suggested area of management focus, Red = requires immediate attention

	Previous Grant Thornton Comment	Rating	Previous Management Response	Updated Comment
1	<p>Income calculations within 5 Year Plan Model</p> <ul style="list-style-type: none"> Our findings support the management assessment that the 5 Year Plan Model is relatively large (>40MB) and that a key contribution to this is the structure adopted by original developers of the model for the income calculations which involves significant repetition of calculation blocks when applying the FAST standard. An alternative method has been proposed by HCPC which involves some derogations to the FAST standard – where this is adopted we recommend the rationale is documented and further integrity checks are added. For example the total of DD payments accrued should be the same in 'IncWrk - AS - alt'I475:I492 and 'IncWrk - AS - alt'N520:EO520 – they are not because of an issue with the timeline but adding an error 		<ul style="list-style-type: none"> We want to develop the 5 Year Plan Model in order to support decisions over possible income process changes, to better support in year resource planning in the Fitness to Practise Department, and to integrate with the budget setting and forecasting processes. The Model is already large and complex, so to enable further development, we intend to simplify the current Model where possible within the bounds of the FAST standard. Simplifications will focus on the income and cash calculations, which is where the greatest complexity and repetition lies. Any changes will be tested in order to ensure the Model still calculates the same results after the simplification. We agree that the rationale for the changes will 	<ul style="list-style-type: none"> The new approach has been adopted for Arts Therapists which we understand will then be replicated across the other professions

	Previous Grant Thornton Comment	Rating	Previous Management Response	Updated Comment
	<p>check on this would highlight and help maintain integrity where calculations use "ingredients" from a number of calculations blocks to reduce overall file size.</p> <ul style="list-style-type: none"> In reviewing the calculation structures we note that there may be significant simplifications possible in some calculations which could reduce the model size and ease readability while maintaining compliance with FAST modelling standard. For example the calculation of the Initial Payment takes the total payments in each model phase and then reprofiles them in line with the new registrant profile, whereas the same result can be obtained for the AS group within significantly fewer lines of calculation by multiplying the number of new registrants by the relevant DD or CC payment for that period – see example in Appendix 2. Note that this result demonstrates that a blended rate can apply when the 		<p>be documented and that additional integrity checks will be built into the model.</p> <ul style="list-style-type: none"> Noted. We also note the “blended rate error”, which will result in a small misstatement of the timing of cash receipts, and we will aim to correct that in the revised calculations referred to above. 	<ul style="list-style-type: none"> Closed. The updated methodology has simplified the calculation for Arts Therapists and addressed this error.

	Previous Grant Thornton Comment	Rating	Previous Management Response	Updated Comment
	<p>Initial Period covers a period where there is a step-up in charges leading to a potential overstatement of the revenue accrued. We understand this could be considered to not be material on the basis that this represents a very small proportion of total income for HCPC and there are already simplifying assumptions in place in respect of when individuals register and their entitlement to a free period.</p> <ul style="list-style-type: none"> We note that the issue identified for the Initial Period does not occur with Credit Card payments as the CC periods coincide with the any change in fees but that there can be a small one month difference in DD values (e.g. for IncWrk-AS DD10 starts in col BW for accrual and therefore includes one period at £76 and all other periods at £90 – as per row 562) In order to assess the impact of alternative direct debit structures (e.g. 		<ul style="list-style-type: none"> Noted We note the non-compliance with the FAST standard in respect of the sensitivity modelling for monthly/quarterly/bi-monthly direct debits. We will aim to design a more integrated, FAST 	<ul style="list-style-type: none"> Closed. The updated methodology addresses the issue with the credit card payments.

	Previous Grant Thornton Comment	Rating	Previous Management Response	Updated Comment
	<p>moving to monthly, bi-monthly or quarterly payments) a number of amendments have been made to the calculation. From our limited testing we consider that the approach taken is reasonable but does not apply the FAST standard and modelling best practice in a number of respects which should be addressed (for example inconsistent formula across a row). When the calculations are finalised we would recommend re-running tests to ensure that when the model is in a steady state the cash flows and revenues behave as expected (e.g. flat).</p> <ul style="list-style-type: none"> We would recommend that the model is subject to future testing, particularly where structural changes are made. For example, such testing could involve running through test data scenarios. HCPC may also wish to consider undertaking a full model review when substantial changes are made. 		<p>compliant approach to modelling cash receipts, allowing for variation of the direct debit frequency and also the proportion choosing to pay by direct debit at various points through the modelled period. The approach will be documented and tested and include integrity checks as recommended above.</p> <ul style="list-style-type: none"> Agreed 	<ul style="list-style-type: none"> Closed. The updated methodology has addressed these with one derogation in respect of calculation blocks which we recommend is clearly documented in the model and userguide

	Previous Grant Thornton Comment	Rating	Previous Management Response	Updated Comment
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- We have identified a number of issues within the calculations but these do not appear to have a material impact or only affect the latter years of the forecast and so the overall rating of amber is applied.

- An overall rating of Green is applied noting that this is dependent upon the derogation for calculation blocks being documented and the workings for the Arts Therapist being replicated

2 **Registrant calculations within 5 Year Plan Model**



Our comparison of the calculations contained within the 5 Year Plan and "Copy of Registrant numbers module of 5YP 14-09-15 RD FINAL", has highlighted a limited number of variances but these are not considered

- It should be noted that the Basic model, as its name implies is used for a sanity check only on the high level outputs from the FAST model.
- We understand the Basic model will not be used going forward and so this comment is closed. The forecasting methodology in the Registrant model has been updated to include dynamic reforecasting based upon

	Previous Grant Thornton Comment	Rating	Previous Management Response	Updated Comment
	<p>material.</p> <p>Our comparison of the outputs from the "BASIC MODEL NO Rf-20150720cQUADCBProjected registrant numbers – 2015 – 2021 – version with 4%and2%rmv1 – amended upd" and the 5 Year Plan, has highlighted several variances:</p> <ul style="list-style-type: none"> For International Applications the Basic Model assumes the values from the last year of actuals are rolled forward. In the 5 Year Plan however a base set of values are used which are significantly smaller. The applications component does not appear to have further dependents in the model so it is not possible to quantify the impact of this inconsistency. A different reduction methodology has been applied in the Basic Model and 5 Year Plan although the outputs are currently the same. The 5 Year plan uses a base set of values which 		<ul style="list-style-type: none"> Although this is a minor error in the FAST model, because it is only in the international applications, it does not have a material impact on the registrant numbers. The two models are different by 1,875 applicants. However this does not affect the projected international registrant numbers. This is correct. The principle of the FAST model is to reduce the nesting of calculations. The outcome is the same, between the two models. 	<p>the actuals entered into the model.</p>

