

Internal Audit of Web Content Management System Project (Phase 2)

David Pendleton, Chief Operating Officer Comments:

INITIAL DRAFT REPORT
2 July 2014

2013/14 Audit Plan
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1 Executive Summary

REPORT RATING

1	2	3	4	5
Unsatisfactory	Requires Improvement	Adequate	Effective	Strong

Controls are designed to achieve operations/ process objectives being assessed and found to be operating effectively in all, or almost all, circumstances.

The detailed rating system is set out in **Appendix 1**.

INTRODUCTION

Ernst & Young undertook an internal audit of Phase 2 of the ABC Web Content Management System (WCMS) Project as part of the ABC 2013/14 Audit Plan¹.

The audit focussed on the activities undertaken by the WCMS Project as part of Phase 2 to develop and implement the CoreMedia content management product.

The audit fieldwork was undertaken in May / June 2014 and did not include consideration of Phase 1 of the WCMS Project.

OVERVIEW

The primary objective of the Web Content Management System (WCMS) Project is to implement an online content management system, CoreMedia that can be configured and customised to enable the use of a common set of tools and templates across the ABC. The WCMS Project is intended to allow ABC divisions, such as Television and Radio, to develop and publish ABC content to both digital online and mobile platforms in a consistent manner.

In 2007 the ABC commenced planning for the WCMS Project. The objective of the WCMS Project was to replace its existing and ageing content management system, "Wallace". The Wallace system was implemented by the ABC and has been in continuous use since 1997.

The Project was initially established and planned for implementation in two phases over four years with an estimated completion of the final phase in April 2013, as reported in the original Business case in September 2009:

- **Phase 1:** Implement the CoreMedia Platform (CMS). Develop web applications for The Drum, News Online and Radio National sites in to the CoreMedia platform.

¹ The 2013/14 Audit Plan was approved by the Audit and Risk Committee in June 2013

- **Phase 2:** Build web applications to enable migration of the remaining ABC sites in the CoreMedia platform.

The first phase of the Project (WCMS Phase 1) was completed in November 2011 and provided the baseline Content Management System platform enabling selected content to be migrated from the Wallace CMS to the new CoreMedia platform.

A revised second phase was proposed in August 2012 to reflect changing organisational requirements, such as the need to deliver content to a broader range of mobile devices and focuses on building core and re-usable functionality as a priority. This revised phase took into consideration findings as part of an independent review of the Project, its architecture, and appropriate options and plans for competing phase 2 performed by Boston Consulting Group in May 2012.

This revised proposal was approved by the Board in February 2013 and included a revised budget and timeframe to account for the increased scope and the time needed to develop and implement these additional CoreMedia features. Based on the Board's approval for revised budget and timeframe, the WCMS Project management team began the development and socialisation of a revised business case for Phase 2. The revised Phase 2 business case was approved by the WCMS Project steering committee in February 2014.

In accordance with the approved business case the revised Phase 2 WCMS Project schedule states an expected completion date in July 2015 with a capital expenditure budget of \$11.4 million. This includes an additional \$1.2 million approved by the Board in February 2013 to cover additional cost for features needed to achieve mobile device content delivery.

At the time of the audit fieldwork in May/June 2014 the WCMS Project was reporting that the Core design and build stages were near completion (approximately 95%) in the master schedule. As the schedule was being finalised at the time of the audit, the progress of some tasks had not been fully updated. At that time the WCMS Project was reporting a total expenditure of \$5.85 million which represents a total expenditure of 49% of budget and is 0.5% below budget for that time period.

Capital Works Department (CWD), under the leadership of the Chief Operating Officer, was responsible for Project Delivery of Phase 2.

PREVIOUS AUDIT COVERAGE

An audit of the WCMS Project was performed as part of the 2011/12 Audit Plan after completion of Phase 1. The 2012 Audit Report was rated **3 – Adequate Controls** and included four medium and two low rated findings. The four medium rated findings related to:

- A potential budget shortfall of \$1.2 million needed to cover an increase in scope and time for content delivery to mobile technologies.
- The requirement for development standards to be finalised, approved and adopted.
- Proposed changes to the implementation strategy and timeframe compression for Phase 2.
- Ensuring action plans created to address independent review findings i.e. Hot House and Cisco reviews, were monitored and progress reported to the WCMS Project steering committee on a regular basis.

The two low rated findings related to:

- Ensuring that the Post Implementation Review for Phase 1 of the Project was completed as planned and that lessons learned carried into the Project strategy for Phase 2.
- Ensuring the Phase 2 implementation strategy, revised timeline and budget options were considered and appropriately socialised with key stakeholders and approved.

At the time of this audit all findings had been addressed through the activities planned or already completed by Phase 2 of the WCMS Project.

ABC STRATEGIC RISKS

The internal audit of the WCMS Project is relevant to the following ABC Strategic Risks:

FINANCIAL Adverse impact of funding, allocation and management of financial resources, including external economic circumstances globally.	High
STRATEGIC PLANNING Inadequate strategic planning, communication, change management, or failure to develop and implement effective internal policies, processes or systems of work.	High
RELEVANCE Failure to provide a broad range of high quality content delivered across all platforms that meets the expectations of audiences domestically and internationally.	Medium - High
INNOVATION Failure to respond rapidly to change and capitalise on opportunities, or to the actions of competitors.	Medium - High
TECHNOLOGY Failure in information systems, infrastructure or security, or in development or implementation of new technology.	Medium - High
CONTINUITY Disruption of operations due to natural events, property damage, malicious threats or terrorism incidents, faults or failures, and delays in logistics, supply chain or due to incidents.	Medium

Appendix 2 also includes risks and mitigating controls in relation to the specific scope areas of the audit.

KEY CONTROLS

In the course of the audit the following key controls were identified:

- An appropriate project governance structure has been established and governance forums held per agreed schedules (i.e. Steering Committee, Product Development Group (PDG) & Product Development Working Group (PDwG)).
- A consolidated project schedule has been developed and was being finalised with a comprehensive set of project tasks and dependencies.
- Cost monitoring and reporting was undertaken on a monthly basis and costs were recorded at a detailed level within SAP Finance. Project financial reports were prepared regularly and were consistent with the SAP Finance system data.
- Key project management documents had been prepared using the ABC PMM5 project management templates.
- A process to re-validate business requirements features and project scope was in place.
- Functional requirements traceability processes and systems were in place.
- Skilled and project-dedicated requirements/ architecture resources had been introduced to re-validate business requirements and to assist in finalising features in-scope and project phase deliverables.
- Project status reporting processes were in place and the preparation of consolidated project status report occurred on a regular basis and was presented to the WCMS Steering Committee on a monthly basis.
- Steering committee membership was appropriate and meetings were scheduled and regularly attended.
- Working group forums (e.g. PDG & PDwG) membership was appropriate balancing project and division technical resources. Meetings were regularly attended and minuted.
- A WCMS Project risk and issues register had been established, and risks and issues were periodically reviewed and monitored.

Further controls are set out in **Appendix 2**.

KEY FINDINGS

The audit identified **3 medium** and **2 low** rated findings. The key findings are summarised below and discussed in more detail in Section 3 of this report.

Benefits realisation (Medium)

The benefits listed in the business case were defined at a high level and did not quantify the benefits (e.g. the lower costs) or detail the timeframes in which the benefits were expected to be realised. The business case did not specifically consider how these benefits would be measured over time to confirm the success of the WCMS Project.

WCMS Project Schedule (Medium)

The WCMS Project schedule for Phase 2 had yet to be finalised, base-lined and approved. This was due to approved project changes to include the development of mobile content delivery features within CoreMedia. Formally "base-lining" a project schedule is considered a key control for complex projects such as WCMS where multiple project teams maintain individual project schedules that are consolidated into an overall integrated master schedule.

Risk Management (Medium)

WCMS Project risks were not assessed considering the inherent nature of the risks identified i.e. assessed considering the absence of mitigating strategies and controls. By monitoring and reporting on the inherent risks it helps the Project focus its risk management activities on those risks that potentially represent the biggest impact to the Project or the ABC if they were to materialise.

MANAGEMENT ACCEPTANCE

The contents of this report have been discussed with Mark Woodley (Head Capital Works), Gary Paternoster (WCMS Program Manager, Capital Works) and Jose Resurrection, (Manager Project Management Office, Capital Works), who have provided the management responses included in the report.

The report has also been cleared with [Director name, Division], whose overall comments are included on the front cover of the report.

ACKNOWLEDGEMENT

Group Audit appreciates and acknowledges the assistance and cooperation provided by staff from Capital Works Department and other ABC areas throughout this internal audit.

2 Overview and Approach to the Audit

2.1 Overview

The primary objective of the WCMS Project is to implement an online content management system, CoreMedia that can be configured and customised to enable the use of a common set of tools and templates across the ABC. The WCMS Project is intended to allow ABC divisions, such as Television, News and Radio, to develop and publish ABC content to both digital online and mobile platforms in a consistent and re-usable manner.

The WCMS Project originally commenced in 2007 when the ABC sought to replace the existing content management system, "Wallace", which was developed by the ABC in 1997.

The Project was initially established and planned for implementation in two phases over four years with an estimated completion in April 2013, as reported in the original Business case in September 2009:

- **Phase 1:** Implement the CoreMedia Platform (CMS). Develop web applications for The Drum, News Online and Radio National sites in to the CoreMedia platform
- **Phase 2:** Build web applications to enable migration of the remaining ABC sites in the CoreMedia platform.

The first phase of the Project (WCMS Phase 1) was completed in November 2011 and provided the baseline Content Management System platform enabling selected content to be migrated from the Wallace CMS to the new CoreMedia platform.

A revised second phase was proposed in August 2012 to reflect changing organisational requirements, such as the need to deliver content to a broader range of mobile devices and focuses on building core and re-usable functionality as a priority. This revised phase took into consideration findings as part of an independent review of the Project, its architecture, and appropriate options and plans for competing phase 2 performed by Boston Consulting Group in May 2012.

This Phase 2 proposal was approved by the Board in February 2013 and included a revised budget and timeframe to account for the increased scope and the time needed to develop and implement these additional CoreMedia features. Based on the Board's approval for revised budget and timeframe, the WCMS Project management team began the development and socialisation of a revised business case for Phase 2. The revised Phase 2 business case was approved by the WCMS Project steering committee in February 2014.

The revised Phase 2 WCMS Project is planned to be delivered by July 2015 and has a capital expenditure budget of \$11.4 million. This includes an additional \$1.2 million approved by the Board in February 2013 to cover additional cost for features needed to achieve mobile device content delivery.

At the time of the audit fieldwork in May/June 2014 the WCMS Project was reporting that the Core design and build stages were near completion (approximately 95%) in the master schedule. As the schedule was being finalised at the time of the audit, the progress of some tasks such as the user acceptance testing of the core phase had not been fully updated.

Capital Works Department (CWD), under the leadership of the Chief Operating Officer, was responsible for Project Delivery of Phase 2.

The key WCMS Project phases and timelines as detailed in the Business Case are outlined in the following table.

WCMS Project: Phase 2		Original Business Case	Revised Business Case	
Phase	Description	Planned due date as at Jan 2013 ²	Revised due date as at Feb 2014 ²	Progress as of May 2014
Foundation	Design, external review, build and deploy	July 2014	July 2014	In progress ~ 70%
Core	Design, build and User Acceptance Testing	May 2014	May 2014	In progress ~ 95%
Stage 1	Implement features for News	September 2014	October 2014	In progress ~20%
Stage 2	Implement features for Radio	December 2014	February 2015	Not started
Stage 3	Implement features for TV	March 2014	May 2015	Not started
Stage 4	Implement remaining features	March 2015	July 2015	Not started

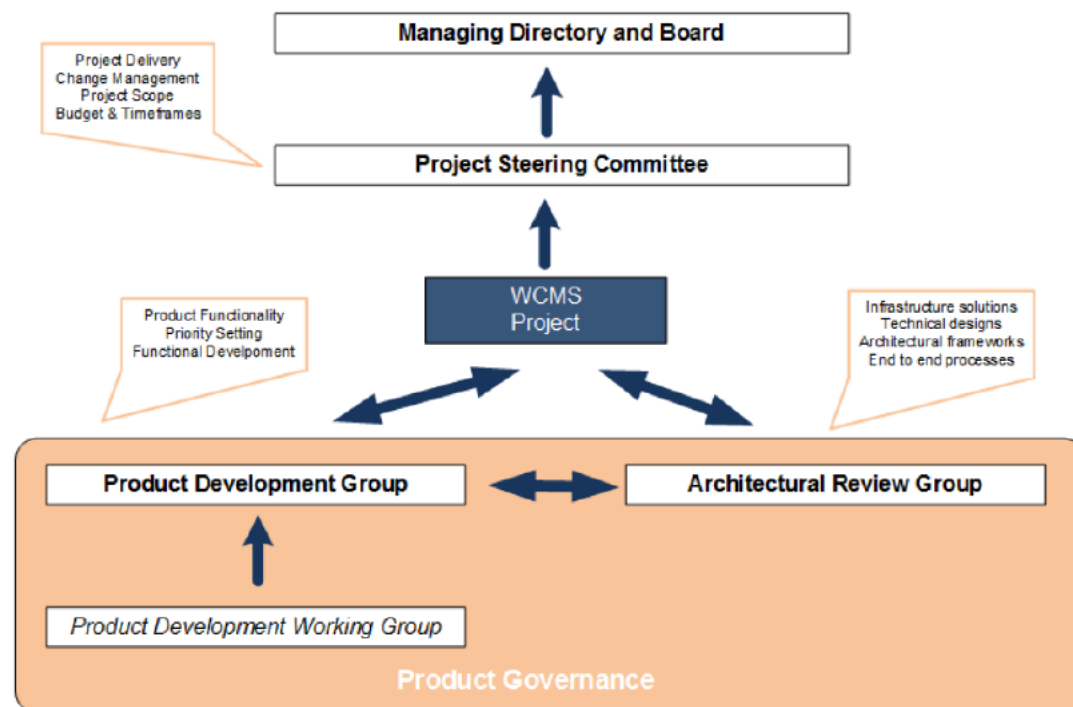
Changes to the planned due dates reflect the time needed to implement the additional features required to support the ABC's Mobile First strategy, as approved by the Board in October 2013. This increases the overall Phase 2 Project delivery timeframe by 4 months as outlined in the revised due dates.

PROJECT GOVERNANCE

The WCMS Project Steering Committee was chaired by the Chief Operating Officer and included Directors from the ABC's content divisions. The governance structure for the WCMS Project is shown in the diagram below:

² Source: WCMS Business Case February 2014 Final.pdf

WCMS Governance Model Roles & Responsibilities



FINANCIAL INFORMATION

The table below summarises the financial performance of the WCMS Project Phase 2 as at April 2014 and reported to the WCMS Steering Committee and ABC Board in May 2014.

