National Audit Office

Report
by the Comptroller
and Auditor General

HM Revenue & Customs

The Customs Declaration Service: a progress update

HC 1124 SESSION 2017–2019 28 JUNE 2018

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HM Revenue & Customs

The Customs Declaration Service: a progress update

Report by the Comptroller and Auditor General

Ordered by the House of Commons
to be printed on 27 June 2018

This report has been prepared under Section 6 of the National Audit Act 1983 for presentation to the House of Commons in accordance with Section 9 of the Act

Sir Amyas Morse KCB
Comptroller and Auditor General
National Audit Office

26 June 2018

HC 1124 | £10.00

This report looks at HM Revenue & Customs' (HMRC's) implementation of the Customs Declaration Service (CDS). It provides an update on HMRC's progress against risks highlighted in our 2017 report, and sets out the current risks and issues that the programme is having to manage.

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Contents

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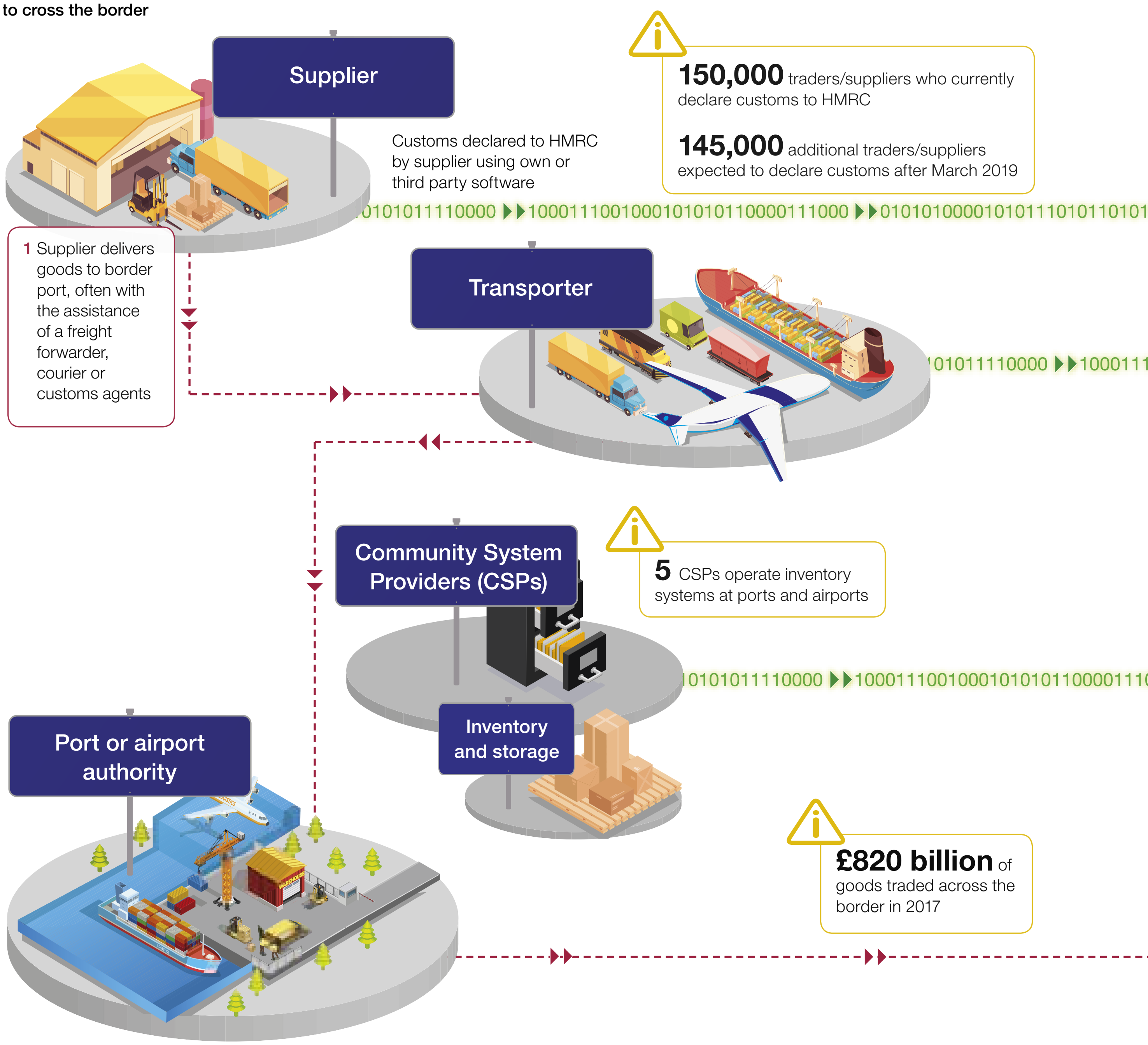
Figure 1