	Previous Grant Thornton Comment	Rating	Previous Management Response	Updated Comment
	<p>are continuously multiplied by a decreasing percentage, while the Basic model multiplies the previous year by a consistent percentage decrease. This has no impact where the assumptions are set to generate the same values.</p> <ul style="list-style-type: none"> The Readmissions sheet within the basic model has an inconsistency such that the PHS value is not included within the total for one period. This drives a variance between the two models. There appears to be some inconsistencies contained within the actuals for the first year of Actuals in the Readmissions sheet. The 'removed registrants less readmis' sheet on the Basic model has some significant variances to the 5 Year Plan due the use of the '-' symbol removing the calculation value. As indicated in the 'Key Assumptions' sheet this symbolises that the route is 		<ul style="list-style-type: none"> This is correct. The Basic model is under-calculating by 10 registrants. The Basic model is simply a sanity check for the FAST model we use to forecast PHS are unlikely to be regulated by HCPC in the near future, but this is yet to be confirmed This is correct. The Basic model calculates readmissions differently to the FAST model. This inconsistency was identified with the Basic model when the FAST model was created. The FAST model is correct. This is a deliberate facet of the model, allowing us to always base predictions on actual values. 	

	Previous Grant Thornton Comment	Rating	Previous Management Response	Updated Comment
	<p>not viable, although this logic does not appear to apply in the 5 Year Plan. The impacted output appears limited to the 'Removed less Readmission' graph.</p> <p>The flexibility to change modelling assumptions for Registrant Calculations within the 5 Year Plan Model is limited by several factors, including:</p> <ul style="list-style-type: none"> • The mechanics of the model are such that for any migration from 'Actual' to 'Forecast', without an over-riding hard-coded number the last Actual value is rolled forward to the forecast. There is no ability to average/smooth the data or take account of the average from previous periods. • When removing Registrants the model does not distinguish between those who are newly joined which may have discounted fees and those who are retained with no such discounting. We understand this is 		<p>Change to projections can be made by varying percentages for future years, where we believe we have evidence of imminent change.</p> <ul style="list-style-type: none"> • It is not possible to track discounted fee registrants vs. full fee paying registrants with the existing reporting software. Therefore as we cannot provide reliable inputs on these quantities we do not model the projected numbers. Intuitively, it is considered that longer standing registrants are much more likely to 	

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	<p>accepted as a modelling simplification as most removals tend to occur within the group paying the full fee (e.g. at retirement from the profession).</p> <ul style="list-style-type: none"> The Readmissions are calculated in each period as a percentage of the opening balance rather than those who left in the previous period. This implicitly relies on a stable correlation between the number of leavers in the last period and readmissions. There is no check in place that any actual input (which would overwrite calculated values) for the number of readmissions is not higher than the number of leavers in previous period. While this may be possible due to the definitions of the terms, we suggest you may wish to consider adding an "alert" to highlight where this occurs so the model user does check this input is appropriate. 		<p>come off the register or fail to renew, than those newly on the register and paying discounted fees.</p> <ul style="list-style-type: none"> We will consider this as a possible amendment / improvement. 	<ul style="list-style-type: none"> No alert has been added although its use may be limited given changes to forecasting approach.

	Previous Grant Thornton Comment	Rating	Previous Management Response	Updated Comment
3	<p>Fitness to Practice Costs within 5 Year Plan Model</p> <ul style="list-style-type: none"> We did not identify any major issues with inserting new data to reforecast the 5 year plan based on updated actuals. We do however recommend inserting a model version tracker as a way of assessing performance against the budget and long term forecasts. We note that it is not currently possible to change the forecast dates for FtP costs independently to other calculations and understand this functionality may be helpful. One approach would be to insert a flag to limit changes to forecast and actual periods to only the FTP sections of the model. However when implementing this we would recommend that this is clearly reported to users so they are aware of assumptions being used We have observed that the model can cannot currently be used for sensitivity analysis or as a resource 		<ul style="list-style-type: none"> Noted, though to reforecast, the start and end date of the budget actuals would need to change, which impacts on registrant numbers calculated elsewhere. This is not explicitly addressed in the detailed section on page 21 of this document. Noted and agreed. We'd want to do this to assist with future budget planning and resource management, especially to monitor the impact of planned changes in FTP processes and structures. 	<ul style="list-style-type: none"> We note that the FTPQuant_moving_fcst worksheet does not currently contain calculations and is therefore still work in progress. This worksheet has therefore been excluded from our review. All costs reported in the model are summarised at the top of the FTPCost worksheet. We have tested on a sample basis the inputs contained within the FTPInp worksheet and identified that changing the number of case managers does not have an impact on the costs presented within the FTPCost worksheet and that a number of inputs were not used (see Appendix 3 for further details on this). We did not identify any other unexpected changes. It should be noted that a large number of the unused inputs relate to 'Actual' values. We recommend that these should either be removed from the model or linked to the

	Previous Grant Thornton Comment	Rating	Previous Management Response	Updated Comment
	<p>/workflow planning tool. In the models current state the addition of monthly updates to enable resource planning and effective reforecasting would require a periodic freeze of the registrant assumptions. This would also drive the need for a reconciliation/ logic check between the frozen and updated registrant values. Implementing this would require an update of the model with sufficient testing to ensure a robust procedure for updating inputs and reconciling frozen values.</p>			<p>relevant calculations.</p> <ul style="list-style-type: none"> As with the previous model, the identified cost groups still follow a similar profile to each other. However, these costs now increase until the period ending 30 April 2016 (period 61), where they increase sharply before decreasing until the period ending 31 August 2017 (period 77) where they flatten. This trend appears to be driven by the ‘Case to answer rate applicable per given month’, which changes over this period as a result of changes in input values over time. Additionally, we note that functionality has been added on the inputs for a number of cost groups to change the rates for these several times. For example, the model contains functionality to change the rate at which cases are processed a limited number of times using an index match formula with the date of the change required. Flexibility may be increased if a series was used to control levels of activity over a period, however we note that this

	Previous Grant Thornton Comment	Rating	Previous Management Response	Updated Comment
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method would be harder to review.