WCMS FINANCIAL SUMMARY AS AT APRIL 2014

Product Support - Ongoing	APRIL			JUL to APR 2014			FY 13/14			Total Product Support		
Figures in '000s	Actuals	Bud	Var	Actuals	Bud	Var	Forecast	Bud	Var	Forecast	Bud	Var
Salaries	68	81	13	684	813	129	961	976	15	5,017	4,683	(334)
Hardware	0	13	13	0	130	130	143	156	13	300	399	99
Software	0	78	78	22	775	753	834	930	96	2,776	3,296	520
Other	3	27	24	22	266	244	95	319	224	718	1,048	330
Total	71	199	128	728	1,984	1,256	2,033	2,381	348	8,811	9,426	615

Product Build - Project	APRIL			JUL to APR 2014			FY 13/14			Total Product Build		
Figures in '000s	Actuals	Bud	Var	Actuals	Bud	Var	Forecast	Bud	Var	Forecast	Bud	Var
Salaries ¹	329	327	(2)	3,366	3,340	(26)	3,907	4,008	101	8,255	8,761	506
Hardware	120	59	(61)	305	583	278	800	700	(100)	800	700	(100)
Software	0	12	12	15	121	106	106	145	39	237	220	(17)
Other (incl Redundancies)	103	60	(43)	648	604	(44)	799	725	(74)	1,285	900	(385)
Phase II ²	0	0	0	0	0	0	0	0	0	270	270	0
Sub-Total	552	458	(94)	4,334	4,648	314	5,612	5,578	(34)	10,847	10,851	4
Contingency ³	13	0	(13)	287	0	(287)	265	0	(265)	267	1,010	743
Total Build inc Contingency	565	458	(107)	4,621	4,648	27	5,877	5,578	(299)	11,114	11,861	747

Notes

- \$1.2m additional CR50: Mobile First.
- Carry in of \$270k Assets from Phase II.
- \$600k: CR102 & CR103

At the time of the audit fieldwork in May/June 2014 the WCMS Project was reporting a total expenditure of \$5.85 million which is tracking slightly under budget for that time period. This

represents a 49% expenditure of the total budget. EY consider that the expenditure to date appears consistent with the status of the Project achievements to date.

2.2 Audit Objectives and Scope

The internal audit of the Web Content Management System Project examined the progress and project management of Phase 2 of the Project. In particular this internal audit considered:

- Project management and governance.
- Approval and oversight processes.
- Performance against financial and time benchmarks.
- Monitoring and reporting.
- Risk management processes.
- Stakeholder management.

The audit of the WCMS Project was informed by the ABC Project Management Methodology (PMM5) used by the Capital Works Department.

The internal audit objectives related to each of the scope areas above were:

1. Project management and governance

- a. Assess whether the activities required for a successful project, including resource allocation, time management and process management have been implemented and are operating effectively. Key focus areas included:
 - Assessing whether applicable findings from the previous Internal Audit, Post Implementation Review and other reviews from Phase 1 of the Project have been addressed and that the transition from Phase 1 has been managed effectively.
 - Verifying that variations to scope, time and cost have been appropriately documented, communicated and approved.
 - Determining whether project management plans are in place, are approved and whether key project milestones and the project schedules overall are achievable.
 - Assessing the processes used to measure the progress of the Project against the schedule and the processes in place to actively monitor, measure and report on the Project.
 - Determining if the time and cost to complete the project phase has been assessed and considered achievable.
 - Verify that material changes to the Project's scope, time and/or cost are communicated and follow the ABC's change management procedures.
 - Determining whether project resource planning adequately assesses the key elements of resource capacity and expertise required to undertake project management, implementation and post-implementation tasks.

- Assessing whether appropriate provider/supplier relationship and contract management processes exist to manage the project phase to completion.
- Verifying that adequate analysis of funding requirements has occurred to ensure sufficient funds have been allocated to manage implementation and post-implementation tasks.
- Determining whether an approved Benefits Realisation Plan has been developed and processes are in place to actively manage and measure benefits realisation.

2. Approval and oversight processes

- a. Assess whether the Project has established appropriate forums to effectively oversee the progress and health of the WCMS Project (Phase 2) and that appropriate authorities are established to make and/or approve key project decisions and changes. This included:
 - Assessing the adequacy and effectiveness of project oversight forums and committees in terms of membership and delegates, meeting frequencies, standing agenda items and related documentation.
 - Determining whether approvals relating to project elements such as key milestones, timelines, benefits and costs are provided in accordance with the WCMS Project management plan and/or ABC policy.
 - Assessing whether clear roles and responsibilities have been defined, documented, agreed and communicated including decision making rights, authorities and escalation paths.
 - Assessing the roles that the ABC Board, key ABC executives, the project sponsor and key division managers have in overseeing and advising the WCMS Project.

3. Performance against financial and time benchmarks.

- a. Assess whether the Project is meeting the expected financial, progress and benefits metrics as outlined in the revised WCMS Project business case, Project management plan and WCMS master schedule. Key focus areas included:
 - Financial actuals against budget and alignment of spend to the schedule.
 - Achievement of planned tasks and activities when compared to the Project schedule.
 - Achievement of benefits realised to date when compared to the benefits realisation plan.
 - Assessing the utilisation of resources when compared to the Project's resource plan.

4. Monitoring and reporting.

- a. Assess whether effective and adequate monitoring and reporting processes are in place to monitor key WCMS Project metrics. Key focus areas included:
 - Project communications and reporting plans.

- Processes for monitoring and reporting on the schedule in terms of task progress and completion.
- Measurement and reporting on the realisation of planned/expected benefits
- Monitoring and reporting on project expenditure.
- Reporting of exceptions.
- The link between project exception reporting and project risk management.

5. Risk Management

- a. Assess the extent to which a structured methodology for identifying, analysing and managing potential risks is being applied. Areas of focus included:
 - Verification that project risk management plans have been reviewed and updated and that risk and issue registers are in place and updated.
 - Verifying that project execution, technology, change and BUA risks are identified and being actively managed.
 - Verifying that Risks Owners are appropriately identified and assigned, and that plans to mitigate identified risks are being documented agreed and approved.
 - Verifying that contingency plans, where applicable, are in place for identified risks.

6. Stakeholder management.

- a. Assess the extent to which stakeholders are engaged in the project including involvement in implementation and change management planning and activities. Areas of focus will included:
 - Assessing whether all key stakeholders are identified.
 - Determining the extent to which stakeholders are engaged in the Project e.g. inclusion of key stakeholders in project working groups, committees and change forums.
 - Assessing the adequacy of stakeholder communication plans.
 - Assessing the extent to which stakeholder satisfaction is (or will be) measured throughout the project lifecycle and determining the effectiveness processes to address stakeholder feedback and/or concerns.

2.3 Methodology

The following general methodology was used in conducting the internal audit:

- Liaised with the ABC staff to explain the objectives of the internal audit; agreed the timing and approach and obtained an overview of the WCMS Project. This included staff working directly on the WCSM Project from Capital Works and relevant stakeholders from other Divisions within the ABC.
- Held discussions with a number of key stakeholders to obtain their views on the WCMS Project which were then considered against Project documentation and other data.

- A full list of staff interviewed as part of this audit is included in the table below.

Name	Title
David Pendleton	Chief Operating Officer
Mark Woodley	Head Capital Works Department
Gary Paternoster	WCMS Project Director
Jose Resurrection	Manager Project Management Office, Capital Works Department
Cathryn Lak	WCMS Enterprise Architect
Angela Clarke	Director ABC Innovation
Kate Tomey	Director, News
Kate Dundas	Director, Radio
Ciaran Forde	Head of Digital Architecture & Development, ABC Innovation
Anthony Willis	Technical Director, ABC Innovation
Michael Easthope	Senior Technology Analyst, ABC Innovation
Linda Bracken	Head of Multiplatform & Content Development, Radio
Ross Dixon	Manager, Multiplatform Development & Design, Radio

- Developed an understanding of the key project management and related business processes and determined the associated risks through holding discussions with relevant officers of the ABC, reviewing the ABC's Project Management Methodology, reviewing applicable ABC policies and procedures and performing walkthroughs of relevant project processes.
- Obtained and sighted over 50 project documents. Selectively reviewed the key documents including, but not limited to, the documents listed below:
 - Business Case – WCMS Original
 - Business Case – WCMS Phase 2 2013
 - Business Case – WCMS Phase 2 Revised 2014
 - WCMS Project Management Plan Version 21
 - WCMS Project – Program Change Management Plan v1.2
 - Board Decision Paper – ABC Web Content Management System Project – 23 August 2012
 - Board Decision Paper – ABC Web Content Management System Project – 10 October 2013
 - Board Decision Paper – ABC Web Content Management System Project – 14 February 2013
 - WCMS Monthly Steering Report November 2013
 - WCMS Monthly Steering Report February 2014

- WCMS Monthly Steering Report for April 2014
- WCMS Financial Reports Jan 2014
- WCMS Financial Reports Feb 2014
- WCMS Financial Reports Mar 2014
- WCMS Risk Register- 20140414
- Master Schedule – 20140529
- WCMS Project Change Register
- Assessed the adequacy and effectiveness of the selected WCMS Project controls.
- Prepared recommendations to the ABC to improve controls where required.

The internal audit was conducted in conformance with the *International Standards for the Professional Practice of Internal Auditing*

3 Detailed Audit Findings and Recommendations

3.1 Benefits realisation

RATING: MEDIUM

OBSERVATION

The revised and approved WCMS Business Case (dated 5 February 2014) includes a list of benefits at Section 11 as follows:

The WCMS Project delivers:

- *focused investment that maximises value at an enterprise level;*
- *lower costs and increased benefit as new features are built once for all sites;*
- *cost effective and fastest delivery of core product, by mid 2014;*
- *functionality to build smaller and simpler sites more quickly/cheaply;*
- *greater content sharing across the ABC;*
- *flexibility to meet evolving ABC needs and priorities;*
- *ability to deliver future capabilities, eg mobile content and social media; and*
- *customisation of front end user experience.*

The benefits listed in the business case are defined at a high level and do not quantify the benefits (e.g. the lower costs) or detail the timeframes in which the benefits are expected to be realised. This section of the business case does not consider how these benefits will be measured over time to confirm the success of the Project.

The ABC Project Management Methodology (PMM5) includes a business case template. The template requires each project to detail tangible and intangible benefits, the time frame for their realisation and the financial value assigned to each. The PMM5 guidance suggests that the benefits defined will be used to inform the "Project Success Criteria" section of the business case.

Guidance is also provided by the PMM5 framework, including a Benefits Realisation Review guide that details how benefits should be followed up and reviewed after a project is delivered.

A project's success is measured by its successful delivery i.e. the defined scope delivered on-time and on-budget, and, importantly, by the benefits that are obtained by the organisation from its delivery. These ongoing business benefits may include factors such as increased efficiencies, cost reductions, product adoption, increased customer satisfaction and improved reliability.

RISK/ IMPLICATION

Without detailed and measureable benefits being defined, there is an increased risk that the ABC may not establish the activities required to effectively measure and report on the ongoing attainment of the benefits. There is an increased risk that the ABC may not be able to effectively demonstrate the return on the investment in the WCMS Project.

RECOMMENDATION

The WCMS Project owner and Steering Committee should consider defining more specific and measurable benefits from the Project which build on those listed in the approved business case. This could be within the current business case or in a separate benefits realisation plan document.

MANAGEMENT RESPONSE

PROPOSED RESPONSIBILITY

PROPOSED IMPLEMENTATION DATE

3.2 WCMS Project Schedule

RATING: MEDIUM

OBSERVATION

The ABC Project Management Methodology (PMM5) Planning Phase Procedure states that:

- *The schedule for the project contains a comprehensive list of the tasks related to the project.*
- *Record durations and resource effort for all tasks required to complete the project. Note that development of the schedule is done in parallel with, and is interdependent with resource planning*
- *Dependencies and constraints should be identified and recorded.*
- *Provide summary of phases, deliverables and milestones if appropriate.*
- *At the end of the Planning Phase the schedule is base-lined.*

The schedule for WCMS Project Phase 2 was still being finalised at the time of the audit in May/ June 2014. This was due to approved project changes to include the development of mobile content delivery features within CoreMedia.

Formally "base-lining" a project schedule is considered a key control for complex projects such as WCMS where multiple project teams maintain individual project schedules that are consolidated into an overall integrated master schedule. The project schedule has not been base-lined at the time of the audit.

Base-lining a project schedule can be achieved by filing an approved version, and using this version as the reference point for reviewing and assessing progress and changes.

Alternatively, base-lining the project schedule can be achieved by using the baseline feature within MS Project. Base-lining the WCMS Project schedule within MS-Project is an automated system-based control that may provide assurance that the approved project schedule cannot be changed without the changes being recorded and immediately visible to the WCMS Project Management team.

Utilising MS-Project may provide efficiency gains through a reduction in the time and effort required to examine and report on the impact that schedule changes may have on downstream project tasks or milestones.

RISK/ IMPLICATION

The impact of changes to the schedule on downstream project activities may not be identified, assessed and reported.

RECOMMENDATION

The WCMS Project schedule should be finalised. Once finalised, the schedule should be considered “base-lined” and presented to the Steering Committee for approval.

Any future changes to the base-lined schedule should be reviewed to identify risks to the planned delivery timeframe of any critical-path activity or milestone. Schedule changes that potentially impact the delivery deadlines should be reported to the WCMS Steering Committee.

MANAGEMENT RESPONSE

PROPOSED RESPONSIBILITY

PROPOSED IMPLEMENTATION DATE

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3.3 Risk Management

RATING: MEDIUM

OBSERVATION

The ABC Project Management Methodology (PMM5) includes templates and guides for project risk management that have been used by the WCMS Project to establish a Project Risk and Issues Register.

Project risks and issues are reviewed on a monthly basis and are reported and discussed at the Steering Committee, Product Development Group (PDG) and Product Development Working Group (PDwG) meetings. Each risk is rated based on an assessment of the impact and likelihood, and considers the presence of risk mitigation strategies identified and documented within the register (residual risk). Key risk types in the register being reported to the WCMS steering committee included program, business, architecture, support, technology and content risks. The risks included in the risk register appeared appropriate for a Project of this complexity.

The method of assessing and rating risks did not specifically consider the inherent nature of the risks identified (i.e. assessed considering the absence of mitigating strategies and controls).

It is noted that the PMM5 guidance does not require a project to assess the level of inherent risk however, it is considered good practice to do so. By monitoring and reporting on the inherent risks it helps the project focus its risk management activities on those risks that potentially represent the biggest impact to the project or ABC if they were to materialise.

RISK / IMPLICATION

Increased risk that the Project team may not be appropriately monitoring or reporting the risks that present the greatest impact to the Project or the ABC.