Overview of customs declarations

The Customs Declaration Service (CDS) will process customs declarations from a variety of routes and will help to clear goods to cross the border

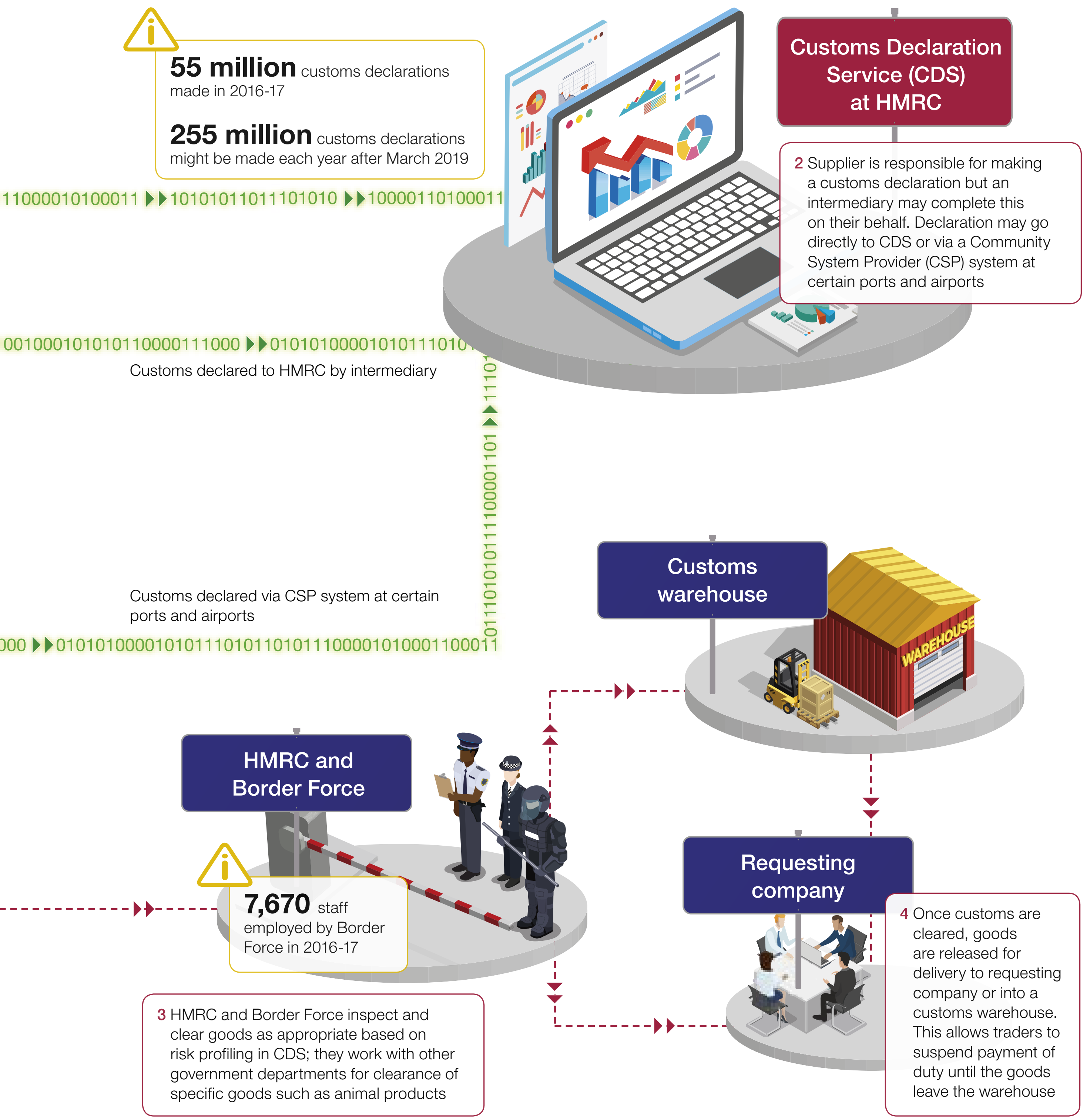


-- Flow of goods 10011 Customs declaration

Note

1 This report focuses on HMRC's creation and implementation of a new Customs Declaration Service (CDS).

Source: National Audit Office



55 million customs declarations made in 2016-17
255 million customs declarations might be made each year after March 2019
Customs Declaration Service (CDS) at HMRC
2 Supplier is responsible for making a customs declaration but an intermediary may complete this on their behalf. Declaration may go directly to CDS or via a Community System Provider (CSP) system at certain ports and airports
Customs declared to HMRC by intermediary
Customs declared via CSP system at certain ports and airports
Customs warehouse
WAREHOUSE
HMRC and Border Force
7,670 staff employed by Border Force in 2016-17
Requesting company
3 HMRC and Border Force inspect and clear goods as appropriate based on risk profiling in CDS; they work with other government departments for clearance of specific goods such as animal products
4 Once customs are cleared, goods are released for delivery to requesting company or into a customs warehouse. This allows traders to suspend payment of duty until the goods leave the warehouse

Key facts

255m

customs declarations that HM Revenue & Customs (HMRC) estimates might be made after the United Kingdom (UK) leaves the European customs union, around a 200 million increase on the 55 million existing declarations each year

150,000

current traders who make customs declarations and will need to move to the Customs Declaration Service (CDS) from the existing system

145,000

minimum number of traders whom HMRC estimates currently trade within the European Union (EU) and might make customs declarations for the first time after the UK leaves the European customs union

CDS programme dates when we last reported in July 2017

July 2018	HMRC planned to finish building the full CDS scope
August 2018	HMRC planned to start migrating traders to CDS
January 2019	HMRC planned to complete migrating traders to CDS

New CDS programme dates

August 2018	HMRC aims to go-live with CDS and start migrating traders as planned – it expects to have 44% of the full functionality in place at this time
November 2018	HMRC now plans to release remaining import functions and start migrating traders who require these functions
December 2018	HMRC now plans to release all export functions and start migrating traders who require these functions
January 2019	HMRC now aims to complete migrating traders to CDS, however this may not be possible given the plan to release export functionality one month before

Contingency programme dates