- The model contains functionality to change the number of case workers a limited number of times using an index match formula with the date of the change required. However, these do not feed into the output. Please consider removing this section if it is no longer used in the model.
- Functionality to change between actuals and forecast data has been included within the FTPQuant worksheet. In the extract provided this is a hardcoded value which we assume will be dynamic when reincorporated into the 5 Year Plan Model but recommend this is confirmed in the final model.
- We note that there currently is no check to test whether the balance falls below zero or hits a threshold. Such functionality may aid management in resource planning.
- We note that the worksheet titled FTPQuant_moving_fcst currently contains inputs that have not been

	Previous Grant Thornton Comment	Rating	Previous Management Response	Updated Comment
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formatted as inputs.

4

Overall review of 5 Year Plan and framework for updating / modifying versions and the individual components.



Model Integrity Checks

We note there are limited checks within the model and those that are present focus on labelling rather than logic / consistency of inputs. We suggest a review of key validation checks (e.g. level of readmissions compared to leavers) are considered and added. This could also include general integrity checks such as ensuring that the balance sheet balances which we understand are undertaken outside the model at present.

The model has 4 error flags which we understand arose from the structural changes to model and we recommend are reviewed and resolved.

We also noted that:

- Agreed

- Agreed

- Agreed.

- Additional checks have been added on financial statements (some reporting errors in version provided which should be checked when model finalised). Although further checks may be appropriate as the model is finalised

- The data management errors present in the previous version reviewed have been resolved.

- Redundant actual annual inputs for the Registrant Module have been removed

- The updated methodology has addressed

	Previous Grant Thornton Comment	Rating	Previous Management Response	Updated Comment
	<ul style="list-style-type: none"> - in the version maintained checks sheet was hidden, we would recommend that this is maintained as a visible sheet. - the inputs for the registrants is duplicated for annual and monthly inputs, we would suggest that a single monthly input is used and these are summated to provide the annual format in which the model calculates to avoid the need to duplicate inputs. - the model appears to contain a large amount of redundant data. For example - there are several corkscrew calculation blocks⁴ in the Fitness to Practice section which have no dependents or checks based upon them. There are also a large number of calculated values in the Registrant module which do not appear to contribute to the intended use of the model, such as the 'Applications' calculations ('RegInp_A'!N725:AB742) and 'Visiting professionals' which appears 			<p>the redundant calculations, however we note that there are further redundant calculations and inputs within the updated Fitness to Practice model.</p> <ul style="list-style-type: none"> • We understand that historic data contained within the model will be streamlined once the model is completed.

⁴ A "corkscrew calculation block" is one which tracks a movement in balance – opening balance + additions – deductions = closing balance. The closing balance becomes the next periods opening balance and so if you use the Excel formula audit functionality to trace the dependents the arrows follow a corkscrew structure.

	Previous Grant Thornton Comment	Rating	Previous Management Response	Updated Comment
	<p>almost completely distinct. For example our understanding is that the scrutiny fees is driven by an input ('IncInp'!N210:Y221) rather than being driven from the applications inputs. Given the size of the model, we would suggest that the unrequired components and historic actuals are removed.</p> <p><u>User guides / model maps</u></p> <p>We note there are no detailed user guides or maps for a complex model which presents risks on succession planning. We recommend that guides are developed as to how the various inputs are updated each year to ensure assumptions are reviewed and updated in a consistent manner. This is particularly important where models include a number of input sheets or where the inputs need to be updated in a specific way. For example it is important that any adjustment to renewal fees entered on the "Fee changes" worksheet coincide with the renewal dates entered on "</p>		<ul style="list-style-type: none"> Agreed Formalised change control with independent sign off is unlikely to be practical given the time investment needed to understand the Model and the small number of HCPC employees who use the Model 	<ul style="list-style-type: none"> It is understood that there is no formalised change control or tracker currently in place.

Previous Grant Thornton Comment	Rating	Previous Management Response	Updated Comment
<p>'RegInp_M!I280:I297"</p> <p><u>Model trackers / change control</u></p> <p>While a note of model changes has been prepared in a word document detailing changes made, we would recommend this is part of an overall change control process where the model amendments are subject to independent review prior to signoff.</p> <p>We note that there is no model tracker used to assist in version control so any input or structural changes can be monitored and changes amended – we would suggest including this which could track key KPIS between versions – 5 year revenue, costs, cash, registrant numbers etc.</p>		<ul style="list-style-type: none"> • Agreed 	

Conclusion

Overall the model is considered in material respects to continue to be fit for purpose in respect of the overall current way of planning and modelling through separate but integrated models. In reaching this conclusion we have considered the extent to which the registrant numbers, fitness to practice, income and five year financial model are coherent, appropriate and consistent with best practice.

The amendments made to the revenue workings for the Arts Therapists do make the calculations and logic applied much clearer and also reduce file size. We recommend that the 5 Year Plan Model is re-tested when these workings are replicated for other professions.

The 5 Year Plan Model and FTP workings frequently refer to "ingredients" further up the worksheet to minimise filesize. We recommend that this derogation from the FAST Standard is clearly documented in the model and accompanying user guides, noting that the potential impact of reduced filesize is considered to outweigh the reduced ease of reading the model calculations

We continue to recommend that a detailed user guide is prepared for the suite given the business critical nature of these spreadsheets and that a standard tracker or filenaming convention is used so that specific outputs or checks can be easily referenced back to the source model.

While we have informed you of any potential logical errors in the 5 Year Plan Model that we have found solely in the course of the agreed scope of our work, given the limited nature of the assessment we are not able to provide you with assurance the Model is free from error.

Acknowledgement

We would like to thank those HCPC staff who assisted us during the course of the review.