RECOMMENDATION

Project risks should be assessed at an inherent level (i.e., before considering any mitigating strategies and controls) and rated and reported accordingly.

MANAGEMENT RESPONSE

PROPOSED RESPONSIBILITY

PROPOSED IMPLEMENTATION DATE

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4 Low Rated Audit Findings

The table below details findings that were identified during the audit that have been rated as "Low" risk.

#	Observation	Recommendation	
4.1	<p>The WCMS Project governance forums are defined in the WCMS Project Management Plan as follows:</p> <ul style="list-style-type: none"> • The Board. • Steering Committee. • Product Development Group (PDG). • Product Development Working Group (PDwG). <p>Until March 2014 decisions within the PDG and PDwG forums required full consensus. Where consensus could not be reached, decisions were escalated to the WCMS Project Steering Committee for resolution, which increased the risk of Project delays.</p> <p>The WCMS Project owner and the Head of the Capital Works Department agreed that a change to the decision-making approach was required where a majority would be required for the PDG and PDwG decisions.</p> <p>At the time of the audit these changes had not been updated in the WCMS Project Management Plan and formally communicated to governance group members.</p>	<p>The charters, as defined within the WCMS Project Management Plan, should be updated to reflect the decision-making rights of the WCMS governance forums and its members.</p> <p>The revised WCMS Project Management Plan should be approved by the WCMS Project Steering Committee and communicated.</p>	<p>Management Response:</p> <p>Proposed Responsibility:</p> <p>Proposed Implementation Date:</p>
4.2	<p>The ABC Project Management Methodology (PMM5) does not include a Project Steering Committee Reporting template. The WCMS Project defined its own reporting structure based on the needs of the Project.</p> <p>A review of the WCMS Steering Committee Reports highlighted that there is no project status dashboard that summarises key project progress performance indicators or trend information.</p> <p>During interviews with Division Directors and content area stakeholders, it was expressed that current reporting did not always provide confidence that key Project activities were progressing as planned.</p> <p>Project performance trend reporting is considered good practice and provides valuable information for a Steering Committee to help direct Steering Committee to aspects of the Project that may require attention review or monitoring.</p>	<p>Project status reports prepared for the WCMS Project Steering Committee should include progress indicators of project performance achieved in the previous and current period, and the planned progress expected to be achieved in the following reporting period.</p> <p>The WCMS Project Management Team should prepare a sample report for endorsement by the WCMS Steering Committee.</p>	<p>Management Response:</p> <p>Proposed Responsibility:</p> <p>Proposed Implementation Date:</p>

5 Opportunities for Improvement

5.1 Project Risk Management

The maturity of the existing WCMS Project risk management processes could be enhanced by:

- Identifying and documenting the relevant Division/Business risk owners for each risk within the existing Risk Register; and
- Increasing the detail describing the risk management processes within the existing Project Management Plan or through developing a separate Risk Management Plan using the PMM5 template.

5.2 Stakeholder communication plan

The Project has yet to define a formal stakeholder communication plan, including guidelines setting out how stakeholder satisfaction will be measured. The WCMS Project should consider the use of stakeholder satisfaction surveys as a means to efficiently obtain independent feedback on the performance of the WCMS Project.

Appendix 1. Group Audit Risk Ratings

OVERALL REPORT RATING

Group Audit reports are rated as follows:

Rating	Description	Explanation
5	Strong	<ul style="list-style-type: none"> Controls are designed to achieve operations / process objectives being assessed and were found to be operating effectively. No instances of non-compliance with ABC policies or contractual obligations. No, or only minor, opportunities for improvement that are not of a control nature were identified.
4	Effective	<ul style="list-style-type: none"> Controls are designed to achieve operations / process objectives being assessed and found to be operating effectively in all, or almost all, circumstances. No, or only minor, instances of non-compliance with ABC policies or contractual obligations. No, or only minor, opportunities for improvement that are not of a control nature were identified. Control weaknesses identified, either individually or taken in aggregate, do not significantly impair the overall achievement of the ABC's operations / process objectives being assessed.
3	Adequate	<ul style="list-style-type: none"> Controls are designed to achieve operations/ process objectives being assessed and found to be operating effectively in most, but not all circumstances. Control enhancements are needed in certain areas to reduce the risk of failing to achieve the objectives of the operations/ process being assessed. Control weaknesses either individually or taken in aggregate, do impair the achievement of the ABC's operations/ process objectives being assessed, but not to a point that is deemed unsatisfactory.
2	Requires Improvement	<ul style="list-style-type: none"> Controls are not adequately designed to achieve operations / process objectives being assessed and/ or were not found to be operating effectively. A number of instances of non-compliance with ABC policies or contractual obligations or instances that have a major consequence were identified. Control weaknesses either individually or taken in aggregate impair the achievement of the ABC's operations/process objectives to an extent that is not acceptable. Fraudulent or corrupt practices considered to be of a low financial impact and/ or limited chance of reoccurrence. Prompt attention is required by management to improve controls and correct identified weaknesses.
1	Unsatisfactory	<ul style="list-style-type: none"> Controls are not adequately designed to achieve operations / process objectives and/ or were not found to be operating effectively. A high number of instances of non-compliance with ABC policies, legislation or contractual obligations or instances that have a significant consequence were identified. Control weaknesses are so significant, systemic or widespread that there is a high risk of financial loss, irregularities, the compromise of confidential information, and/ or non-compliance with ABC policies. Fraudulent or corrupt practices with a moderate or high financial impact and/ or with a reasonable likelihood of reoccurrence. Urgent attention is required by management to improve controls and correct identified weaknesses.

A rating of one or two will necessitate a follow-up internal audit to be performed following the issue of the report and in consultation with management.

RATING OF INDIVIDUAL FINDINGS

HIGH

A finding that represents a control weakness, which could have, or is having, a significant adverse impact on the ability to achieve the operations / objectives being assessed or has a high risk exposure.

GUIDING CRITERIA

- Potentially significant financial impact
- Breach of delegations – regular and / or high values
- Non compliance – systemic and / or frequent
- Widespread business interruption or major inconvenience to audience, staff, suppliers and / or customers
- Contractual non-compliance or legislative breach that could result in significant legal action and / or penalty
- Significant delay in achieving key project milestones that impact overall timeliness of project delivery and / or major deviation to project plan that impacts expected project benefits
- Lasting and major reputational damage
- Potentially significant or fatal health & safety impact
- Fraudulent or corrupt conduct

MEDIUM

A finding that represents a control weakness, which could have or is having a moderate, yet important adverse impact on the ability to achieve the operations / objectives being assessed or has a moderate risk exposure.

GUIDING CRITERIA

- Potentially moderate financial impact
- Breach of delegations – periodic and / or moderate values
- Non compliance – periodic but not systemic
- Business interruption in more than one area or moderate inconvenience to audience, staff, suppliers and / or customers
- Contractual non-compliance or legislative breach that poses the threat of legal action and / or penalty
- Moderate delay in achieving key project milestones and / or moderate deviation to approved project plan that impacts expected project benefits
- Short term, and localised reputational damage
- Potentially moderate health & safety impact

LOW

A finding that represents a minor control weakness, with minimal potential impact on the ability to achieve the operations / objectives being assessed or has a minimal risk exposure.

GUIDING CRITERIA

- Potentially small financial impact
- Breach of delegations – isolated and / or low values
- Non compliance – isolated instances
- Localised business interruption or minor inconvenience to audience, staff, suppliers and / or customers
- Contractual non-compliance or legislative breach but legal action and / or penalty is unlikely
- Minor delay in achieving project milestones and / or minor deviation to approved project plan that impacts expected project benefits
- Minimal reputational damage, if any
- Minimal health & safety impact

Opportunity for Improvement

An Opportunity for Improvement arises where Group Audit considers that the recommendation, if implemented, would result in a benefit to the ABC (for example, a more efficient and / or cost effective process, a reduction of expenditure or an increase in revenue), but the finding does not represent a weakness in control design, non-compliance or a breakdown in the operation of controls.

Appendix 2. Risk Assessment

At the start of the internal audit process, we identified potential risks arising from WCMS Project without regard for any controls/strategies to mitigate such risks (Gross Risk). During the internal audit, controls and strategies in place to minimise the risks identified were tested for existence and effectiveness. Based on the effectiveness of the controls and an assessment of likelihood and occurrence, an appropriate Residual Risk Rating was determined.

The information in the Risk and Controls Matrix below may be of use to Capital Works to implement other risk assessments or risk registers. For further information about operational risk assessments and risk registers please contact the Risk and Insurance Unit in Business Services.

Potential Risk	Inherent Risk Rating	Controls / Mitigation Strategies	Residual Risk Rating
Budget and benefits			
Cost forecasts are inaccurate or incomplete leading to cost increases causing project delays or inability to fund the project phase to completion.	High	<ul style="list-style-type: none"> Cost forecasts are performed by the CWD Manager based on the estimated effort to complete activities in the schedule, taking into consideration any issues or delays. 	Low
Supplier/Vendor contracts do not protect the ABC against product or resourcing increases leading to unplanned cost increases.	Medium	<ul style="list-style-type: none"> The Head of CWD is responsible for the WCMS vendor relationships. Prior to commencement a Statement of Work is signed. 	Low
There is insufficient budget contingency to accommodate changes to the project scope, resources or timeline.	High	<ul style="list-style-type: none"> The current WCMS approved budget includes a 8.4% contingency and is approved by the ABC Board. 	Low
Benefits are not clearly defined leading to unrealistic expectations of the value the Project is to deliver.	Medium	<ul style="list-style-type: none"> Additional controls required to mitigate this risk. Refer to Finding 3.1. 	Medium

Potential Risk	Inherent Risk Rating	Controls / Mitigation Strategies	Residual Risk Rating
Project scope and dependencies			
The scope defined is ambiguous and/or does not align with the requirements, leading to additional unplanned increases in effort, time and/or cost.	High	<ul style="list-style-type: none"> Process for re-validating business requirements, features and timing is in place. 	Medium
Requirements are ambiguous or incomplete leading to potential increases in scope to meet division needs.	High	<ul style="list-style-type: none"> Functional requirements traceability process and systems are in-place. 	Medium
Project activities required to deliver the defined scope are missing or inaccurate leading to additional effort and/or cost.	Medium	<ul style="list-style-type: none"> Detailed requirement gathering by division is included in the Project Schedule. At the end of the build phase a demo for the business users is performed. 	Low
The Project does not comply with the ABC's project management methodology leading to a lack of project controls required to manage project risk.	Medium	<ul style="list-style-type: none"> The Project adheres to the key elements of the CWD Project management methodology, including adaptation of guides and templates. 	Low
Project resourcing and scheduling			
Project changes are not controlled leading to unauthorised and/or unfunded changes to scope and/or time.	High	<ul style="list-style-type: none"> A change management process is in place for controlling changes affecting scope, time or cost. All changes are assessed, reviewed by the WCMS Steering Committee and approved. Control improvement is required to further mitigate this risk. The project schedule should be finalised, base-lined and approved in accordance with the PMM5 guidelines. Refer to Finding 3.2 	Medium
Project authorities are unclear leading to delays in decision-making or approvals.	Medium	<ul style="list-style-type: none"> An appropriate governance structure is defined including high level decision areas. Control improvement is required to further mitigate this risk. The decision frameworks have undergone recent changes which have not been formally communicated. Refer to Finding 4.1 	Low
Skills required to perform project tasks are inadequate leading to increased cost or time.	Medium	<ul style="list-style-type: none"> Inclusion of skilled and project-dedicated requirements/architecture resources have been introduced. 	Low

Potential Risk	Inherent Risk Rating	Controls / Mitigation Strategies	Residual Risk Rating
There are insufficient resources, internal or external, to complete the project activities as planned leading to project delays.	High	<ul style="list-style-type: none"> Project resourcing is planned and documented and project resource utilisation is tracked and reported to the WCMS Steering Committee on a monthly basis. 	Medium
Resource performance is inadequate to deliver the project activities within the timeframes expected leading to delivery delays and additional cost.	Medium	<ul style="list-style-type: none"> Inclusion of skilled and project-dedicated requirements/architecture resources have been introduced. 	Low
There is no contingency for the loss of key project resources leading to material project delays.	High	<ul style="list-style-type: none"> Project resourcing is planned and documented and project resource utilisation is tracked and reported to the WCMS Steering Committee on a monthly basis. 	Medium
Quality			
Key deliverables are not adequately reviewed and accepted prior to being migrated into production environments leading to the delivery of systems that do not meet stakeholder quality and/or functional expectations or the defined requirements.	High	<ul style="list-style-type: none"> Key project documentation is largely aligned to the requirements of the ABC project management methodology (PMM5). Key project deliverables are reported to the Steering Committee on completion. Project deliverables are reviewed and approved by the PDG. 	Medium
Change requests do not adequately capture business requirements leading to deliverables not meeting internal or external expectations.	Medium	<ul style="list-style-type: none"> A change management process is in place for controlling changes affecting the scope. All material changes are reviewed and presented to the WCMS Steering Committee for review and approval. Major project changes require Board level approval. 	Low
Operations risk (BAU)			
Division and/or end user training is inadequate leading unsatisfactory levels of system adoption and use.	High	<ul style="list-style-type: none"> Training activities are defined in the Change Management Plan and included as a sub-project within the master project schedule. 	Medium
Inability to integrate business processes with the new system leading to unplanned post-production business process re-engineering	Medium	<ul style="list-style-type: none"> A business change management project stage is included in the WCMS Project that covers business and technology hand-over to BAU. 	Low

Potential Risk	Inherent Risk Rating	Controls / Mitigation Strategies	Residual Risk Rating
System performance and/or capacity is inadequate to meet demands leading to internal and/or external reputational impacts.	High	<ul style="list-style-type: none"> System and regression tests are activities included in the Schedule. 	Medium
Inadequate user training leading to higher than unexpected system support needs/calls.	Medium	<ul style="list-style-type: none"> Training activities are defined in the Change Management Plan and the schedule. 	Low
The delivered system is not stable or resilient leading to unplanned outages.	Medium	<ul style="list-style-type: none"> System and regression tests are activities included in the Schedule. Improvement to risk management controls are required to mitigate this risk further Refer to Finding 3.3. 	Medium
Technology and IT infrastructure required to deliver the scope of the project does not comply with the ABC's architecture standards, leading to technology changes the need to provision additional support or technical administration resources.	Medium	<ul style="list-style-type: none"> A dedicated Enterprise Architecture specialist is assigned to the WCMS Project to review and assess that all functional and non-functional requirements are aligned to ABC architecture standards. 	Low
Information security does not meet the ABC's requirements leading to unplanned post-production system configuration changes and related cost.	Medium	<ul style="list-style-type: none"> Information Security requirements are considered as non-functional requirements and dedicated Enterprise Architecture specialist is assigned to the WCMS Project to review and assess all non-functional for compliance to standards. 	Low

Appendix 3. Limitations

This engagement was performed in accordance with the terms of the contract between ABC and EY (and any subsequent engagement agreement under the contract) dated 1 November 2012, and our procedures were limited to those described in that agreement.