July 2018	HMRC plans to have demonstrated the CHIEF (Customs Handling of Import and Export Freight) system's capacity as a contingency option. When we previously reported, HMRC had not planned its contingency option in detail

Summary

1 HM Revenue & Customs (HMRC) is now in the final year of its programme to replace its existing customs system, CHIEF (Customs Handling of Import and Export Freight), with a new Customs Declaration Service (CDS). The new system will be an integral part of the UK's overall customs regime. The UK collects around £34 billion annually from customs and excise duties and value added tax (VAT) on transactions at the border. In 2017, around £820 billion of goods crossed the border. It is vital to the UK's economy and consumers that trade continues to operate smoothly across the border, for example by maintaining the trade flow of perishables such as food products.

2 HMRC is changing its customs system to comply with legislative requirements that were established before the UK voted to leave the European Union (EU). HMRC considers that the UK's decision to leave the EU, the European single market and customs union have not changed the overall rationale for CDS. HMRC is still building CDS to comply with the EU legislation which is already familiar to industry, and the resulting system will comply with international rules.

3 There are around 150,000 traders who import and export goods outside the EU. These traders already make around 55 million customs declarations each year in CHIEF, predominantly through a third party. HMRC expects these traders to continue to make customs declarations in CDS. The UK's decision to leave the EU and the customs union has important implications for the CDS programme. Depending on the outcome of EU exit negotiations, from March 2019:

- at least 145,000 traders who currently import or export goods solely within the EU might be required to make customs declarations for the first time; and
- the number of customs declarations could increase from around 55 million to around 255 million each year.

4 On 19 March 2018, the government published a draft agreement on the withdrawal of the UK from the EU. The withdrawal agreement proposes an implementation period that will apply from 29 March 2019 until 31 December 2020. If the draft agreement is approved and this preserves customs arrangements as they are, traders who operate solely within the EU will not have to submit customs declarations until after December 2020. As a consequence, the assumption is that there would not be an associated increase in the volumes of customs declarations until after this date. However, the draft agreement is being negotiated and HMRC, as with the rest of government, continues to plan for the UK leaving the EU customs union with 'no deal' and no implementation period.