Grant Thornton UK LLP
June 2016

Appendix 1 – Document Reviews

For this review we have considered the following:

Summary of document review

- **HCPC 5 Year Plan 2016-2021 10-05-16 with transition experiment plus FTP mods**
- **FTP alternative model 31-5-16.xlsx**

Appendix 2 – Queries and issues summary for amended 5 Year Plan workings

Introduction

The attached summarises queries / issues identified during a high-level review of the amended workings in the original 'IncWrk – AS2' and updated 'IncWrk – AS3' sheets as part of the Internal Audit 2015 -16 plan. While we have informed you of any potential logical errors in the 5 Year Plan Model that we have found solely in the course of the agreed scope of our work, given the limited nature of the assessment we are not able to provide you with assurance the Model is free from error. Where comments are raised but corrective action is not taken, the result is not strictly FAST compliant and derogations would need to be stated for the model.

All model references are to the version "HCPC 5 Year Plan 2016-2021 29-02-16.xlsb" provided to us via email on 29 February 2016; with updated comments against the version "HCPC 5 Year Plan 2016-2021 4-4-16 with transition experiment.xlsb" provided to us via email on 20 April 2016; further comments against the version "HCPC 5 Year Plan 2016-2021 3-5-16 with transition experiment.xlsb" provided to us via email on 03 May 2016 and further comments against the version "HCPC 5 Year Plan 2016-2021 10-05-16 with transition experiment plus FTP mods" provided to us via email on 12 May 2016 at 15:49.

References to FAST standard (e.g. FAST 2.01-05) are to published standard version Version/ FAST02a/ 29.05.14 available on-line at http://www.fast-standard.org/wp-content/uploads/2015/03/FASTStandard_02a.pdf

Cell references stated are in relation to the sheet iteration at which the point was raised.

Queries / issues with potential commercial impact or impact on use of model

ID	Issue	Cell reference	Comment / Query	HCPC – Response	GT – Response	HCPC - Response 2	GT – Response 2	HCPC - Response 3	GT – Response 4
1	Calculation of transition period	'IncWrk - AS2\!CT223 'IncWrk - AS2\!177:180	The first monthly DD payment is in April 2018 in this modelled profession which is 7 months after the last 6 monthly payment so appears to be a month too late? This seems to be due to calculation of transition flag and we have separately sent through queries on how transition has been applied.		–We note this is not active in latest version but running a sensitivity so quarterly payment start in April 2018 shows there is no longer an additional month delay before first payment			The modelling assumes that if we were to enable monthly or quarterly direct debit, the DDs would be collected at the start of the applicable period, rather than 2 months in advance of the applicable period as at present	
2	Model Errors	= Check!\$I\$9	We note that the model still reports errors which we suggest are closed	This has been corrected	We understand from the covering email that	This is correct. Once the 2016 actuals are added	Closed		

ID	Issue	Cell reference	Comment / Query	HCPC – Response	GT – Response	HCPC - Response 2	GT – Response 2	HCPC - Response 3	GT – Response 4
					these errors exist due to a need to update inputs but have not verified this at this stage			into the model these will disappear	
3	Inputs no longer used	'IncInp'158:173	The model calculations have been amended so that international and grandparenting fees are treated the same but there remains separate inputs on the input sheet. We would recommend consolidating the inputs so the redundant inputs are not present and used in error.		These are highlighted but not yet removed – we assume they will be removed in final version		Following the comment in the email – there should be appropriate commentary and formatting for redundant lines, but otherwise comment closed.	Grandparenting may arise again in future so we have not removed it from the structure	

ID	Issue	Cell reference	Comment / Query	HCPC – Response	GT – Response	HCPC - Response 2	GT – Response 2	HCPC - Response 3	GT – Response 4
4	Redundant imports	'IncWrk – AS3!G205:K206	The spread input values are not connected to the calculations for the number of months' advance payments assumed spread over.					Changed	Comment closed

Queries / issues with presentational impact

ID	Issue	Cell reference	Comment / Query	HCPC - Response	GT - Response	HCPC - Response 2	GT – Response 2	HCPC - Response 3	GT – Response 4
1	FAST 2.01-03 Row consistency	'IncWrk - AS2!N2:EO 2 (and time lines on other worksheets)	This is a mix of hardcoded input and calculated values with a separate timeline on each sheet. To comply with FAST standard this should be consistent and recommend linking to a common timeline in model across row (e.g.	Have corrected this so that it links bank to Time sheet Row 22 as suggested.	Agreed although there is a link one cell beyond required (Apr 22 whereas calcs stop Mar 22)	I have deleted this	Closed		

ID	Issue	Cell reference	Comment / Query	HCPC - Response	GT - Response	HCPC - Response 2	GT - Response 2	HCPC - Response 3	GT - Response 4
			'Time'!N22:HJ22)						
2	FAST 2.01-03 Row consistency	'IncWrk - AS2'!N3:EO 3	This is a mix of hardcoded input and calculated values with a separate timeline on each sheet. To comply with FAST standard this should be consistent and recommend linking to a common timeline in model across row (e.g. 'Time'!N116:HJ116)	Have corrected this so that it links back to Time sheet Row 116 as suggested.	Closed				
3	FAST 2.01-03 Row consistency	'IncWrk - AS2'!N4:EO 4	This is a mix of hardcoded input and calculated values with a separate timeline on each sheet. To comply with FAST standard this should be consistent and recommend linking to a common timeline in model across row (e.g. 'Time'!N28:HJ28)	Have corrected this so that it links back to Time sheet Row 28 as suggested.	Closed				

ID	Issue	Cell reference	Comment / Query	HCPC - Response	GT - Response	HCPC - Response 2	GT – Response 2	HCPC - Response 3	GT – Response 4
4	FAST 2.01-03 Row consistency	'IncWrk - AS2!N5:EO5	This is a mix of hardcoded input and calculated values with a separate timeline on each sheet. To comply with FAST standard this should be consistent and recommend linking to a common timeline in model across row (e.g. 'Time!N9:HJ9)	Have corrected this so that it links back to Time sheet Row 9 as suggested.	Closed				
5	FAST 2.01-05 Highlighting of intra-sheet counter flows	'IncWrk - AS2!N10:EO23	FAST standard recommends these are highlighted – e.g. as per 'RegWrk_A!197:197	Have corrected – have done the same with N28:EO36	Closed				
6	FAST 3.06-02 Daisy chains – links to links	'IncWrk - AS2!N10:EO11	E.g. for row 10 a direct link would be to row 160 rather than 218	Have corrected – have also linked row 16 to a higher up	Closed				