The services provided were advisory in nature and did not constitute an audit, a review or an engagement to perform agreed-upon procedures in accordance with the Australian Auditing Standards.

This report has been prepared for the use of ABC management and use is restricted in accordance with the terms of the contract and any third party reliance is subject to EY and ABC consent.

We disclaim all liability to any other party for all costs, loss, damage and liability that the other party may suffer or incur arising from or relating to or in any way connected with the contents of our report, the provision of our report to the other party or the reliance upon our report by the other party

Liability limited by a scheme approved under Professional Standards Legislation.

WCMS Steering Committee

1.00pm, 2 July 2014

AGENDA

1. Minutes from last meeting
2. Project Update
3. Financial Report
4. Integration: scope & schedule
5. Other Business

WCMS Steering Committee

Minutes

1pm, 2 July 2014

Attendees: David Pendleton, Chief Operating Officer
Angela Clark, Director Innovation
Kate Torney, Director News
Richard Finlayson, Director TV
Michael Mason, A/g Director Radio
Mark Woodley, Head Capital Works
Scott Makin, Project Manager
Amanda Walsh, Executive Manager Operations Group

Apologies: Lynley Marshall, Director International

Minutes of the Last Meeting

Pending the correction of a typographical error, the Minutes of the last meeting were endorsed.

It was agreed that Angela and David will meet within the next week to discuss issues Angela had raised concerning previous minutes.

Project Update

The feature merge has been added to the schedule. Schedule dates have not changed but the order of features has moved. This has been agreed with PDG.

The schedule is on track except for a two week gap in the design of release 12 and release 13. It expected that this gap will be remedied by release 15, which will leave the schedule with a 4 week buffer.

The project build is on track.

Testing is currently running behind schedule due to delays in the test environment build. Testing has now started and this delay will be remedied by the end of release 12, ahead of UAT testing at release 13.

It was noted that there is no plan in place yet for stage acceptance testing sign off although a marker date has been included in the project schedule. This has been listed as a risk (Risk no 132, see pg 14 of the Project Update) and it was agreed that a proposal, including who will oversee the testing, will be drafted by Scott, Ciaran and Ant for PDG consideration at the next Steering Committee meeting.

Key Risks/Issues

Ernst and Young have recommended that risk reporting to the Steering Committee should be listed by high impact issues. The table on pg 14 of the current Project Update follows this new approach.

Scott will work with Ciaran to refine the wording of risk no 147 and finalise the operational framework and plan. Both the plan and framework will be tabled at the next Steering Committee meeting.

Risk no 137 (staff retention) due to several contracts coming to an end in September. It was acknowledged that the rate of pay is substantially higher for contract staff compared to ABC staff. It was agreed that risk 137 will be assigned to Steven Parr only with a separate risk created for the BAU staffing plan assigned to Anthony Willis. Both risks will continue to be tracked. It was agreed that more detail on location of skill sets vs requirements will be provided to the COO.

Risk 59 (accessibility) will be brought to the Steering Committee as an update in the near future. This risk will be assigned to Gary Paternoster, not Innovation.

It was agreed that the outcomes of the workshops on templates will go to the next PDG meeting.

It was noted that changes or identified gaps within the News and Information features are known by each division.

It was noted that the project will be able to assess whether Triple J, iView and other core products will fit within the system after the feature gap analysis and the integration workshops are completed. The integration workshops are currently underway and included within the Integration Project scope. The feature gap work is progress as per the project schedule and due to occur before the start of each major project stage.

The integration scope documentation has been discussed with the working group and was circulated to key stakeholders earlier this week. A confirmation of sites that will/won't be delivered by the system are planned to be signed off at the next PDG meeting. This will then be circulated to the next Steering Committee or out of session. Sites that will fall outside the project will need a plan as to how they will work with the WCMS system. (API , etc)

Finance

The Finance Report was considered read.

Integration

The PDG and ARG have endorsed the Integration business plan and schedule for Steering Committee approval.

Angela will forward Ciaran's comments on the definition of 'integration' to Mark Woodley. It was noted that the Integration Plan will need to be amended should the gap analysis find any sites which will fall outside the project.

It was agreed that Mark Woodley will meet with Ant to clarify these concerns.

Innovation did not endorse the business plan.

Subject to any significant changes coming out of this discussion, the Steering Committee approved the Integration Project business plan and schedule.

Other business

It was agreed that the Operating Model and Communications Plan will be brought to the next Steering Committee meeting.

WCMS Communications

Communication Purpose:

The WCMS project to date has focused its communication to CoreMedia users and selected divisional representatives. The Project would like to target Wallace users to start to set expectations and prepare them for the change.

Communication Target:

DG-WCMS-Steering-Committee
DG-WCMS-PDG;
DG-WCMS-PDwG;
DG-WCMS Project Team;
DG-CoreMedia Users;
DG-CoreMedia RN Users;
Managers of Wallace Users
Wallace Users

Communication Sender:

WCMS Project Management

DRAFT EMAIL – For Managers

Subject line: Web Content Management System (WCMS) UPDATE for Managers

The ABC is committed to delivering a single Web Content Management System to allow our staff to share content and keep up with the ever changing needs of our audience. The project team has been busy and, from November 2014 the ABC's WCMS, Core Media, will be progressively available with new and enhanced features.

It is important that each business area prepares for any change by working with their divisional representatives. We are encouraging you to identify and schedule your key staff to attend the first wave of training that will commence in September. Dates for the online training will start to be made available within the next two weeks. Places will be limited in this first series of training, so please book early.

With the new WCMS tool coming online, we are also announcing that Wallace is reaching its end of life. Once divisions have successfully moved to the new WCMS, Wallace will be retired.

We have identified Wallace users and will be communicating with them regarding this change.

Divisional Representatives and FAQs can be found at our [project website](#) or contact [Joanne Darvell](#), WCMS Change Manager.

DRAFT EMAIL – For Core Media and Wallace Users

Subject line: Web Content Management System (WCMS) UPDATE

The ABC has been upgrading its Web Content Management System to provide a single WCMS that will allow content sharing, mobility and flexibility in the way we deliver content to our audience.

The project team have been busy and the initial phase of the new system will be available in production from November 2014. These changes will provide our audience with social media links, dynamic images and improved mobile content delivery. The project is working closely with the divisions to plan and schedule a smooth transition.

So the users can understand how to use the new tools, we will be scheduling the first round of training and encourage your participate. The training will be delivered via online packages which will be available on our training system from September 2014. Initial training places will be limited so please make sure you express your interest early.

With the new WCMS tool coming online, we are also announcing that Wallace is reaching its end of life. Once divisions have successfully moved to the new WCMS, Wallace will be retired.

If you have any further questions please refer to our [FAQs](#) or contact [Joanne Darvell](#), WCMS Change Manager.

Accessibility Review

WCMS Phase 2



Prepared for ABC
25 September 2014
Version 1.0

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1 Introduction

1.1 Overview

PwC's Digital Change Services (PwC) was engaged by the ABC to conduct an independent review of WCMS Phase 2 for accessibility issues over a seven day period. Accessibility refers to the degree to which a product, system or device is accessible by as many people as possible.

WCMS is a content management system (CMS) that is being built by the ABC and is intended to be the universal platform on which all ABC websites will be built in the future.

WCMS is built using CoreMedia, a flexible web content management system for the production, administration and delivery of scalable, personalized multi-channel services.

1.2 Purpose

The purpose of this document is to provide the ABC with an overview of the accessibility review process along with key findings and actionable recommendations for improving the accessibility of the core features that will be used to build accessible websites using WCMS Phase 2.

1.3 Intended audience

This document is intended for the teams and external resources responsible for the design, development, management and maintenance of the system reviewed in this document.

1.4 Previous work

In June 2014, PwC performed an accessibility review of the first implementation of WCMS, Phase 1 against the Authoring Tool Accessibility Guidelines (ATAG) 2.0 (draft) Level AA Part B only, which relates to the production of accessible content by WCMS. An accessibility review against the Web Content Accessibility Guidelines (WCAG) 2.0 on the News and Radio National sites (which were built using WCMS Phase 1) was also conducted.

The results of the WMCS Phase 1 review showed that WCMS was capable of producing accessible content with a few exceptions, namely:

- The controls for the default media player (audio and video) were inaccessible
- The media player did not support closed captions
- The content editor did not support the production of fully accessible tables
- The content editor did not support marking up text that was not the primary language of the page
- Alt text for Image Proxies did not overwrite the alt text specified for the original image
- ViewTypes were capability of creating accessible content, however were not always built with accessibility in mind.

In addition, the set of authoring tool requirements that support authors in creating accessible content by helping authors and developers to recognise accessibility issues and repair these issues during the content authoring process were not satisfied.

As WCMS Phase 1 was capable of producing accessible content and most exceptions were in the control of the WCMS developers, PwC focused on reviewing the front-end output of WCMS Phase 2 against WCAG 2.0 Level AA, rather than perform a complete review of WCMS Phase 2 against ATAG 2.0.

1.5 What is accessibility?

Accessibility refers to the degree to which a product, system or device is accessible by as many people as possible. Often, accessibility is used in relation to people with disabilities. While people with disabilities are one of the key beneficiaries of accessible design, accessibility helps to bring benefits to a wide range of users in many working contexts.

Assistive technology (AT) refers to software or hardware that is specifically designed to assist people with different needs in carrying out daily tasks. It can include hardware such as different types of keyboards and pointing devices as well as software.

1.6 What is WCAG 2.0?

WCAG 2.0 is an international standard written by the W3C for use by web authors, developers and designers. It includes recommendations and techniques for creating accessible content and websites.

WCAG 2.0 contains 61 success criteria – these are testable statements which can be used during design and development to assess if a website meets the standard. The success criteria are split into 3 levels of conformance. These are defined as follows:

- Level A – the lowest level of conformance
- Level AA
- Level AAA – the highest level of conformance

2 *Our approach*

2.1 *Overview*

PwC's accessibility assessment is based upon the W3C's [Website Accessibility Conformance Evaluation Methodology \(WCAG-EM\) 1.0](http://www.w3.org/TR/WCAG-EM/)¹. The key steps of the approach are:

- Methodology Requirement 1: Define the Evaluation Scope
- Methodology Requirement 2: Explore the Target Website
- Methodology Requirement 3: Select a Representative Sample
- Methodology Requirement 4: Audit the Selected Sample
- Methodology Requirement 5: Report the Evaluation Findings

A manual assessment was used to evaluate selected pages. Manual checks are required in order to ensure that the results are relevant to people. For example, an automated test can determine whether an image has an alternative text description, but it cannot determine whether that description is relevant, accurate or helpful to a human being.

2.2 *Scope of testing*

PwC conducted an accessibility review of 50 features and their associated states, **against WCAG 2.0 Level AA**, and the HTML standards appropriate to these pages.

The review occurred over a period of 7 days. Testing occurred between 15 September and 24 September 2014 within the test environments:

- wcms-preview.aus.aunty.abc.net.au/editor (Editor)
- wcms-preview.aus.aunty.abc.net.au/test-accessibility (Preview)
- wcms-www.test.abc.net.au/test-accessibility (Live)

The findings set out in this document are correct at the time of publication:

- Do not include other features that have not been tested
- Do not cover any updates or maintenance that have been or will be performed on the application since it was tested
- May be rendered invalid if changes have been made to specifications of the technology being tested
- Are according to our interpretation of the WCAG 2.0 and ATAG 2.0
- Identify as many issues as possible within the identified timeframe (but may not be exhaustive of every single possible variation of every possible problem).

Out of scope:

¹ <http://www.w3.org/TR/WCAG-EM/>

- There were a number of features that excluded from the scope which are detailed in Appendix B: Out of scope features. As WCMS was still under development, there were features that were not available during the testing period. There were also feature that were deemed not to have an impact on the production of accessible content. These features were out of scope for this review.

2.2.1 Features tested

ABC supplied PwC with a list of features that were available for testing. Findings in this document apply to the features assessed, but the recommendations should be extrapolated and solutions applied to existing or new features where relevant.

The following features were tested.

Feature	Page that uses feature
3.1 Search Form	http://wcms-preview.aus.aunty.abc.net.au/test-accessibility
3.3 Search Results	http://wcms-preview.aus.aunty.abc.net.au/test-accessibility/294552.html?searchTerm=cricket
7.3.2 Global Header	http://wcms-preview.aus.aunty.abc.net.au/test-accessibility
7.3.5 Site Navigation	http://wcms-preview.aus.aunty.abc.net.au/test-accessibility
7.3.3 Global Footer	http://wcms-preview.aus.aunty.abc.net.au/test-accessibility
1.1.2 Text (News and Information) document	http://wcms-preview.aus.aunty.abc.net.au/test-accessibility/294218.html
12.34 Related Content	http://wcms-preview.aus.aunty.abc.net.au/test-accessibility/294204.html
7.4.1 Extended Article document	Tested as part of 1.1.2 Text (News and Information) document
7.3.4 Site header	http://wcms-preview.aus.aunty.abc.net.au/test-accessibility
7.3.6 Site footer	http://wcms-preview.aus.aunty.abc.net.au/test-accessibility
7.9.5 Embedded Content	http://wcms-preview.aus.aunty.abc.net.au/test-accessibility/294964.html
7.7.1 Dynamic Collections	http://wcms-preview.aus.aunty.abc.net.au/test-accessibility
1.1.9 Overriding objects' properties (was Teaser document)	http://wcms-preview.aus.aunty.abc.net.au/test-accessibility
1.2.1 Taxonomies	Tested as part of 1.2.1.1 Subjects and 1.2.1.2 Genres
12.43 Tickers	http://wcms-preview.aus.aunty.abc.net.au/test-accessibility
12.22 Featured Comments	http://wcms-preview.aus.aunty.abc.net.au/test-accessibility
12.7 Publish Content	http://wcms-www.test.abc.net.au/test-accessibility/ *
2.1.2 Vanity URL (URL redirects)	http://wcms-preview.aus.aunty.abc.net.au/test-innovation
7.3.1 Page Layout	http://wcms-preview.aus.aunty.abc.net.au/test-accessibility
7.9.4 Teasers (Property override)	Tested as part of 1.1.9 Overriding objects' properties (was Teaser document)
1.1.7 Map document	http://wcms-preview.aus.aunty.abc.net.au/test-accessibility