5 We first reported on the CDS programme in July 2017. We found that HMRC had made progress, but a significant amount of work remained to implement CDS successfully. We concluded that government as a whole had to decide whether it needed to do more to mitigate the risk of CDS being needed but not ready in time.

6 In October 2017, the Committee of Public Accounts (the Committee) took evidence from HMRC on its progress in implementing CDS. A summary of the Committee's conclusions and recommendations, and HMRC's responses, is included in Appendix One.

Scope

7 This report provides an update on HMRC's progress since July 2017. We consider the deliverability of the CDS programme and highlight the risks and issues HMRC needs to manage to fully implement CDS by January 2019. We also consider what HMRC's progress with CDS and its contingency option means for the risks associated with being unable to process customs declarations at the volume required in the event of 'no-deal' with the EU. As in our previous report, we do not evaluate the overall value for money of the programme. We review:

- how HMRC is managing the CDS programme;
- HMRC's progress in meeting the technical challenges of implementing CDS and creating a working contingency option; and
- HMRC's actions to ensure that traders and others involved in customs administration are ready to use CDS by January 2019.

8 This report does not cover aspects of the government's overall customs regime that are outside the CDS programme. In particular, we have not included:

- Border Force, which controls the movement of goods, people and transport at the border, and the work of other government departments and agencies; and
- wider changes to border systems, infrastructure and any requirements for new staff resources.

Key findings

Progress towards a functioning customs system on leaving the EU

9 HMRC has made progress in addressing risks within the CDS programme. In our previous report, we highlighted five significant risks that HMRC needed to manage. These were: the very tight delivery timetable; integrating the CDS system with HMRC's technology and ensuring it can handle increased volumes; managing CDS's stakeholders, including the many traders who will use it; managing the CDS programme and scope; and ensuring the programme is fully funded and resourced. Since our review, HMRC has secured all the funding it currently expects to require for CDS. It has also made some progress in tackling other risks and has put mitigations in place against risks that have subsequently arisen, alongside developing contingency arrangements. Nearly one year on from when we last reported, we set out the current programme risks and issues below (paragraphs 1.7 and 1.10 to 1.14, Figure 3 and Figure 4).

10 HMRC has accelerated work on its contingency option for handling customs declarations in the event of 'no deal' in March 2019. In July 2017, we reported that HMRC had identified contingency arrangements in case CDS was not ready on time, but had not planned these in detail. HMRC has now made progress with planning and implementing contingency arrangements. These involve scaling up the existing CHIEF system to manage up to 255 million customs declarations each year. HMRC expects this to cost £8.7 million. When we first reviewed CDS, HMRC planned to complete the testing required to demonstrate whether CHIEF can scale up by December 2018. It now plans to do this by July 2018. HMRC expects it will take a further three months to scale up the operational CHIEF system. If it successfully completes this work, HMRC should have the system capacity to handle customs declarations no matter what the outcome of negotiations between the UK and the EU. HMRC is confident that CHIEF will be able to handle the increased volume of declarations, and that it remains a reliable system that is suitable for a short term contingency arrangement (paragraphs 1.13 and 2.16 to 2.20).

11 A wide range of changes are required for a fully functioning customs regime after the UK leaves the EU. Beyond HMRC's core customs IT systems, many systems and processes are required for an effective customs regime. Some of these are within HMRC's control and others require it to work with other government departments and industry. HMRC has established a separate programme, the Border Systems Programme, to manage the changes that may need to be made to other border systems as a result of the UK leaving the EU. We expect to review the Border Systems Programme at a later stage (paragraphs 1.24 and 3.17 to 3.18, and Figure 6).