ID	Issue	Cell reference	Comment / Query	HCPC - Response	GT - Response	HCPC - Response 2	GT – Response 2	HCPC - Response 3	GT – Response 4
row									
7	FAST 2.04-02 – use comment column rather than comment function so clearly visible	Not exhaustive but includes 'IncWrk - AS2!G12, 'IncWrk - AS2!G13, 'IncWrk - AS2!G15'Inc Wrk - AS2!G19:G22, 'IncWrk - AS2!G30,'IncWrk - AS2!G30, 'IncWrk - AS2!G35, 'IncWrk - AS2!G68 , 'IncWrk - AS2!G82, '	Review need for comment cells and remove or include as visible comment	Have removed the comments and inserted them in column A	We note that comments have been included in column A. We would recommend using another column as this is used for section titles and can aide quick navigation through workbook (by use of CTRL-DOWN and CTRL –UP arrows. You may wish to consider that	I have changed this to be column H	We note that you have inserted a column keep a space between comments and constants. Timelines should have a consistence starting point on every sheet – when this update is applied therefore all sheets with the time would need to have column	I didn't mean to insert the additional column so I have deleted it	Comment closed

ID	Issue	Cell reference	Comment / Query	HCPC - Response	GT - Response	HCPC - Response 2	GT – Response 2	HCPC - Response 3	GT – Response 4
					column 'H' is better suited.		inserted in the same place.		
8	Redundant rows	'IncWrk - AS2!G12	Consider removing as not needed rather than including blank. For example this creates a risk is that content is inadvertently included in blank cells which feeds through to totals and subsequent calculations	Have left the rows in due to it pulling up errors id deleted. We are looking to change how the accounts are mapped, so when we do this we should be able to remove the redundant lines with no impact.	We have not been able to replicate errors and have only identified Only dependent as the sum on row 24	I have removed this row	There are further redundant rows which could be removed: 12, 14, 18, 19, 29, 31, 35	We have deleted all the redundant rows with the exception of grandparenting, we have kept these in case grandparenting comes back in the future	There should be appropriate formatting and commentary for redundant rows, but otherwise comment closed
9	Linking to more than one row	'IncWrk – AS2!18:18	This formula references row 225 + 227 – it would aid readability and tracing	Have corrected	Corrected for most counterflow	To make this easier I have added in the	Closed		

ID	Issue	Cell reference	Comment / Query	HCPC - Response	GT - Response	HCPC - Response 2	GT - Response 2	HCPC - Response 3	GT - Response 4
		'IncWrk – AS2!N22:E O22	back o formulae if it referenced a total of the two rather than having to look at both rows. (For row 18 you may wish to consider restructuring 'IncWrk – AS2!224:227 so that it has year 1 & year 2 pre-offset. Then year 1& year 2 post-offset.)	this	items although row 31 still contains calculations.	row to the calculation block up the top			
10	FAST 3.05-03 – Unique labelling	Not exhaustive but includes 'IncWrk – AS2!21:21 'IncWrk – AS2!G68:J68	Where values are a link to another part of workbook we suggest also linking label. There are several occasions where this occurs but in this example the same row of calculated values is called both “Direct debit payments – Existing Registrants – AS” (row 21) and “Renewal fee – full fee	Have done this	Closed				

ID	Issue	Cell reference	Comment / Query	HCPC - Response	GT - Response	HCPC - Response 2	GT - Response 2	HCPC - Response 3	GT - Response 4
			paying registrants – DD – after offset” (row 229)						
In 11	Labelling	'IncWrk - AS2!G34	Suggest removing (DD) if this includes all income regardless of payment method	Have linked these up to the calculations – now should only say DD if necessary	Noted				
12	FAST 1.01-06 – formatting of imports	'IncWrk - AS2!40:44 'IncWrk - AS2!G68:J68 'IncWrk - AS2!135:136	Imports from other sheets should be coloured blue as per FAST standard – see 'RegWrk_M!967:969 for an example of style	Have changed the following rows to be blue: 40:47,49,68,135:142,145:149,152:156,170:173,183:186,190:191,204:205,207:208	Rows 121 and 122, 'IncWrk - AS3!N59:E063 are imports (marked correctly in blue) but are also marked as an input. 'IncWrk - AS3!G40:G41 are	These have been completed	Rows 59 – 64 are still marked as an input. We suggest the format is changed to reflect import (e.g. as per row 110 on same sheet)	Done	Comment closed

ID	Issue	Cell reference	Comment / Query	HCPC - Response	GT - Response	HCPC - Response 2	GT – Response 2	HCPC - Response 3	GT – Response 4
					marked as input but not linked. 'IncWrk - AS3!G214:J 215 are marked as import though are daisy chained rather than imported and linked. 'IncWrk - AS3!N61:E O61 – values should be imported before being used in a calculation.				
13	Flags for end of year 1 and year 2 simplification and use of	'IncWrk - AS2!49:66	The end of year 1 and year 2 flags are calculated over 14 rows – you may wish to consider	Have corrected this	Flags reduced logically, although the		Following comment from email – It would be	Have added in flags for 1 &2 above the formula	Comment closed

ID	Issue	Cell reference	Comment / Query	HCPC - Response	GT - Response	HCPC - Response 2	GT - Response 2	HCPC - Response 3	GT - Response 4
	hardcoded values		consolidating this calculation given after establishing the first two flags for end of year 1 and end of year 2 in a monthly models – all other flags will be 12 months later and so this could be done using an INDEX/MATCH over fewer lines. This should also enable the avoidance of hardcoded values in flags.		hardcoding of '2' is still present		appropriate to have a separate flag to determine the end of each year. Hardcoded values within formula should be limited to 1 or 0.	and linked to this	
14	Avoiding hardcoded values in workings and simplification	'IncWrk - AS2!71:77	This flag calculation uses hard coded values and would need to be manually adjusted – an example of an alternative calculation has been supplied separately	Have corrected this	'IncWrk - AS3!G55:J5 5 should be on input sheet and imported. Otherwise closed	Done – I have linked this to IncInp I112	Closed		
15	FAST 3.04-02 – include spaces	For example 'IncWrk -	As per FAST standard and to improve	Done	Done for this row but	Done	Rows: 131, 145, 173,	Done	Comment