7.6.1 Image gallery	http://wcms-preview.aus.aunty.abc.net.au/test-accessibility/294288.html
1.1.4 Video document	http://wcms-preview.aus.aunty.abc.net.au/test-accessibility/294384.html
12.36 RSS/Podcast - Simple	http://wcms-preview.aus.aunty.abc.net.au/test-accessibility
7.9.1 Maps	http://wcms-preview.aus.aunty.abc.net.au/test-accessibility
7.4.8 Video	Tested as part of 1.1.4 Video document
13.3 Video Player	http://wcms-preview.aus.aunty.abc.net.au/test-accessibility/294384.html
7.4.10 Interactive + NewsGap16	Tested as part of 7.9.2 Interactives (HTML5)
1.1.8 non-ABC content (was Interactive document)	Tested as part of 7.9.2 Interactives (HTML5)
12.46 Live Blogging	http://wcms-preview.aus.aunty.abc.net.au/test-accessibility/294432.html
1.4.2 Image gallery	Tested as part of 7.6.1 Image Gallery
1.1.3 Image document	http://wcms-preview.aus.aunty.abc.net.au/test-accessibility/294332.html
7.4.2 Image	Tested as part of 1.1.3 Image document
7.9.2 Interactives (HTML5)	http://wcms-preview.aus.aunty.abc.net.au/test-accessibility
12.28 Maps Detail View	http://wcms-preview.aus.aunty.abc.net.au/test-accessibility/294346.html http://wcms-preview.aus.aunty.abc.net.au/test-accessibility/294348.html http://wcms-preview.aus.aunty.abc.net.au/test-accessibility/294350.html
7.7.2 Editorial collections	http://wcms-preview.aus.aunty.abc.net.au/test-accessibility
7.4.7 Audio	http://wcms-preview.aus.aunty.abc.net.au/test-accessibility/294240.html
1.1.5 Audio document	Tested as part of 7.4.7 Audio
7.5.5 Grid List	http://wcms-preview.aus.aunty.abc.net.au/test-accessibility
7.5.3 Detailed List	http://wcms-preview.aus.aunty.abc.net.au/test-accessibility
7.5.4 Simple List	http://wcms-preview.aus.aunty.abc.net.au/test-accessibility
7.5.6 Link List	Tested as part of 7.5.4 Simple List
13.4 Audio Player	http://wcms-preview.aus.aunty.abc.net.au/test-accessibility/294240.html
12.44 Topic List	http://wcms-preview.aus.aunty.abc.net.au/test-accessibility
7.8.1 Various + NewsGap05	Tested as part of all viewtypes
12.18 Closed Captions Within Video Player	http://wcms-preview.aus.aunty.abc.net.au/test-accessibility/294384.html
12.17 Carousel	http://wcms-preview.aus.aunty.abc.net.au/test-accessibility
8.1 Renditions (Media availability)	http://wcms-preview.aus.aunty.abc.net.au/test-accessibility/294240.html

2.3 List of accessibility tools

The following tools were used to run manual tests:

- Firebug for Firefox
- Web Developer Toolbar for Firefox
- Web Accessibility Toolbar for Internet Explorer
- Colour Contrast Analyser tool

2.4 Software tested on

Manual reviews were done using the following software:

- Firefox 32.0.2
- Internet Explorer 9
- NVDA 2013.3 (screen reader)
- Windows Magnifier (screen magnifier)
- Windows 7 Enterprise

2.5 Technology relied upon

WCAG 2.0 states that to achieve compliance, the site should have only accessibility-supported ways of using technologies. This section identifies the technologies relied upon to provide this website:

- HTML
- CSS
- Scripting

WCAG 2.0 states that to achieve conformance, websites should have only accessibility-supported ways of using technologies (Conformance Requirement 4).

WCAG 2.0 does not restrict the use of accessible scripting such as Javascript (see [Appendix A: Reference materials](#) for more details). WCAG 2.0 spells out the criteria (through the use of various Sufficient Techniques²) that you have to follow to ensure that any implemented JavaScript is accessible (for example, ensuring device independence so keyboard and mouse users can access and navigate the user interface).

The use of JavaScript does not mean a page will be inaccessible, and can be used to enhance accessibility (for example, warning users about a timeout will tend to rely on scripting). However there are accessibility issues associated with the use of JavaScript which should be taken into consideration. These include hidden content, control and awareness over dynamic content changes or updates to a page, and difficulty accessing or navigating with a keyboard or assistive technology.

² <http://www.w3.org/TR/2012/NOTE-WCAG20-TECHS-20120103/client-side-script.html>,
<http://www.w3.org/TR/2012/NOTE-WCAG20-TECHS-20120103/server-side-script.html>

These are common problems that arise from the use of JavaScript and can cause major difficulties for assistive technology users, so care must be taken to ensure access via keyboard and providing an equivalent experience for all users.

While reliance on JavaScript is allowed, it is important to determine whether it is necessary or vital for page functionality, as the use of accessible HTML with JavaScript enhancement will provide a more accessible experience for more users.

3 *Summary of WCAG 2.0 compliance*

3.1 *Accessibility issues*

Accessibility issues were entered directly into the WCMS issue tracking software Jira. Issues were described in the following manner:

- Which feature the issue applies to
- A description of the issue
- Recommendation for fixing the issue
- Which Success Criterion or Criteria the issue fails

In addition, a severity scale rating was discussed and agreed with representatives from the WCMS team and the wider business for each issue that was identified. A summary of the Jira ticket number, issue, applicable feature and severity is available in [Appendix C: Summary of issues and severity](#).

The severity scale ratings, shown below, can be used to help prioritise future developments:

Fail severity	Description of severity
Low	Minor inconvenience which is not likely to prevent anyone from accessing content, but could affect the ability of some people to use the content.
Medium	Feature would benefit from improvements. Usability affected. May prevent some people from accessing or using the page content.
High	Requires attention. Potential showstopper and workaround does not exist. Prevents access to sections of the site or content.

The focus of the evaluation was on Level A and Level AA. In some instances, accessibility enhancements and usability suggestions are also provided. These recommendations are provided on the assumption that progressive enhancement principals are used – e.g. build a basic version that meets WCAG 2.0 and other web standards, then use appropriate JavaScript and WAI-ARIA to enhance the user experience for all users.

3.2 *Summary of results*

3.2.1 *By WCAG 2.0 Success Criteria*

This section outlines the performance score for the sampled features using the W3C's 'Per website' performance scoring methodology. The Per Website performance score indicates the overall percentage of Level A and Level AA Success Criteria that were met. The W3C states that: "Performance scores can provide more granular measure for the level of

conformance of a website than the WCAG 2.0 conformance levels provide. This can be useful to monitor progress of websites over time. However, scores alone do not provide sufficient context and information to understand the actual accessibility state of a website.”

This score calculates a ratio over the sampled features. Any failure to meet a Success Criterion on any web page is directly reflected as failure of the features to meet the respective Success Criterion.

This score is calculated as follows:

- All applicable WCAG 2.0 Success Criteria is noted.
- Success Criteria that are met on all of the web pages within the selected sample are marked as a pass. For example, if Success Criterion 1.1.1 is met on all web pages, then this Success Criterion is marked as a pass.
- After the evaluation, the overall Per Website is calculated based on the sum of Success Criteria that are met consistently across the entire sample (from dot point 2), divided by the sum of all applicable Success Criteria (from dot point 1).

The overall Per Website score for the WCMS Phase 2 features is:

60%

This means that the WCMS Phase 2 features met the following Success Criteria at the time of testing:

Conformance level	Pass	Fail
Level A	13 of 25 Level A Success Criteria passed	12 of 25 Level A Success Criteria failed
Level AA	9 of 13 Level AA Success Criteria passed	4 of 13 Level AA Success Criteria failed

The overall percentages relate to the percentage of Success Criteria passed for that Conformance Level for the selected sample of pages. For example, 56% of Level A means that 56% i.e. 14 of the 25 Level A success criteria were met. 54% of Level AA means that 54% i.e. 7 of the 13 Level AA success criteria were met.

Note:

- Level AA percentage is not cumulative (i.e. it is separate to the Level A percentage).
- Success Criteria that do not apply to the content are deemed to have been met and marked as n/a.
- Issues identified in the ‘Other recommended usability & accessibility enhancements’ are not counted against the Pass / Fail / n/a column.
- Partial passes are counted as a Pass.

See [Appendix D: WCAG 2.0 results breakdown](#) for a detailed breakdown of the number of Success Criteria passed for Level A and AA against the four Principle of WCAG 2.0, and the specific Success Criteria that were passed or failed.

3.2.2 *By feature*

This section outlines the total number of issues for each feature that was tested, and the severity of each issue.

Feature	Total issues	High severity issues	Medium severity issues	Low severity issues	Enhancement
Audio	5	3	1	1	0
Carousel	4	1	1	2	0
Detailed List	1	0	0	1	0
Dynamic Collections	1	0	0	1	0
Editorial Collection	1	0	0	1	0
Embedded Content	4	0	1	3	0
Featured comment	2	0	1	1	0
Global	10	5	1	2	2
Global footer	2	0	0	1	1
Global header	3	0	2	1	0
Image Document	1	0	0	0	1
Image Gallery	2	1	1	0	0
Image Proxy	1	1	0	0	0
Interactives (Soundcloud)	6	1	1	4	0
Interactives (Vimeo)	3	1	2	0	0
Interactives (YouTube)	2	2	0	0	0
Live Blogging	7	2	4	1	0
Map Details View (Dynamic Maps)	2	1	0	1	0
Map Details View (Google Maps)	2	1	1	0	0

Feature	Total issues	High severity issues	Medium severity issues	Low severity issues	Enhancement
Map Details View (Open Street Map)	1	1	0	0	0
Map document (Dynamic Maps)	1	0	0	1	0
Map document (Open Street Map)	1	1	0	0	0
Map document (Static Map)	1	0	0	1	0
Quotes	1	0	0	1	0
Related Content	6	2	4	0	0
Renditions (Media Availability)	1	0	0	0	1
Search Form	2	0	2	0	0
Search Results	4	1	2	0	0
Site Header	1	0	1	0	0
Site Navigation	2	1	0	0	1
Text (News and Information)	2	1	0	1	0
Tickers	3	2	1	0	0
Video	2	2	0	0	0

3.3 Key issues

The following describe some of the key issues with a high severity rating that were identified during testing. This is not an exhaustive list of high priority issues. Please refer to [Appendix C: Summary of issues and severity](#) and their related Jira ticket entries for a complete list of all issues, including those with a high severity rating.

3.3.1 Media players

The media players used for audio and video content both have accessibility issues that present a keyboard-only user from playing the media content.

The large 'play' button that is overlaid on an image associated with the media file is not keyboard accessible which will prevent keyboard only users, including screen reader users from being able to play the audio or video file.

When the media is played, the media player controls for both the audio and video content are inaccessible. The controls for the different media types are not the same.

The video player supports closed captions which addresses one of the issues identified in WCMS Phase 1 testing.

3.3.2 Ticker

The news ticker has several accessibility issues, including:

- The inability to pause the ticker, and
- Inconsistent experience due to nested ticker items (where the buttons to move forward/back) not being consistently displayed.

Any moving content must have a way for users to pause the content. Users may need more time to read the information displayed via the ticker. For certain groups, including people with low literacy, reading and intellectual disabilities, and people with attention deficit disorders, content that changes may make it difficult or even impossible to interact with the rest of the Web page.

The example news ticker of the test site had a nested list with a single news item, followed by a nested list with three news items. When a single news item is displayed, there is no forward/back buttons, however when multiple news items are displayed these buttons appear. This leads to an inconsistent experience for the user.

To address the issue of the consistent display of ticker items, and in particular the forward/back buttons, we recommend including news items in a single list where the forward/back button is either never present if there is only one news item, or always present if there is more than one. This solution is modelled off best practice solutions for carousels.

3.3.3 Site navigation

Sub-navigation elements within the site navigation are not keyboard accessible. Currently, a user can only navigate through the top level navigation with the keyboard.

3.3.4 Interactives

Interactives (HTML5) such as SoundCloud, Vimeo and YouTube all have accessibility issues which are of a high severity rating. These include interactive elements that are not keyboard accessible or labelled in a way that is accessible, elements that do not have a keyboard focus indicator and elements that cause a keyboard trap. This will be a risk with using any third-party code, and many companies who build these products do so without accessibility in mind.

Recommendations to address keyboard accessibility include using native HTML elements that automatically receive keyboard focus or ensuring keyboard focus by using the tabindex attribute, ensuring a visible focus indicator is available for all interactive elements that does not rely on colour alone, and a reference to avoid keyboard traps in Flash.

3.3.5 Maps

WCMS Phase 2 has three different maps available namely Open Street Maps, Google Maps and Dynamic Maps. Each of these maps have similar accessibility issues, including:

- Inaccessible map controls (e.g. Zoom, Pan)
- Maps are rendered using img elements with no alt attribute or testing with NVDA/Firefox resulted in strings of nonsensical letters and numbers.

References to resources and code samples for replacement map controls have been included as part of the recommendations.

To address the img elements with no alt attribute/nonsensical strings of characters, we have recommended the use of aria-hidden="true" on the map feature along with a redundant in-page link for older screen readers that do not support aria-hidden. More details are available in the relevant tickets within Jira.

3.3.6 Visible focus indicator

There are multiple instances where a visible keyboard focus indicator is not present for interactive elements such as buttons. This is often an issue with interactives (third-party plugins or embeds), but is also an issue for the WCMS carousel. Visible keyboard focus indicator include the default focus indicator of a dotted line around the element, or custom CSS indicators.

3.3.7 Authoring tool issues

The issue identified during WCMS Phase 1 testing, namely that the alt text for Image Proxies did not overwrite the alt text specified for the original image, has only been partially addressed.

A content publisher can create an Image Proxy which references an existing Image in the library. The caption and alt text for the Image can be overridden via the Image Proxy. When the Image Proxy is rendered in its own page, the alt text for the Image Proxy is used. When the Image Proxy is used as it is within the homepage on the test site, the alt text of the original Image is used.

We have also raised the issue identified in WCMS Phase 1 that a content publisher cannot specify that an image has empty alt text. When the alternative text field for an Image is left blank, WCMS automatically adds alt text which replicated the value entered into the title field. This makes it impossible for an author to include an image with empty alt text. Empty alt text is valid when an image is decorative, or when the information conveyed by an image is convey in another format such as text.

3.4 Content-related notes

The focus of this review was on the output of WCMS Phase 2. As such, we have not reported on all issues that are not the responsibility of the front-end developer. As such, in some instances we have not reported on alt text that is not appropriate for the image, understanding that this is a test environment and that content authors and publishers do have control over the elements they need.