The CDS programme

12 **HMRC aims for CDS to go live as planned in August 2018, but has reduced the scope of what CDS will be able to do at that date.** HMRC had planned to design and build the full scope of CDS by July 2018. Its overall aim for CDS to go live in August 2018 and migrate traders by January 2019 remains as we reported last year. Since then, HMRC has developed its transition planning and decided on a phased approach due to delays in development, and the other considerations set out in paragraph 13. In developing the system, it has found gaps in export functionality which require additional work, and has experienced delays in accessing the CDS production environment and in integrating CDS with HMRC's finance system. These issues mean HMRC has been unable to complete its development work according to the original timetable and will not deliver all the CDS functionality by August 2018. In August, HMRC expects to have around 44% of the full functionality of CDS in place, which will support certain types of import declaration. HMRC is not as far advanced as planned with its development work but considers that it is on track to deliver this first release of functionality by August (paragraphs 1.15 to 1.18 and 2.3 to 2.7, Figure 5 and Figure 7).

13 **HMRC now plans to implement functionality in three phases, with further releases in November and December.** HMRC has reviewed its approach since we last reported and now plans to implement the additional import functionality in November, and export functionality in December. It has told us that its intention would always have been to phase the release of functionality to mitigate the risk of implementing a complex system all at once. HMRC has engaged with industry in developing this phased approach, and HMRC has told us that key stakeholders consider it fits with their development timetables. This phased approach also allows HMRC to ensure it starts migrating users in August as planned. Development issues have had an impact on the timing of releases and the third release is late in the timetable. This means that some CDS functionality will not be available until after the migration process gets underway. Traders involved in the first release will have to support a further two releases and associated changes to their own systems and processes before the end of the year (paragraphs 1.15 to 1.22).

14 **Testing will continue but HMRC will not know whether CDS works in live service until it has implemented all the functionality in December 2018.** HMRC's programme of testing CDS is underway. In April, HMRC started to test how the main CDS modules perform at higher volumes, and in May it started to test how the modules perform when integrated with existing HMRC systems. It will continue to progressively test the system functionality until the third release of functionality in December 2018. It will also monitor the performance of the system as users migrate on to CDS from CHIEF. The late release of functionality and migration of users increases the risk that HMRC will not have sufficient time to resolve any issues that it might identify with the last release. As is common with IT systems, even after testing issues may also emerge in the live environment (paragraphs 2.9 to 2.13).

15 HMRC is unlikely to complete the migration of all users on to CDS in January 2019. HMRC plans to closely manage the migration of traders who submit high volumes of declarations and has a communications campaign in place for lower-volume traders. HMRC's overall aim is to complete migration by January 2019 as planned. However, traders who export goods may not complete migration by this date as they will only have one month to complete the process. HMRC is considering whether it can bring forward its November and December releases or reduce the time available to some users to migrate on to CDS. However, this may not be possible if the development of the CDS system continues to progress at its current rate, or if CDS users are not able to respond quickly enough. Traders will continue to have access to CHIEF, which HMRC intends to continue running alongside CDS, for a period after January 2019. This will help mitigate the risks of CDS not being ready as traders will be able to revert to CHIEF. However, it may also lead to some traders continuing to use CHIEF for longer than necessary, which could also delay the completion of migration (paragraphs 1.19 to 1.21).

Readiness of users and delivery partners

16 Key organisations that need to change their software and business processes to use CDS may not be ready. In February and March 2018, we interviewed and surveyed community system providers (CSPs) and customs software suppliers. These organisations operate systems that allow traders to make customs declarations. While CSPs and customs software suppliers are confident that HMRC will deliver an operational CDS system, they are not yet confident that the full scope of CDS will be ready by January 2019. CSPs and customs software suppliers told us that HMRC's communication and engagement have been generally good. However, they have also told us that the technical information HMRC has provided has consistently arrived later than they would have liked, and has not always been complete or sufficiently detailed. This means that, in March 2018, 4 out of 5 CSPs and 14 out of 19 customs software suppliers whom we surveyed were uncertain about exactly what changes they needed to make to their software and therefore when their systems would be ready for users to submit customs declarations. Since January 2018, HMRC has run a series of 'trade tests' to allow stakeholders to test their software and connections to CDS. To date, 15 of 57 software suppliers have reported successfully testing all scenarios. HMRC has told us that it has also undertaken further activity to engage with these stakeholders since the time our work was completed (paragraphs 2.14 to 2.15, 3.3 to 3.5 and 3.10 to 3.15, Figure 10 and Figure 13).