ID	Issue	Cell reference	Comment / Query	HCPC - Response	GT - Response	HCPC - Response 2	GT - Response 2	HCPC - Response 3	GT - Response 4
	between arguments in formulae to aid reading	AS2!N81 =IF(AND(N69=TRUE,N77=1),N40,0)	readability it is suggested to include spaces in formula		suggest you consider applying for other rows (particularly where IF statements)		186, 190, 202, 205, 209, 226, 232, 233, 234, 234, 244, 245 in particular would also benefit from spacing to aid viewing.		closed
16	Linking to ingredients outside calculation blocks	For example 'IncWrk - AS2!81:81, 'IncWrk - AS2!87:87	In the examples highlighted these reference row 40 which is an import from IncInp of UK graduates. It would be easier to follow if the UK graduates were included just above Pool 1 so that value driving the Pool 1 and Pool 2 additions can be seen without scrolling up worksheet.	Have corrected this so that the registrant numbers are directly above the calculation block.	Example moved, but other import in the local area are drawn on from much further down the sheet ('IncWrk - AS3!60:63). FAST calculations	Have changed rows 120:121 to not be orange, have changed row 39:40 to be linked, have changed J213:214 to black font to show not	Closed		

ID	Issue	Cell reference	Comment / Query	HCPC - Response	GT - Response	HCPC - Response 2	GT - Response 2	HCPC - Response 3	GT - Response 4
			<p>Note in general we assume the approach to calculation blocks is intended to use the exemptions in standard</p> <p>FAST-2.02-01.1 except when the calculation block is a balance corkscrew</p> <p>FAST-2.02-01.2 except when cascading calculations are warranted</p>		<p>blocks expect inputs to be viewable in the area local to the calculation/ output.</p>	<p>imported, have changed N61 to be split into two rows</p>			
17	Inputs on workings sheet	'IncWrk - AS2!I93:93	There is an input row for manual adjustments in workings sheet – so that these can be monitored and managed we would suggest including this as a link to a separate input sheet	This has been moved to RegInp_M Rows 500:540	Closed				
18	Font colours	'IncWrk - AS2!N86:E	A different font colour is used here and	Have changed font	Font still remains on	Have changed the	Closed		

ID	Issue	Cell reference	Comment / Query	HCPC - Response	GT - Response	HCPC - Response 2	GT – Response 2	HCPC - Response 3	GT – Response 4
		O136	significance not clear – should these just be black?	colour to black as suggested	119 – is this supposed to be for ‘explanatory’ values as there are no dependents?	font colour to black. No need for different font			
19	Hard coded values in formula	'IncWrk - AS2!N94:E O94 'IncWrk - AS2!N102:E O103	This formula contains a hardcoded 24 which is 2 year renewal cycle – this should be linked to an input. E.g. importing 'IncWrk - AS2!J47 and linking to that value	Have linked these back to J47	Closed				
20	Avoiding counterflows where not needed	'IncWrk - AS2!N94:E O95 'IncWrk - AS2!N102:E O103	These workings link to calculation in rows below and so should be marked as a counterflow. An alternative would be to move the removals below the additions in the corkscrew calculation.	Have moved additions above removals	The titles have not moved with the calculations – please review.	From what I can see the titles have moved?	In Pool 3 – the calculation in row 'IncWrk – AS3!81:81 has the same equation as that of 'IncWrk - AS2!96:96,	AS3 is correct for this, I think AS2 is incorrect as the minuses are sitting in the additions	Provided the labelling is consistent, unique and logical – Comment closed

ID	Issue	Cell reference	Comment / Query	HCPC - Response	GT - Response	HCPC - Response 2	GT – Response 2	HCPC - Response 3	GT – Response 4
							but the titles are different. It would appear that the titles have not been moved with the equations. This appears evident several times in the worksheet.		
21	Linking checks to control check	'IncWrk - AS2!133:133	This contains a useful check between the 7 pools and registrant calculations. We suggest this is linked to the overall check flag (potentially just applying check for forecast period so it avoids historic differences due to	This has been done. Please see the check sheet	We recommend that the checks should be calculated on the sheet then imported to the check sheet. The	I have done this with the first check on AS3. Check you are happy with this and if so I will roll out.	We suggest the errors should be counted on the sheet in which they occur so simpler to trace back and the result simply	Done	Comment closed

ID	Issue	Cell reference	Comment / Query	HCPC - Response	GT - Response	HCPC - Response 2	GT – Response 2	HCPC - Response 3	GT – Response 4
			incomplete actuals)		new checks in the check sheet are not linked to the check sheet total/output and so errors may be overlooked.		linked to the check sheet as per the other checks on the check sheet. Also the check sheet total should be updated to include any new checks. At the moment 'Check'!I69:I86 does not link into either Alert or Check flag totals and so may be overlooked		

ID	Issue	Cell reference	Comment / Query	HCPC - Response	GT - Response	HCPC - Response 2	GT – Response 2	HCPC - Response 3	GT – Response 4
							when using model		
22	Nested IF statement	'IncWrk - AS2!143:143 'IncWrk - AS2!152:157 'IncWrk - AS2!170:174	We have separately suggested an alternative calculation to remove need for nested IF statement	Have changed these to index match functions	Closed				
23	Formula using inputs "off-sheet"	'IncWrk - AS2!145:147	These formula use SUMIF referencing a different sheet – under the FAST standard all ingredients are brought into sheet for calculation. We would suggest converting the annual to monthly in the time sheet as this was done in the original model 'IncTime!1075:1078	Have corrected IncInp so that the figures are monthly, have then linked the formulas directly to these cells instead of using a SUMIF	Closed – though not checked impact of changing inputs.				

ID	Issue	Cell reference	Comment / Query	HCPC - Response	GT - Response	HCPC - Response 2	GT – Response 2	HCPC - Response 3	GT – Response 4
24	Calculation layout / use of calculation blocks	'IncWrk - AS2!218:235 also 'IncWrk - AS2!N160:E O167	We would suggest reviewing the structure of this: For example the scrutiny and initial payments are not required here (the summary is at top of sheet) Registration and renewal fees calculations reference lines over several locations in the worksheet which are not nearby (rows 46, 98, 135...) and so are difficult to follow – we would suggest this is a good example where bringing together all the ingredients into a calculation block would be helpful and make	Have removed the scrutiny fees and initial payments. Have added in the cells used either into the calculation block, or directly above in the case of Renewal Fees etc. which are used in numerous calculations	Updated as stated- though this could be considered not fully FAST compliant.				