However, there are two items that relate to the authoring of images and maps that are important:

- **Alt text:** Ensure that content authors and publishers are trained in accessible content practices, and in particular how to write alt text that accurately describes the purpose or function of the image for a user who cannot access the image.
There were no infographics within the test site. Infographics are considered complex images that must have a text alternative that presents the same information in an accessible form.
- **Maps:** PwC has tested the accessibility of the maps and reported any issues that were found. However, it will be the responsibility of the content authors and publishers to ensure that the same information conveyed via the map is presented visually must be presented in text as well. Front-end developers may also be involved with ensuring information is accessible if a map function is more complex. (e.g. a map that shows electoral boundaries)

3.5 Outstanding testing

Parsing could not be completed due to restricted access to the Showcase (live) and Previous site (Success Criteria 4.1.1 Parsing). The instructions below describe how to check for parsing errors.

1. Check for parsing errors using the [W3C Markup Validation Service](#).
2. Parsing errors are a subset of validation errors. You DO NOT have to fix all validation errors, but you do need to fix all parsing errors to pass this Success Criterion. You will need to fix the following parsing issues if they occur on the website:
 - Elements have complete start and end tags
 - Elements are nested according to their specifications
 - Elements do not contain duplicate attributes
 - Any IDs are unique
 - Unquoted attributes (under certain circumstances)
 - Duplicate attributes
 - Mismatched quotes on attributes
 - Attributes not space separated
 - Mismatched element start and end tags
 - malformed attributes
3. Retest once the issues have been fixed.

4 *Next steps*

Accessibility is a journey rather than an end state. This means that there are many different components to being 'accessible'.

To ensure that the core features tested in this review are accessible, the recommendations provided for the issues identified should be implemented and then retested for compliance.

As certain features are still under development, these features should be tested for compliance when they are ready.

The focus of this review was on features rather than testing entire pages against WCAG 2.0 Level AA. We have endeavoured to identify any issues that could apply when WCMS Phase 2 begins to be used to build live sites (e.g. heading structure). However, not all issues can be foreseen and we recommend that when WCMS Phase 2 is used for live sites that pages are reviewed to identify a new accessibility issues that could not be detected within this project.

Other elements that the ABC may want to consider include:

- **Content authoring and publishing processes**
Ensure that accessibility is considered throughout the authoring and publishing processes.
- **Development of custom features or variations on core features**
As business units start to build their websites using WCMS Phase 2 and responsibility for development moves outside of the core WCMS team to WCMS Business as Usual or teams within business units, it will be important that accessibility processes, governance and accountability are in place to ensure that websites are built with accessibility in mind.
- **Ongoing review**
Ensure regular ongoing review of the all new features or updates to existing features.
- **Testing with people with disabilities**
Involve people with disabilities in regular testing of the website. A priority should be testing the first few sites built of WCMS Phase 2 with people with disabilities to identify any issues with the core features that could be repaired and rolled out to all future sites using WCMS Phase 2.
- **Document the defined 'accessibility supported' technologies**
Sometimes known as the 'baseline' (refer to W3C's Appendix B Documenting Accessibility Support for Uses of a Web Technology). The Australian Human Rights Commission also recommends "to clearly state which technologies they have relied upon in publishing web content".

4.1.1 *Further resources*

To help implementation and follow best practices the following links may help:

Description	URL
A guide to understanding and implementing Web Content Accessibility Guidelines 2.0	Understanding WCAG 2.0
Techniques for WCAG 2.0	WCAG 2.0 Techniques

Appendix A: Reference materials

A.1 Terms and definitions

For the purposes of this document, the following terms and definitions apply:

Term	Definition
Accessibility supported	Supported by users' assistive technologies as well as the accessibility features in browsers and other user agents.
Relied Upon (Technologies)	From WCAG 2.0 definition for "relied upon" : The content would not conform if that technology is turned off or is not supported.
Website	A coherent collection of one or more related web pages that together provide common use or functionality. It includes static web pages, dynamically generated web pages, and web applications.

A.2 Accessibility supported

The definition of accessibility supported according to WCAG 2.0 requires that 1) the way that the Web content technology is used must be supported by the users' assistive technology and 2) the Web content technology must have accessibility-supported user agents (e.g. web browsers) that are available to users.

In our opinion, Javascript as a Web content technology is supported by users' assistive technology and web browsers. In the [WebAIM Screen Reader User Survey #5 \[January 2014\]](#), 97.6% of respondents had Javascript enabled. Furthermore, with the March 2014 update to Techniques for WCAG 2.0 and the introduction of new ARIA (Accessible Rich Internet Applications) Techniques, it is also now possible to prove conformance of scripted content using these Sufficient Techniques.

A.3 Usability heuristics

Heuristics are more noted as being "good rules of thumb" for interface design rather than strict guidelines.

Whenever designing and or re-developing an existing interface, developers should make use of the below rules to ensure their designs meet user expectations and general good practice.

Orientation, navigation and information architecture

Navigation choices are ordered in the most logical or task-oriented manner. Labelling is clear and logical (e.g. Links, buttons, options). Navigation items such as links and buttons are clearly selectable.

It is clear to the user what actions can be taken next or where they can go next. There is clear indication of where the user is.

Match between the website and the real world

The website should speak the users' language, with words, phrases and concepts familiar to the user. Interaction should reflect real-world conventions, making information appear natural and logical.

Effectiveness and efficiency

Clear feedback is provided on user actions. There is clear visibility of system progress. Confirmation offered on irreversible actions. The user does not need to enter in the same information more than once and questions are grouped logically and each group has a heading.

Recognition rather than recall

Good design minimises the user's memory load by making objects, actions, and options clearly communicative of function and identity. The user should not have to remember information from one part of the site to another. Instructions for use of the website should be visible or easily retrievable whenever appropriate.

Consistency and standards

Users should not have to wonder whether different words, situations, or actions mean the same thing. The website should be consistent and follow a set of clearly established conventions.

Visual design

The interface should be clean, crisp and uncluttered. The layout is organised and ordered. Interface elements are easy to discover. There is good balance between information and the use of white space.

User control, freedom and flexibility

The website and associated controls should not only guide the user through the completion process but afford users the ability to control the process to match their distinct expectations and needs.

The design should support different ways of using it, and correspond with key scenarios for use. Examples include accelerators, unseen by the novice user, which may often speed up the interaction for the expert user such that the website can cater to both inexperienced and experienced users. The website should allow users to tailor frequent actions.

Error management

Error messages should be expressed in plain language (no codes), precisely indicate the problem, and constructively suggest a solution. Even better than good error messages is a careful design which prevents a problem from occurring in the first place. The website should therefore either eliminate error-prone conditions or check for them and present users with a confirmation option before they commit to the action.

Help

Even though it is better if the website can be used intuitively and without assistance, it may be necessary to provide online help. This information should be readily accessible, easy to search, focused on the user's task, list concrete steps to be carried out, and not be too large.

Appendix B: Out of scope features

The following features were not available during the testing period and were therefore out of scope:

- 2.1.3 Legacy URLs
- 1.2.2 Places
- 12.8 Context Aware Presentation
- 6.1 Comments
- 1.2.2.1 Locations
- 1.2.2.2 Regions
- 1.2.1.2 Genres
- 12.35 RSS/Podcast - Detailed
- 12.31 Popular Tags
- 6.4 Social Sharing for Text Documents
- 1.2.1.1 Subjects
- 18.1 Feature promo

The following feature were deemed not to have an impact on the production of accessible content and were therefore out of scope:

- 12.13 Test/Staging Areas (Non-functional feature)
- 12.11 Development Areas (Non-functional feature)
- 7.2.1 Templating (No testing required)
- 12.2 Manage Content Access (Editor feature (Not client facing))
- 12.1 Editor Search (Editor feature (Not client facing))
- 90.0 Template backport phase-2 generic (Editor feature (Not client facing))
- 12.9 Default Presentation of content (No testing required)
- 7.1.2 Desktop Views (Non-functional feature)
- 1.1.1 Base Document Model + 1.1.1 NewsGap Hero Media N/A (Not testable)
- 12.6 Manage text content (Editor feature (Not client facing))
- 12.4 Manage Content Workflows (Editor feature (Not client facing))
- 12.3 Manage Content Definitions (Editor feature (Not client facing))
- 1.2.3 Roles (Editor feature (Not client facing))
- 7.1.1 Device detection & redirection (Non-functional feature)
- 7.1.3 Mobile views (testing implicit)
- 12.42 Tabs (In development)
- 7.7.4 Featured Contents + 7.7.4 NewsGap11 Proxy Collections (In development)
- 2.3.1 Analytics (Non-functional feature)
- 12.19 Custom Tracking (Non-functional feature)
- 12.14 Remote Access (Non-functional feature)
- 2.3.2 Cookies (Non-functional feature)
- 12.29 Video Player Playlist (In development)

- 12.30 Newsletter (Non-functional feature)
- 7.9.3 Newsletter Content (Non-functional feature)
- 9.1 Newsletter Form (Non-functional feature)

Appendix C: Summary of issues and severity

Jira ID	Issue	Feature	Severity
WCMSAC-1	Colour alone used to show keyboard focus	Global Header	Medium
WCMSAC-2	CSS used to display non-decorative images	Global Header	Medium
WCMSAC-3	ARIA used inappropriately	Global Header	Low
WCMSAC-4	Image missing alt attribute	Site Header	Medium
WCMSAC-5	Form control missing corresponding label	Search Form	Medium
WCMSAC-6	Search button image included via CSS	Search Form	Medium
WCMSAC-7	Submenu items not keyboard accessible	Site Navigation	High
WCMSAC-8	ARIA used inappropriately	Global Footer	Low
WCMSAC-9	Add role="navigation" to nav elements	Global	Enhancement
WCMSAC-10	Add nav element and role="navigation" for Site Navigation	Site Navigation	Enhancement
WCMSAC-11	Use aria-label attribute to give names to different navigation areas	Global	Enhancement
WCMSAC-12	Use nav element and role="navigation" for Global footer	Global Footer	Enhancement
WCMSAC-13	Insufficient contrast between text and background colour	Search Results	Medium
WCMSAC-14	Link text (URL) is not meaningful and redundant	Search Results	Medium
WCMSAC-15	Headings not reflect how information is organised	Search Results	Medium
WCMSAC-16	Pagination lacks semantics, focus on new page incorrect	Search Results	High
WCMSAC-17	Expand/collapse functionality not conveyed to screen reader users	Related Content	High
WCMSAC-18	Add appropriate alt text; remove headings from Related Content list	Related Content	Medium
WCMSAC-19	Add label to topic cloud for context	Related Content	Medium
WCMSAC-20	Insufficient contrast between text and background colour	Related Content	Medium
WCMSAC-21	Lightbox for image has several accessibility issues	Related Content	High

Jira ID	Issue	Feature	Severity
WCMSAC-22	Insufficient contrast between text and background colour	Tickers	Medium
WCMSAC-23	Ticker cannot be paused	Tickers	High
WCMSAC-24	Media type indicator, play button not accessible, order confusing	Audio	High
WCMSAC-24	Media type indicator, play button not accessible, order confusing	Video	High
WCMSAC-25	Combine download link & file size	Audio	Low
WCMSAC-26	Expand/collapse functionality not conveyed to screen reader users	Audio	High
WCMSAC-27	Media player controls inaccessible (audio)	Audio	High
WCMSAC-28	Insufficient contrast between text and background colour	Audio	Medium
WCMSAC-29	Add language attribute to identify language of page	Global	Medium
WCMSAC-30	Add skip-to links for templates	Global	High
WCMSAC-31	Media player controls inaccessible (video)	Video	High
WCMSAC-32	Combine adjacent image and text links for the same resource	Global	High
WCMSAC-33	CSS used to display non-decorative images, not available to screen readers	Editorial Collections	Low
WCMSAC-33	CSS used to display non-decorative images, not available to screen readers	Embedded Content	Low
WCMSAC-34	Heading markup used on content that is not a heading	Dynamic Collections	Low
WCMSAC-34	Heading markup used on content that is not a heading	Detailed List	Low
WCMSAC-35	Use blockquote feature for featured comment, change order	Featured comment	Low
WCMSAC-36	Insufficient contrast between text and background colour	Featured comment	Medium
WCMSAC-37	Heading markup used on content that is not a heading	Embedded Content	Medium
WCMSAC-38	Potentially insufficient contrast between text and background colour	Embedded Content	Low
WCMSAC-39	'Read More' unnecessary	Embedded Content	Low
WCMSAC-40	When empty alt text is used, ensure there is not title attribute	Global	Low
WCMSAC-41	Empty heading elements present	Global	Low
WCMSAC-42	Sequence of content affects meaning and understanding	Text (News and Information)	High

Jira ID	Issue	Feature	Severity
WCMSAC-43	Use headings to labels sections of content, nest correctly	Global	High
WCMSAC-44	Insufficient contrast between text and background colour	Text (News and Information)	Low
WCMSAC-45	No visible keyboard focus outline on topic cloud	Related Content	Medium
WCMSAC-46	Add file type, file size to Media unavailable download link	Renditions (Media Availability)	Enhancement
WCMSAC-47	Google Map controls not keyboard accessible	Map Details View (Google Maps)	Medium
WCMSAC-48	Add aria-hidden="true" to Google Map + inpage skip link	Map Details View (Google Maps)	High
WCMSAC-49	Add aria-hidden="true" to Open Street Map + inpage skip link	Map Details View (Open Street Map)	High
WCMSAC-49	Add aria-hidden="true" to Open Street Map + inpage skip link	Map document (Open Street Map)	High
WCMSAC-50	Interactive elements not keyboard accessible, no name	Live Blogging	High
WCMSAC-51	Images have not alt attribute, and no alt text	Live Blogging	High
WCMSAC-52	[Advice] Ensure alt text describes the image	Image Document	Advice
WCMSAC-53	Add aria-describedby to image gallery to improve accessibility	Image Gallery	High
WCMSAC-54	Previous/Next buttons on image gallery don't work reliably with keyboard	Image Gallery	Medium
WCMSAC-55	Image/text on carousel does not display correctly using keyboard	Carousel	Medium
WCMSAC-56	No visible keyboard focus outline on carousel	Carousel	High
WCMSAC-57	Shortcut key required for entry into iFrame (NVDA/FF only)	Global	High
WCMSAC-58	Order of content for Soundcloud may be confusing for screen readers	Interactives (Soundcloud)	Medium
WCMSAC-59	Move forward/backwards for audio (Soundcloud) not accessible	Interactives (Soundcloud)	Low
WCMSAC-60	Remove title attributes from Soundcloud elements	Interactives (Soundcloud)	Low
WCMSAC-61	No visible keyboard focus for some elements in Soundcloud	Interactives (Soundcloud)	High
WCMSAC-62	Play more tracks options not keyboard accessible	Interactives (Soundcloud)	Low
WCMSAC-63	Leave a comment link, timecodes and 2 x	Interactives	Low

Jira ID	Issue	Feature	Severity
	clickable objects w/out names available	(Soundcloud)	
WCMSAC-64	Content publisher not able to specify empty alt text	Global	High
WCMSAC-65	Alt text not overridden for Image Proxy in certain viewtypes	Image Proxy	High
WCMSAC-66	Audio player (Live Blogging) not keyboard accessible	Live Blogging	Medium
WCMSAC-67	Change semantics on ticker to make more accessible	Tickers	High
WCMSAC-68	Informative image included as CSS background image	Live Blogging	Low
WCMSAC-69	Add H2 semantic markup to timestamps on Live Blogging	Live Blogging	Medium
WCMSAC-70	Insufficient contrast between text and background colour	Live Blogging	Medium
WCMSAC-71	Form control missing corresponding label	Live Blogging	Medium
WCMSAC-72	Image thumbnails on carousel not keyboard accessible	Carousel	Low
WCMSAC-73	Hide/Show Map button on Static Map not keyboard accessible	Map document (Static Map)	Low
WCMSAC-74	Social media source included as CSS background image	Quotes	Low
WCMSAC-75	Keyboard trap present for YouTube embed on homepage (FF only)	Interactives (YouTube)	High
WCMSAC-76	YouTube player only partially accessible	Interactives (YouTube)	High
WCMSAC-77	Some loss of content when text size increased to 200%	Carousel	Low
WCMSAC-78	Keyboard focus indicator not visible for all Vimeo media player elements	Interactives (Vimeo)	High
WCMSAC-79	Hide media controls feature on Vimeo when video playing stops keyboard focus	Interactives (Vimeo)	Medium
WCMSAC-80	Full screen mode in Vimeo is not modal	Interactives (Vimeo)	Medium

Appendix D: WCAG 2.0 results breakdown

The breakdown by Level A and AA Principles for the selected sample of pages:

Principle	WCAG 2.0 Level A			WCAG 2.0 Level AA		
	Success Criteria	Pass or N/A	Fail	Success Criteria	Pass or N/A	Fail
1. Perceivable	9	5	4	5	3	2
2. Operable	9	4	5	3	1	2
3. Understandable	5	3	2	5	5	0
4. Robust	2	1	1	0		
Total	25	13	12	13	9	4
Overall		52%	48%		69%	31%

Success Criteria that are met on all of the web pages within the selected sample are marked as a pass (a green tick). For example, if Success Criterion 1.1.1 is met on all web pages, then this Success Criterion is marked as "met" (a green tick).