17 HMRC has started to communicate with the existing traders and other users who regularly engage with CHIEF but there is a lot more to do. Currently, 150,000 traders make customs declarations for trade outside the EU. These traders predominantly use a third party to submit declarations on their behalf. HMRC has identified around 8,700 registered users of CHIEF, including freight forwarders and customs agents, who may also need to change business systems and processes, and recruit and train staff. HMRC has been directly communicating with larger businesses. It updated its website in January 2018 and emailed current CHIEF users in February 2018. Leading up to August, HMRC will increase its direct communications. HMRC also uses other mechanisms to communicate more widely, including through trade representative groups, software suppliers and its established customs forum (paragraphs 1.6 and 3.6 to 3.9, Figure 2, Figure 11 and Figure 12).

18 HMRC has not yet started communicating with at least 145,000 EU-only traders about CDS. These traders may need to make customs declarations once the UK leaves the EU. In light of the continuing uncertainty about the customs arrangements that will apply from March 2019, HMRC has prepared, but not yet started, a communications campaign for these traders. HMRC is keeping under review the need to start this campaign. HMRC told us it is unable to do so until the results of negotiations with the EU about the post-March 2019 customs arrangements are clearer (paragraphs 1.6 and 3.9, Figure 2 and Figure 12).

Concluding comments

19 The UK and EU have made progress towards an agreement that will leave customs arrangements unchanged until December 2020. However, until this agreement is confirmed, the government has directed HMRC to continue planning for a 'no deal' scenario with the expectation that a fully scaled and operational customs system will be in place in March 2019.

20 In response to the concerns we highlighted in July 2017, HMRC has accelerated its plans to develop the existing CHIEF system as a contingency option. This has reduced the risk that it will not be able to handle the potential increased volume of customs declarations at the end of March 2019, in the event of 'no deal'. The contingency option is still to be fully tested, and the success of customs preparations will involve many other dependent systems and processes at the border. However, if HMRC completes this work successfully, it will be in a better position in the event that CDS is not ready or does not perform as planned.

21 Since July 2017, HMRC has taken steps to mitigate some of the risks we previously highlighted. However, further technical and business issues have arisen in the CDS programme, and an already tight timeline has become even more demanding. Significant challenges remain and there is a risk that CDS will be unable to fully replace CHIEF by January. HMRC has mitigated some of the risk with its plans to operate CHIEF and CDS in parallel over this period. However, it is also critical that HMRC fully tests and scales-up its contingency option over the summer of 2018, supports delivery partners such as CSPs and software providers to make necessary changes to their own systems, communicates effectively with traders about new customs processes and migrates them successfully on to CDS.

Part One

The Customs Declaration Service programme

1.1 This part provides information on the Customs Declaration Service (CDS) programme. It includes an update on HM Revenue & Customs (HMRC's) progress in implementing CDS, including how it has tackled the risks we highlighted in July 2017.

Background

1.2 Imported or exported goods must pass through customs. Taxes and duties may be payable on the goods depending on their nature, origin or intended destination. These include value added tax (VAT), excise duties (for example, on tobacco products) and customs duty. The UK is currently a member of the European Union (EU) customs union. This means that it does not levy customs duty on goods arriving from other EU member states, and businesses need only make a customs declaration if they trade with countries outside the EU.

1.3 HMRC is responsible for processing customs declarations and collecting revenue. Border Force (a part of the Home Office) is responsible for controlling the movement of goods and transport at the UK border, and carries out enforcement activity on behalf of HMRC.

1.4 In October 2013, the EU adopted the Union Customs Code (UCC) as the new framework for customs rules and procedures.[1] These changes came into force in 2016, but transitional arrangements will operate until the end of 2020. In 2013-14, HMRC started work to replace its current customs system CHIEF (Customs Handling of Import and Export Freight), which it has operated for more than 20 years. It decided that CHIEF's ageing technology would be too expensive and slow to update to meet the requirements of the UCC. HMRC planned that its new system, CDS, would provide the same high-level functions as the old system, and would be more flexible, scalable and cost-effective for traders.

1.5 On 23 June 2016, the UK voted to leave the EU. HMRC paused elements of the CDS programme while it considered the implications of the vote. It concluded that its plans remained substantially valid and it resumed development in September 2016. In March 2017, the government triggered Article 50 of the Lisbon Treaty, having signalled its intention to leave the European single market and seek a new customs arrangement with the EU from March 2019. This means that importers and exporters currently trading solely within EU countries may need to start making customs declarations from 2019.