ID	Issue	Cell reference	Comment / Query	HCPC - Response	GT - Response	HCPC - Response 2	GT – Response 2	HCPC - Response 3	GT – Response 4
			reviewing the calculation easier.	reference cells are not far enough away from the calculating cell to warrant repeating these.					
25	Inconsistent Formulae	'IncWrk - AS2!O45, N74, N115, N191, N202	We note that there is inconsistent formula across rows, in most cases this is due to formula being present in column M – which are not used.				In response to the comment in the email. The majority of values/formula in row N (now M) do not have dependents and thus are not impacting the values.	I have changed this so that there are no formulas in column M	Comment closed

ID	Issue	Cell reference	Comment / Query	HCPC - Response	GT - Response	HCPC - Response 2	GT – Response 2	HCPC - Response 3	GT – Response 4
							<p>For the instances where the output is feeding a corkscrew the corkscrew should be updated so that it recognises the first period and draws in the value as required. 'IncWrk – AS3!N116' is also drawing in a value from another sheet – this should be</p>		

ID	Issue	Cell reference	Comment / Query	HCPC - Response	GT - Response	HCPC - Response 2	GT – Response 2	HCPC - Response 3	GT – Response 4
							separated out as an import for the calculation block and dynamically driven i.e. not manually selected from the timeline values.		
26	Hardcoded Value and excessive length formulae	'IncWrk - AS3!177:177 , 'IncWrk - AS3!195:195	Row 177 contains numerous functions which make the formulae excessively long – We would suggest that the calculations that feed the if statement are broken out. Row 195 is also long, but also has hardcoded values beyond 1 and 0. A					We are happy with the length of these formulas. The aim of this model is to reduce the size, so we don't want to add more	This would require a derogation against FAST standard 3.03-01 and 3.03-02 in regards to the length. Comment

ID	Issue	Cell reference	Comment / Query	HCPC - Response	GT - Response	HCPC - Response 2	GT – Response 2	HCPC - Response 3	GT – Response 4
			suggestion could be to use the mod formula with a divisor of 1 and check that the remainder is 0 (thus an integer).					rows.	closed
27	Inconsistent Borders	'IncWrk - AS3!O111:E P115, 'IncWrk - AS3!O120:E P124	There are cells with side borders in the timeline section.					Fixed	Comment closed

Appendix 3 – Queries and issues summary for updated FTP Model

Introduction

The attached summarises queries / issues identified during a high-level review of the amended workings in the Fitness to Practise workbook titled “FTP alternative model 31-5-16”. While we have informed you of any potential logical errors in the 5 Year Plan Model that we have found solely in the course of the agreed scope of our work, given the limited nature of the assessment we are not able to provide you with assurance the Model is free from error. Where comments are raised but corrective action is not taken, the result is not strictly FAST compliant and derogations would need to be stated for the model.

All model references are to the version “FTP alternative model 31-5-16.xlsx” provided to us via email on 31 May 2016.

References to FAST standard (e.g. FAST 2.01-05) are to published standard version Version/ FAST02a/ 29.05.14 available on-line at http://www.fast-standard.org/wp-content/uploads/2015/03/FASTStandard_02a.pdf

Several issues occur across the worksheet so we have highlighted examples rather than produce an exhaustive list for you to consider. Inevitably there are areas of judgement for some compliance points (e.g. the extent to which cascading calculations are used – where a separate calculation block is not used to improve repetition or reduce row usage by omitting repeat of a nearby precedent). Cell references stated are in relation to the sheet iteration at which the point was raised.

Queries / issues with potential commercial impact or impact on use of model

ID	Issue	Cell reference	Comment / Query	HCPC – Response	GT Response
1	FAST 2.01-03: Timeline	'FTPInp'!2:5 'FTPQuant'!2:5 'FTPCost'!2:5 'FTPQuant_HandC_suppl'!2:5	We note that the timeline across the worksheets in the model are hard-coded. To comply with FAST standard this should be consistent and recommend linking to a common timeline in model across row Please confirm this will be corrected	Agreed. This has been done when the FTP sheets were integrated into the 5YP model the timeline will draw from the Time sheet	Noted – we will clear when we receive updated model

ID	Issue	Cell reference	Comment / Query	HCPC – Response	GT Response
			when included in 5 Year Plan Model		
2	Errors in workbook	'FTPQuant'!M84	We note that this cell contains an error. We suggest deleting this cell as it does not appear to have any dependents	Agreed, done	Noted – we will clear when we receive updated model
3	Links to errors and external workbooks		The model contains a number of named cells that either contain an error or link to another workbook. Please consider removing these named cells if they still result in either an error or a link to an external workbook in the version of the model where the FTP worksheets fall within the main version of the model.	The FTP sheets have been integrated into the 5YP model and links made to other sheets within the model as appropriate	Noted – we will clear when we receive updated model
4	Change in assumptions impacting on results	'FTPQuant'!246:246	We note that total costs relating to the Fitness to Practise Model have changed by c.£8 million compared to the original model reviewed. On analysis, this appears to be because of a change in the types of inputs used. For example, 'Days of Preliminary Hearings' (used to calculate 'total preliminary hearing fees') was input in the original model reviewed and now is calculated based on other inputs, resulting in a different value. Please confirm that this change in value is intended.	Some units of input and some assumptions have changed as a result of experience and/or changes in the way FTP operates, for example the average length of hearing has been increasing due to older, more complex cases being cleared during 2015-16 but is expected to reduce again as those cases move through the pipeline; also the case to answer rate has increased as a result of the distillation effect of the new Standard of	Noted

ID	Issue	Cell reference	Comment / Query	HCPC – Response	GT Response
				Acceptance. We will review the outputs from the model prior to finalising it for Council in July to confirm the reasonableness and consistency of assumptions.	