Success Criteria	Level	Pass/Fail
1.1.1 Non-text content	A	✗
1.2.1 Audio-only and Video-only (Pre-recorded)	A	✓
1.2.2 Captions (Pre-recorded)	A	✓
1.2.3 Audio Description or Media Alternative (Pre-recorded)	A	N/A
1.3.1 Info and Relationships	A	✗
1.3.2 Meaningful Sequence	A	✗
1.3.3 Sensory Characteristics	A	✓
1.4.1 Use of colour	A	✗
1.4.2 Audio Control	A	✓
2.1.1 Keyboard	A	✗

2.1.2 No Keyboard Trap	A	✗
2.2.1 Timing Adjustable	A	N/A
2.2.2 Pause, Stop, Hide	A	✗
2.3.1 Three Flashes or Below Threshold	A	N/A
2.4.1 Bypass Blocks	A	✗
2.4.2 Page Titled	A	✓
2.4.3 Focus Order	A	✓
2.4.4 Link Purpose (In Context)	A	✗
3.1.1 Language of Page	A	✗
3.2.1 On Focus	A	✓
3.2.2 On Input	A	✓
3.3.1 Error identification	A	✓
3.3.2 Labels or instructions	A	✗
4.1.1 Parsing	A	✓ Partial pass
4.1.2 Name, Role, Value	A	✗
1.2.4 Captions (Live)	AA	N/A
1.2.5 Audio Description (Pre-recorded)	AA	N/A
1.4.3 Contrast (Minimum)	AA	✗
1.4.4 Resize text	AA	✗
1.4.5 Images of Text	AA	✓
2.4.5 Multiple Ways	AA	✓
2.4.6 Headings and Labels	AA	✗
2.4.7 Focus Visible	AA	✗
3.1.2 Language of Parts	AA	N/A
3.2.3 Consistent Navigation	AA	✓
3.2.4 Consistent identification	AA	✓
3.3.3 Error Suggestion	AA	✓
3.3.4 Error Prevention (Legal, Financial, Data)	AA	✓

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4 DECEMBER 2014

ABC BOARD – INFORMATION PAPER
ABC WCMS PROJECT

Item No: 19

Board Meeting No: 8

Date: 4 December 2014

INFORMATION PAPER

ABC Web Content Management System Project

Recommendation

That the Board:

NOTE the project progress to date in the implementation of the Web Content Management System (WCMS) Product Build as approved at the February 2013 Board meeting

Prepared by	Mark Woodley Head of Capital Works
Prepared on	20 November 2014
Endorsed by	David Pendleton Chief Operating Officer
Approved by	Mark Scott Managing Director

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ABC WCMS PROJECT

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ABC BOARD – INFORMATION PAPER
ABC WCMS PROJECT

1. Purpose

The purpose of this paper is to provide information on the Web Content Management System (WCMS) project build approved at the February 2013 Board meeting and updated at the October 2013 and May 2014 meetings.

This information paper provides an update which includes:

- A summary of the current project schedule;
- The progress to date;
- A Financial status update; and
- Information on accessibility review

2. Background

2.1 WEB CONTENT MANAGEMENT SYSTEM (WCMS)

The web content management system (WCMS) project will provide an efficient, robust and flexible solution for development and publication of ABC content to digital platforms to meet the ABC's increasing online needs as well as community expectations for the online delivery of ABC's services.

2.2 PREVIOUS ADVICE

At its February 2013 meeting the Board approved capital expenditure of \$10.2 million, noting ongoing operational costs and a preferred approach to completing the project. In October 2013 the Board noted progress to date and approved a change in scope to include a "Mobile First" approach in the foundation design and features. The change approved an increase of \$1.2 million to the project budget and an extension of the project timeframe by four months. The May 2014 paper provided information and status on the project progress, the project reviews and the revised project schedule.

3. Activity & Progress

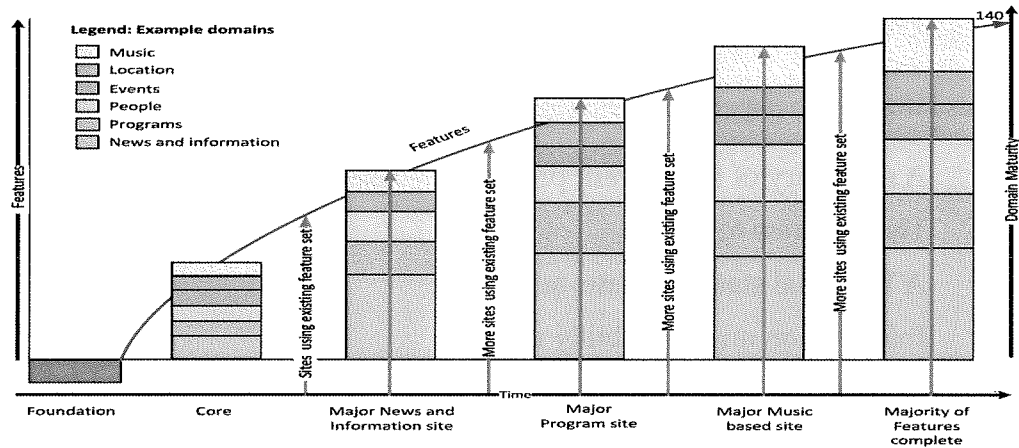
Since May 2014, the project has been progressing with the feature build work in the Core and Stage 1 as well as the foundation, integration, code merge, testing and training sections of the projects schedule.

The project team are currently undertaking the building phase of release 16 of 24 and working with the Divisions on the design of release 17 and 18. Via a project change request recently ask for at the project Steering Committee, accessibility features will be moved forward from release 23 and completed in Stage 1. (See accessibility section 3.1 below for details)

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The diagram below presented in previous papers illustrates the relationships between the Foundation, Core and the four project Stages.



As recommended in the external technical review by Core Media, reported in previous updates to the Board, the team has now progressed and completed the code merge. The code merge was recommended by Core Media as the best way to bring together the unpinning software developed in the phase 1 WCMS build and the new features designed and built in this project WCMS phase 2. This code merge was also critical to the smooth transition of sites using the phase 1 system onto the new WCMS. With this merge completed, the key benefits of the operational WCMS and all new features are included in the WCMS going forward.

An overview of various project stages and the number of feature releases within each is outlined in the following table.

Stage	Number of feature Releases
Core	9
Stage 1: (News & Information)	6, plus accessibility
Stage 2: (emphasis on Radio)	3
Stage 3: (emphasis on TV)	3
Stage 4: (Other)	2
Total	24

Table showing feature release numbers for each stage

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Over the period from May to November the project has progressed release 10 - 15 and release 16. The feature build work was completed on the releases up to 15 and the scoping work is underway for release 16 and accessibility.

The foundation work is behind schedule as it experienced some delay in the design and implementation of a new software tool. This tool was designed in line with the Core Medias future product releases as it will reduce testing and deployment time for all future software. This has created schedule issues with the User Acceptance Testing and the project is now scheduling additional user testing time to catch up. The project is planning that the additional testing, together with the accessibility testing will be complete and back on schedule with release 17 in January 2015.

<i>Item</i>	<i>Original Schedule (Jan 13)</i>	<i>Current Schedule</i>	<i>Forecast Completion date</i>	<i>Status</i>
Project scoping	Feb-13	Complete	Complete	Complete
WCMS Team build up	Apr-13	Complete	Complete	Complete
Foundation - Design, external review, build and deploy	Jun-13	Aug -14	Dec -14	In Progress (additional time required to finalise new deployment tool)
Core - Design, build and ready to deploy	Dec-13	Oct -14	Dec - 14	In progress (accessibility added to core features)
Stage 1: Design, build & ready to deploy	Apr-14	Oct-14	Jan - 14	In Progress (accessibility added to stage 1)
Stage 2: Design, build and ready to deploy	Jun-14	Feb-15	March - 15	In Progress (accessibility moved forward)
Stage 3: Design, build and ready to deploy	Oct-14	May 15	June - 15	—
Stage 4: Design, build and ready to deploy	Mar-15	July-15	July - 15	—

Table showing project stage delivery dates

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3.1 ACCESSIBILITY FEATURES

The phase 2 WCMS project schedule was prepared with a priority for ABC web production to transition as quickly as possible into the new system. This resulted in the Core and first three Stages of the project features scheduled to be built without upgrading accessible capability. Updates to accessibility were planned only after almost all other features were in production. The accessibility features were therefore scheduled in release 23 which is the second last release, due to be completed in May 2015.

The Australian Human Rights Commission (AHRC) has set a timetable for compliance with new legal requirements for online accessibility (Web Content Accessibility Guidelines (WCAG 2.0)).

In September 2013 the Director of Innovation provided the ABC Executive with a briefing on online accessibility issues, including the public sector requirement to meet new accessibility requirements (WCAG 2.0 AA) by 31 December 2014.

In April 2014, Innovation engaged PwC Digital to undertake a review and in June 2014, the review focused on production websites. It found that many of the live News sites built within the existing WCMS phase 1 system were not fully compliant and would need moderate modifications. In September 2014, this same accessibility review found that the phase 2 WCMS build to date also required similar accessibility modifications. Rather than resource and undertake this similar work on both WCMS phase 1 and phase 2, with stage 1 of the project almost completed News could transition onto the new WCMS and the accessibility work would only be required on WCMS phase 2. Therefore the project was asked to move the accessibility feature work forward and included in Stage 1 (News and Information).

With Steering Committee approval, the project team revised the project schedule and is proceeding to build accessibility features together with release 16 and will have both completed by December 2014. Under this schedule change, Stage 1 is now lengthened by 2 months and includes accessibility but the overall project completion date remains unchanged. This schedule change also results in release 17 -22 being delayed one month but the final release, 24 complete as originally scheduled.

The User Acceptance Testing (UAT) would also need to be adjusted as re-testing features with accessibility items included will now need to occur before Stage 1 is ready for deployment into production in January 2015.

3.2 USER ACCEPTANCE TESTING AND TRAINING

The methodology used for testing and acceptance throughout the project lifecycle will ensure each of the features have been scoped, built and tested in line with user requirements.

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Individual feature tests will be completed at each release on a feature by feature basis. This is done first by the project team and then by the specialist users as assigned by each Division. Once this feature testing has been completed the release is then approved as a finished deliverable.

At the completion of each project Stage, all releases and features are collectively tested against all other features built to date so as to ensure the stage has been completed and works collectively as per the agreed requirement. After this second testing has been completed the project Stage is then approved as completed and ready for deployment.

Training plays an important role both in users understanding of the new system capability and in operators becoming familiar with the specific tools and environment of the ABC's WCMS. Key Divisional staff are trained as "super users" before and during the stage testing phases of the project. This training is scheduled at this time to ensure that a good understanding of what has been developed is put into practise with the testing of the feature releases.

The first super user courses were run from 16th September to 3rd October in Brisbane, Sydney and Melbourne. Two courses were run in both Brisbane and Melbourne and four courses run in Sydney. In total there are now twenty eight super users trained on the new WCMS (6 from News, 6 from Radio, 8 from TV, 5 from Innovation and 3 from International). Four additional training and extension courses are planned for Sydney and Melbourne from the 24th November to 27th November.

Once super users are trained, "elearning" web training session will be available for other WCMS users. It is planned that the super users in each Division will assist in the training of staff within their Divisions before staff migrate their individual Web sites into the system.

4. Operational Handover planning

With both the Core and Stage 1 of the project nearing completion, the next period will see the business units being able to deploy new websites and transition into the new product build. Since the establishment of the project, the project has been managing both the new build and support of the live system operations, WCMS phase 1. The operations team was previously managed within the Innovation Division and is referred to as the Business as Usual team (BAU). The BAU team are responsible for bug fixes, minor enhancement and live deployment of software into the production environment, "live websites" and will continue to manage these activities.

While the BAU and project build team are currently managed by the project manager, once the balance of the new build is moved into production, the BAU team will then be moved back to Innovation. The exact timing of this will depend on the number of sites deployed, and is anticipated to transition back to Innovation under the Innovation Product Manager at the completion of the project Stage 2, scheduled March 2015. This timing and the process for handover continues to be discussed with Innovation.

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In addition to the UAT and training occurring before the Divisions migrate to the new WCMS, other key operational functions and ongoing governance need discussion and agreement. The key document called the Operational Framework is currently being prepared and will need to be completed and agreed before deployment of the new WCMS can occur.

4.1 OPERATIONAL FRAMEWORK

Once the project finishes each Stage and before the ABC Web sites can be migrated into the new WCMS, the ongoing operation of the WCM product will be run under an operational framework. The operation framework document outlines each of the key functions of the migration, the system, its support, all future development and the governance of the WCM product as it evolves and changes in line with ABC strategic direction, customer movements and industry trends.