1 Regulation (EU) No 952/2013 of the European Parliament and of the Councils.

1.6 As set out in **Figure 2**, HMRC processed around 55 million import and export customs declarations in 2016-17 from around 150,000 traders. It collects around £34 billion in tax and duty on imports from countries outside the EU each year. Imports from outside the EU were around 45% of all imports to the UK in 2017. HMRC currently estimates that, subject to the new customs arrangements which are agreed with the EU, at least 145,000 intra-EU traders may also need to make customs declarations for the first time from March 2019.[2] This would mean the number of customs declarations annually could increase to around 255 million, with peaks and troughs throughout the year. This number of declarations is much larger than the capacity of the legacy CHIEF system and reinforces the need for the new system.

Figure 2
UK customs volumes and values

Traded goods are worth £820 billion with tax revenue of £34 billion

	EU goods	Non-EU goods	Total
Customs declarations	0	55 million	55 million
Traders	145,000	150,000	295,000
Goods import value	£262 billion	£216 billion	£478 billion
Goods export value	£167 billion	£175 billion	£342 billion
Total goods value	£429 billion	£391 billion	£820 billion
Customs duty	0	£3 billion	£3 billion
Import VAT	0	£25 billion	£25 billion
Excise duty	Not known	Not known	£6 billion
Total tax and duty	Not known	Not known	£34 billion

Notes

1 Of the 55 million customs declarations made in 2016-17, 46 million are import declarations and 9 million are export declarations. Customs declarations and associated duties are only currently due for trade with countries outside the EU, so the declarations and duty collected from intra-EU trade are both zero. Import VAT is also paid only on trade with non-EU countries.

2 Based on 2017 numbers, HM Revenue & Customs (HMRC) estimates that at least 145,000 traders trade solely within the EU and 150,000 traders trade with the rest of the world. These are updated estimates from the 180,000 and 141,000 respectively that we reported last year. Of the 150,000 trading with the rest of the world, 77,000 trade exclusively with countries outside the EU and 73,000 trade with both EU and non-EU countries.

3 Import and export values are 2017 figures for trade in goods from the Office for National Statistics, *Publication tables, UK trade*, table 2, UK trade in goods by area, 11 June 2018.

4 HMRC does not report information on the geographical split for excise duty receipts.

Source: HM Revenue & Customs and Office for National Statistics

2 Based on HMRC's published 2017 UK VAT registered importer and exporter population, trade in goods, https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/701537/2017_UK_VAT_Registered_Importer_and_Exporter_Population.pdf. This is a minimum estimate as it does not include non-VAT registered traders.

HMRC's progress with delivering the CDS programme

Update on the risks highlighted in our 2017 report

1.7 We first reported on CDS in July 2017.[3] We found that HMRC had made progress in designing and developing CDS, but that a significant amount of work remained and there was a risk that HMRC would not have the full functionality and scope of CDS in place by March 2019 when the UK leaves the EU. We concluded that government as a whole had to decide whether it needed to do more to mitigate the risk of CDS being needed by March 2019 but not ready on time.

1.8 In October 2017, HMRC wrote to the Committee of Public Accounts (the Committee) stating that it had made good progress since July and remained on track to implement CDS by January 2019. In the same month, the Committee took evidence from HMRC and found that much remained to be done to have an effective CDS system that traders could use in place in January 2019. HMRC provided further updates in January and March 2018. We have set out the Committee's conclusions and recommendations, and HMRC's responses, in Appendix One.

1.9 HMRC monitors programme risks in its monthly programme board. **Figure 3** overleaf shows that those risks highlighted in our 2017 report still exist. It provides an update on each, including details of where we cover it further in this report. Other risks have arisen since July 2017 and these are also covered in this report.

Resourcing

1.10 CDS is part of HMRC's wider transformation portfolio. In early 2018, HMRC completed its review and prioritisation of this portfolio. It proposed to ministers that certain programmes should be stopped and others extended so that it could focus its resources on its most critical projects including CDS.

1.11 We previously reported that HMRC expected to spend £157 million to develop CDS with a capacity to process up to 150 million declarations each year. HM Treasury approved this funding, noting that it did not cover the costs required to increase the capacity of CDS to handle the potential volume of declarations after the UK leaves the EU. HMRC was seeking funding for this increased capacity through its separate Border Systems Programme.