Queries / issues with presentational impact

ID	Issue	Cell reference	Comment / Query	HCPC - Response	GT Response
1	FAST 2.01-05 Highlighting of intra-sheet counter flows	'FTPCost'!10:14,17:17,20:20,23:23	FAST standard recommends these are shaded grey to indicate counterflow.	Done	Noted – we will clear when we receive updated model
2	FAST 3.06-02 Daisy chains – links to links	'FTPCost'!201:201	This appears to replicate row 199 – please confirm if this can be deleted or amend	Deleted	Noted – we will clear when we receive updated model
3	Redundant rows / cells	'FTPInp'!I205,I214,I367,I369,I371,I373,I375,N216:XFD216,N199:EC199,N197:XFD197,N147:BH147,AL175:BP175,BQ175:EC175,N175:AK175,N114:EC114, 'FTPInp'!N167:EC167, 'FTPInp'!N171:EC171 'FTPQuant'!N255:EC255,N167:EC167,N166:EC166,N16	Consider removing as not needed rather than including blank. For example this creates a risk is that content is inadvertently included in blank cells which feeds through to totals and subsequent calculations	Noted. Some of these eg MIS cases are information which does not have a direct impact on variable costs but which is relevant for FTP resource planning, so is expected to be used in further development of the model	Thank you for confirming. Closed.

ID	Issue	Cell reference	Comment / Query	HCPC - Response	GT Response
		2:EC162,N161:EC161,N150: EC150,N71:EC71,N67:EC67 ,EC70,EC61			
4	FAST 3.05-03 – Unique labelling	Not exhaustive but includes 'FTPQuant'!234:234 'FTPQuant'!117:117	Where values are a link to another part of workbook we suggest also linking label as this would reduce the risk of mislabelling when amending the model.	Agreed, will amend	Noted – we will clear when we receive updated model
5	FAST 1.01-06 – formatting of imports	Not exhaustive but includes 'FTPQuant'!43:43 'FTPQuant'!I45 'FTPQuant'!47:47 'FTPQuant'!I49	Imports from other sheets should be coloured blue as per FAST standard – see 'FTPCost'!30:30 for an example of style	Agreed, will amend	Noted – we will clear when we receive updated model
6	FAST 3.04-02 – include spaces between arguments in formulae to aid reading	For example 'FTPQuant'!N99 =IF(N\$5-\$I88<=0,0,INDEX(\$N\$113:\$WZ\$113,0,N\$5-\$I\$88))	As per FAST standard and to improve readability it is suggested to include spaces in formula	Will consider though not sure that spaces do improve readability	Noted – we will clear when we receive updated model
7	Linking to ingredients outside calculation blocks	For example 'FTPQuant'!O191 'FTPQuant'!Q147	In the examples highlighted these reference rows 39 and 41 It would be easier to follow if a link to these rows were included just above the Pool so that value driving the Pool can be seen without scrolling up worksheet. Note in general we assume the approach to	Noted although we aim to minimise repetition of data within the model so as to keep sheet and file sizes manageable	Noted – we recommend this derogation from FAST is clearly documented in model and user guide.

ID	Issue	Cell reference	Comment / Query	HCPC - Response	GT Response
			<p>calculation blocks is intended to use the exemptions in standard</p> <p>FAST-2.02-01.1 except when the calculation block is a balance corkscrew</p> <p>FAST-2.02-01.2 except when cascading calculations are warranted</p>		
8	Inputs on workings sheet	'FTPQuant'!39:39,41:41 FTPQuant_HandC_suppl worksheet	<p>These hard-coded input series feeds directly into a number of calculations throughout the same worksheet.</p> <p>It may be beneficial to add functionality to control the actual/budget series by using a combination of if statements and dates controlling the actuals period – alternatively please confirm that this is addressed when including in full 5 Year Plan Model.</p> <p>We note that the FTPQuant_HandC_suppl worksheet contains inputs that have not been identified as such. Please consider formatting as inputs and then transfer to an input worksheet.</p>	<p>When FTP module is integrated into 5YP model, actual period flag on row 39 now linked to Time! row 51, and number of registrants on row 41 will link to RegWrk_M.</p> <p>All of the data on the FTPQuant_HandC_suppl sheet will draw from RegWrk_M</p>	Noted – we will clear when we receive updated model
9	Workings on input sheet	'FTPQuant'!39:39,41:41	We note that FTPInp contains a number of calculations. For a similar reason, we would recommend that these are moved to calculation worksheets.	Not clear what this refers to?	This comment refers to the following cells: 'FTPInp'!I201,I197 'FTPInp'!I230

ID	Issue	Cell reference	Comment / Query	HCPC - Response	GT Response
					'FTPInp'!I252 'FTPInp'!I355
10	Formula using inputs "off-sheet"	Not exhaustive but includes 'FTPQuant'!N110 'FTPQuant'!Q125	These formula reference a different sheet – under the FAST standard all ingredients are brought into sheet for calculation.	As above, we aim to minimise repetition of data within the model so as to keep sheet and file sizes manageable	Noted – we recommend this derogation from FAST is clearly documented in model and user guide.
11	Calculation layout / use of calculation blocks	Corkscrews within the FTPQuant worksheet	Each corkscrew in the model contains multiple unique calculations within the block, reducing transparency within the model. The FAST standard suggests that calculation blocks should contain one unique calculation. Consider separating the calculations from the corkscrew and then link to these cells.	As above, we aim to minimise repetition of data within the model so as to keep sheet and file sizes manageable	Noted – we recommend this derogation from FAST is clearly documented in model and user guide.
12	Inconsistent Formulae	FTPQuant'!K11:M33	We note that there is inconsistent formula across rows.	Corrected	Noted – we will clear when we receive updated model
13	Calculation formatted as an input	'FTPInp'!I269:I274,I280:I285,I291:I296	We note that these formulas have been formatted as inputs. Please can we confirm these are intended as inputs showing assumptions rather than workings?	They are inputs. Calculation was including reflecting Council agreement that partner fees increase 2% per annum from 1/4/2015 baseline	Noted – we suggest adding a comment next to input to clarify this for future users

ID	Issue	Cell reference	Comment / Query	HCPC - Response	GT Response
14	Avoiding counterflows where not needed	'FTPInp!131:131 'FTPQuant!201:201	These workings link to calculation in rows below and so should be marked as a counterflow. An alternative would be to move the removals below “Cases concluded – actuals”.	Noted, will address.	Noted – we will clear when we receive updated model



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