The project team together with Innovation and Technology have been working on this framework since November 2013 and it is now due for wider discussion and agreement with the content Divisions.

Importantly under Innovation the framework defines a specific team called the Web Content Management Team WCMT. This team is ongoing made up of two functional groups.

1. The BAU team, as previously discussed will be responsible for support; and
2. The Development group, who will continue to build new features and functions into the WCM product.

Releases to the product will be governed by a Release Control Board (RCB) chaired by Innovation and made up of divisional managers from each of the key user Divisions. The RCB is responsible for:

- Setting priority and schedule for user requests
- Managing the allocation of resources to requests
- Ensuring the efficient use of resources
- Forecasting the annual operating plan

4.2 MIGRATION OF WEB SITES TO THE WCM PRODUCT

Business Readiness

Business Readiness is the set of tasks that are needed to prepare a division/business unit move an existing website into, or develop a new website in the WCMS product. Tasks may include role changes, updated processes, training, communication to users and any supporting technology is ready. Also a Transition Support Model is

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developed to support users the first 2-3 weeks of using the new system where required.

The WCMT will work with the Divisions/Business Unit to help plan the Business Readiness strategy for their initial transition/migration to the WCM product. Once migration has been completed the division/business unit will continue to follow the guidelines as outlined in the operational framework document.

Training

As outlined in the training section above training will occur and the WCMT will be responsible to:

- Providing vanilla training materials and advice to the Content Divisions;
- Developing and supporting a 'Super User' network of skilled WMC users across the ABC;
- Training the Super Users in the product and train the trainer sessions;
- Providing a Product Catalogue that provides detailed examples of how to use the WCM system and features;
- Providing access and support to a Training Environment, where WCM product users can learn and practice their skills; and
- Assist the divisions with developing an appropriate training strategy such as roaming, distance learning, face to face or self paced.

DATE OF MEETING

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5. Financial status

WCMS FINANCIAL SUMMARY AS AT OCTOBER 2014

Product Support - Ongoing	OCTOBER			YTD OCTOBER 2014			FY 14/15			Total Product Support		
	Actuals	Budget	Variance	Actuals	Budget	Variance	Forecast	Budget	Variance	Forecast	Budget	Variance
<i>Figures in '000s</i>												
Salaries	99	106	7	336	425	89	1,552	1,274	(278)	4,764	4,683	(81)
Hardware	0	9	9	0	36	36	58	107	49	118	399	281
Software	0	87	87	64	347	283	898	1,041	143	2,122	3,295	1,173
Other	3	22	19	23	86	63	130	259	129	864	(270)	(1,134)
Total	102	223	121	423	894	471	2,638	2,681	43	7,868	8,107	239

Product Build - Project	OCTOBER			YTD OCTOBER 2014			FY 14/15			Total Product Build		
	Actuals	Budget	Variance	Actuals	Budget	Variance	Forecast	Budget	Variance	Forecast	Budget	Variance
<i>Figures in '000s</i>												
Salaries ¹	401	301	(100)	1,827	1,206	(621)	3,633	3,617	(16)	8,682	8,763	81
Hardware	12	0	(12)	48	0	(48)	72	0	(72)	402	700	298
Software	1	5	4	19	18	(1)	19	55	36	54	220	166
Other (incl Redundancies)	(11)	19	30	302	74	(228)	400	223	(177)	1,567	897	(670)
Phase II ²	0	0	0	0	0	0	0	0	0	270	270	0
Sub-Total	403	325	(78)	2,196	1,298	(898)	4,124	3,895	(229)	10,975	10,850	(125)
Contingency ³	0	0	0	0	0	0	0	0	0	305	1,010	705
Total Build inc Contingency	403	325	(78)	2,196	1,298	(898)	4,124	3,895	(229)	11,280	11,860	580

Notes

- 1 \$1.2m additional CR50:Mobile First.
- 2 Carry in of \$270k Assets from Phase II.
- 3 \$600k: CR102 & CR103



DATE OF MEETING

ABC BOARD - INFORMATION PAPER

6. Recommendation

That the Board:

NOTE the project progress to date in the implementation of the Web Content Management System (WCMS) Product Build as approved at the February 2013 Board meeting.

WCMS Steering Committee

Minutes

18 December 2014

Attendees: David Pendleton, Chief Operating Officer
Angela Clark, Director Innovation
Kate Torney, Director News
Lynley Marshall, Director International
Michael Mason, Director Radio
Rebecca Heap, for Director Television
Mark Woodley, Head Capital Works
Bruce Waters, Project Manager
Amanda Walsh, Executive Manager Operations Group

Apologies: Richard Finlayson, Director Television

Item 4 Change Request 187 – removed from agenda

It was agreed to remove Change Request 187 from the agenda. Instead, this will be presented as a suggestion from the Project Team to drive momentum in light of accessibility issues for News, Radio and Innovation to consider proposing to the Steering Committee. Both Kate Torney and Angela Clark informally supported the proposal however it was agreed that the idea needs to be communicated and understood by the various teams.

Bruce Waters will therefore conduct formal briefing sessions / consultation with each of the divisions, followed by discussion with PDG members. It was agreed that although this is not a WCMS Project issue, as WCMS contingency budget is being used for this work it is important that the Project Team be involved. News and Radio National accessibility issues however need to be resolved.

Item 5 Operational Framework – removed from agenda

It was agreed to remove the Operational Framework document from the agenda.

Minutes of the Last Meeting

The Minutes were endorsed and it was noted that BAU funding is in the budget for 2015/16.

Project Update

User Accessibility Testing will be finished tomorrow and the Exit Report will be signed off on 7 January 2015. This sees the completion of the build, ready for deployment to production at the end of January. A small BBQ will be arranged to celebrate this achievement.

The complete set of features can already be seen in a test site to check that the suite of functionality works together.

Business Verification Testing requests for information have been received from Innovation. Bruce is working with Ant and Access to get further clarification on those requests. It was noted that resourcing for Business Verification Testing falls outside the project and are the responsibility of the business.

Further details around the costs of new environments or support will be provided by the Project after further details of what the business requirements are received. Angela Clarke agreed that Innovation will provide a scope for BVT. An impact statement will be provided to the Steering Committee and it was agreed that if this work is likely to cause delays to the schedule, a paper will be circulated to the Steering Committee out of session.

It was agreed that the project will continue to stay with the schedule unless BVT presents any problems with the system.

Accessibility

Approximately twenty items have been identified and fixed.

Foundation

Full staging environments are all available and production environments are better than existing systems. The Steering Committee acknowledged the effort put into this and thanked the team for their work.

The Project thanked Radio and News staff for their assistance and effort in helping to achieve this.

Communications

Milestone dates will be published so that teams can be better prepared for when work will affect them.

API

It was noted that the features associated with the API are still within the project however the interface to make this work with the API sits within the Integration Project.

Bruce will follow up on PDG sign off of API feature requirements as well as confirmation that the Integration Project has this covered. Bruce will update the Steering Committee by email out of session.

CoreMedia Support Contract

The CoreMedia support contract will be finalised before the end of the year.

Radio Gap Analysis

Issues identified will be acted on by the Project as it is less than 200 days work.

TV Gap Analysis

Issues around metadata are being discussed with the Project and Television. The analysis has been completed however signoff is yet to occur, pending metadata discussions around iView.

BAU

It was confirmed that BAU handover will occur at the end of Stage 2.

Other Business

The Steering Committee thanked the Project for the work completed this year.

There was no other business.

WCMS Steering Committee

Minutes

15 January 2015

Attendees: David Pendleton, Chief Operating Officer
Lynley Marshall, Director International
Michael Mason, Director Radio
Richard Finlayson, Director Television
Ciaran Forde, for Director Innovation
Gaven Morris, for Director News
Mark Woodley, Head Capital Works
Bruce Waters, Project Manager
Amanda Walsh, Executive Manager Operations Group

Apologies: Angela Clark, Kate Torney

Minutes of the Last Meeting

Ciaran stated that Angela asked for the recording of the last meeting to be checked with regard to her informal support of the proposal. Amanda will check the tape and confirm.

All were satisfied that actions regarding the API features discussed at the last meeting are progressing through the proper forums.

Progress Report

The Progress Report was noted. The number of UAT features signed off were noted, including confirmation that there were no Priority 1 or Priority 2 errors (i.e. there are no errors which will prohibit the system going live).

Concerns around testing interface with Facebook were discussed as it is not possible to test the interface until the system is live. Ciaran is looking into this issue however it is a noted risk should no test environment be available prior to 'go live'.

Accessibility

Twenty items have been addressed and will be rolled out in the next release, ready for production in February.

Change Management

The team is looking at any changes from BVT that need to be incorporated into the change management plan, for example transition of Radio National.

CoreMedia Support Contract

Gary Paternoster has been in discussions with CoreMedia to progress the contract while he was

s.47F

Business Verification Testing

David Pendleton has requested that a document describing the purpose of BVT be provided by Innovation so that it is understood what we are trying to achieve and what success will look like.

The impact statement will be finalised and circulated to the Steering Committee once this information is provided.

Risk

The major risk of operational handover was discussed. The operational framework document, including the BAU resourcing plan, remains outstanding. It was agreed that Technology needs to be consulted.

The Steering Committee requested a plan of how this will be addressed as soon as possible so that Innovation and the Project Team are comfortable that this will be addressed. It was agreed that this will be finalised ahead of the next Steering Committee meeting.

Change Request

The proposed change request was discussed with the PDG on Tuesday as requested at the last meeting. It was agreed that the governance processes would be used to progress this issue. The PDG (except for Innovation) supported the Change Request at the meeting. Therefore the recommendation from the PDG to the Steering Committee then needs to make the decision as per the proper governance processes. If there is no decision at the Steering Committee, it is escalated to the MD.

The Steering Committee then considered the Change Request noting that the majority of the PDG supported it (except for Innovation). The Committee noted the changes that the PDG to the Change Request following their meeting. Ciaran spoke to these changes including shifting from Accessibility to deployment priorities. Gaven did not agree that the PDG voted to shift priority away from Accessibility. It was noted that at the PDG, Television were keen to understand the migration process and this will be provided to the next PDG.

News and Radio National's use of the phase 2 code base, as raised in Angela's email, were discussed. This issue relates to full deployment of these sites, rather than starting to make changes in the new system. This request proposes we use contingency funds. Ciaran spoke to 'other tools' to prioritise which News sites should be deployed first. Gaven spoke to the discussions at the PDG and agreed with Innovation that there is a more 'graceful' way to rollout the system when everything is perfectly lined up however the amount of time this will delay the project is unknown so the proposed change is the preferred approach for News. Ciaran was unable to speak to a timeframe for prioritising other sites until the ASG meeting on 3 February which may include demands on resources. Gaven voiced concerns that even after that meeting, there will be delays until March or April which would see the news sites continuing to be non-compliant on accessibility issues.

It was agreed that Accessibility also plays an important role in this change. Deploying News as proposed in the change request will ensure that there is an immediate response to mitigate as

quickly as possible our non-compliance to accessibility obligations which currently exist in the old system.

Angela's emailed comments about rebuilding News and RN later were discussed. It was noted that a rebuild may be required once the whole of business user experience determined when the Digital Network is up and running. However, waiting for this to occur would see lengthy delays to the project schedule. The current approach rolls News and RN out as the Digital Network team is developed.

All this considered, the Steering Committee (except for Innovation) endorsed the Change Request. Richard supported the Change Request, noting that the ASG prioritisation work may delay the migration even further. Michael Mason agreed with the Request and Richard's comments but requested the abovementioned timeframe from Innovation before making a final vote. Lynley agreed with Richard and Michael, but requested that an understanding on impact on other divisions yet to rollout so that this will be easy for future rollouts. Gaven supported the Change Request, although asked for the timeframe to be developed. Ciaran does not support the Change Request, and understands that this will therefore trigger escalation to the Managing Director.

David Pendleton will ring Angela to advise the decision today. The Project team will action the Change Request unless Angela request that it be stopped and escalated to the MD.

From: [Bruce Waters](#)
To: [Kirstyn Bodell](#)
Date: Thursday, 26 February 2015 3:32:51 PM
Attachments: [WCMS Steering Committee minutes 15 January 2015.pdf](#)

Hi Kirstyn,

Please find attached a copy of the minutes of the January session of the WCMS Steering Committee – I have highlighted the relevant sentence covering the endorsement of the PCR for Transition of Existing WCMS Tenants.

Regards,

Bruce

WCMS Steering Committee

Minutes

9.00am, 19 March 2015

Attendees: David Pendleton, Chief Operating Officer
Angela Clark, Director Innovation
Kate Torney, Director News
Michael Mason, Director Radio
Richard Finlayson, Director TV
Mark Woodley, Head Capital Works
Ciaran Forde, Head Digital Architecture & Development, Innovation
Amanda Walsh, Executive Manager Operations Group

Apologies: Lynley Marshall, Director International and Bruce Waters, Project Manager

Minutes of the Last Meeting

Corrections to the Minutes were made around the concerns raised on API integration process and visibility. A paper will come to the next steering committee.

It was agreed that the schedule for the integration project will be circulated as soon as possible.

The Minutes discussing BVT issues were corrected also corrected. It was agreed that multi-tenancy needs to be tested.

It was noted that Ciaran Forde will attend the Steering Committee until further notice now that the project is in the 'handover' phase.

CoreMedia Support Contract

A contract to maintain the system into the future is being negotiated with CoreMedia. A business case outlining options has been sent to the ARG ahead of Steering Committee approval. When the business case comes to the Steering Committee, the history and approved funding model will be included.

It was noted that the timing of this contract may require a special Steering Committee meeting to be convened.

Business Verification Testing

A start date for BVT has yet to be set and Innovation raised concern around some options which would fail if testing began now. A two phased approach to testing has not been recommended by Access.

It was agreed that as many BVT tests will take place as soon as possible noting that some will fail. Ciaran and Bruce will discuss the requirements for system deployment which needs to be tested. The requirements for system deployment will be defined as soon as possible.

Project Update

News raised concerns around the transfer of tenants being listed as 'complete' (page 3) should read as 'ongoing'. High level plans will be reviewed to ensure they do not require updating.

Video player accessibility concerns were raised. It was noted that there has been little visibility around how problems with the accessibility features are being addressed / fixed. Mark will check that these bugs have been identified and prioritised for fixing. It was agreed that the business (through the working groups and UAT) will prioritise the order that these fixes need to be addressed.

Finance

It was agreed that Mark will confirm the details behind \$600k for Change Requests 101 and 102.

Other Business

A design solution for adaptive for mobile has not been finalised and therefore a like-for-like transition for News is not possible. News' site is currently 'adaptive' rather than 'responsive'. The project team is confirming whether ADP can be leveraged as a solution and a date for the adaptive work to be completed. Mark will confirm a date and advise the Steering Committee.