1.12 HMRC's latest estimate shows expected total costs of £270 million (**Figure 4** on page 17). HMRC expects to spend an extra £60 million on developing the core system, including £12 million of non-cash costs. It also expects to spend a further £53 million to scale up CDS to handle 300 million customs declarations each year as a result of the decision to leave the EU. This £53 million was reallocated to the CDS programme from the Border Systems Programme.

3 Comptroller and Auditor-General, *The Customs Declaration Service*, Session 2017–2019, HC 241, National Audit Office, July 2017.

Figure 3
Update on the risks highlighted in our 2017 report

Risks we previously highlighted still remain

Risk	Summary	Update	Covered in this report
Resourcing	HM Revenue & Customs (HMRC) has had a significant number of staff vacancies and may incur more costs than forecast in the current business case.	**Risk has reduced.** HMRC now forecasts its resourcing needs in more detail and has a better understanding of requirements. However, resourcing risks still exist. The costs of the Customs Declaration Service (CDS) have increased, but funding is now in place.	Part One
Programme and scope management	HMRC's approach relies on close monitoring to prevent slippage of key milestones.	**Risk remains the same.** HMRC must continue to implement CDS with a large number of stakeholders and potentially competing demands.	Part One
Timetable	HMRC has only two months between the CDS full implementation date and when the UK plans to leave the European Union (EU).	**Risk has increased**. HMRC plans no change to the timetable. However, slippage means that many more users will now migrate closer to January 2019 and there is a risk that this process will go past this date.	Part One
System development	HMRC must integrate a number of modules, and scale them to handle declarations at the volume that may be required after the UK leaves the EU.	**Risk remains until integration and testing is complete.** HMRC has tested the performance of individual modules at current volumes. However, it has not yet proved that the system can handle the volumes expected after the UK leaves the EU in individual modules or the full system. End-to-end testing started in April 2018 but will continue until late 2018.	Part Two
Contingency arrangements	HMRC has identified contingency options but has not yet planned these in detail.	**Risk has reduced.** HMRC has a detailed contingency plan in place under a separate programme. It now plans to increase the existing CHIEF (Customs Handling of Import and Export Freight) system's capacity earlier but has not yet completed this work.	Part Two
Stakeholder engagement	HMRC has gaps in its knowledge of important stakeholder groups and does not have a detailed plan for moving users to CDS.	**Risk remains until HMRC migrates all users on to CDS.** HMRC has started its communications with current CHIEF users but has not yet started to communicate with EU-only traders. HMRC developed a more detailed migration plan but it continues to change this in light of the delivery issues it has faced.	Parts Two and Three

Source: National Audit Office

Figure 4

Costs of the Customs Declaration Service (CDS) and contingency programme

The cost of CDS has increased to £270 million

Programme	Estimated cost	Status	Spend to date
CDS – capacity 150 million	£217.0 million	HM Treasury approval to spend until 30 September 2018 (date of next approval point)	£93.9 million
CDS – additional capacity	£53.0 million	Agreed (EU exit funding)	£9.7 million
CDS total	£270.0 million	–	£103.6 million
Contingency programme	£8.7 million	Agreed (EU exit funding)	£0.8 million

Note

1 Spend to date figures are to the end of 2017-18.

Source: HM Revenue & Customs

1.13 HMRC has also allocated funding of £8.7 million to develop CHIEF as a contingency option. This includes IT costs of £7.9 million and staff costs of £0.8 million. We cover HMRC's contingency arrangements in more detail in Part Two.

1.14 To date, HMRC has spent £103.6 million. In March 2018, HMRC told the Committee that it has all the funding it currently needs to implement CDS. HM Treasury allocated £260 million to HMRC for costs related to EU exit in 2018-19. HMRC confirmed that this funding was sufficient to both increase CDS's capacity up to 300 million customs declarations each year and to develop functioning contingency arrangements.

Programme management and timetable

1.15 HMRC is managing CDS with a high-level overview of activities and 13 critical milestones, supported by detailed plans for rolling 10-week periods. These plans show that HMRC originally planned to design, develop and test the CDS system by July to allow CDS to 'go live' at the beginning of August 2018. It then planned to migrate all existing CHIEF users to CDS from August 2018 to January 2019. This allowed six months to migrate all current users to the new system.

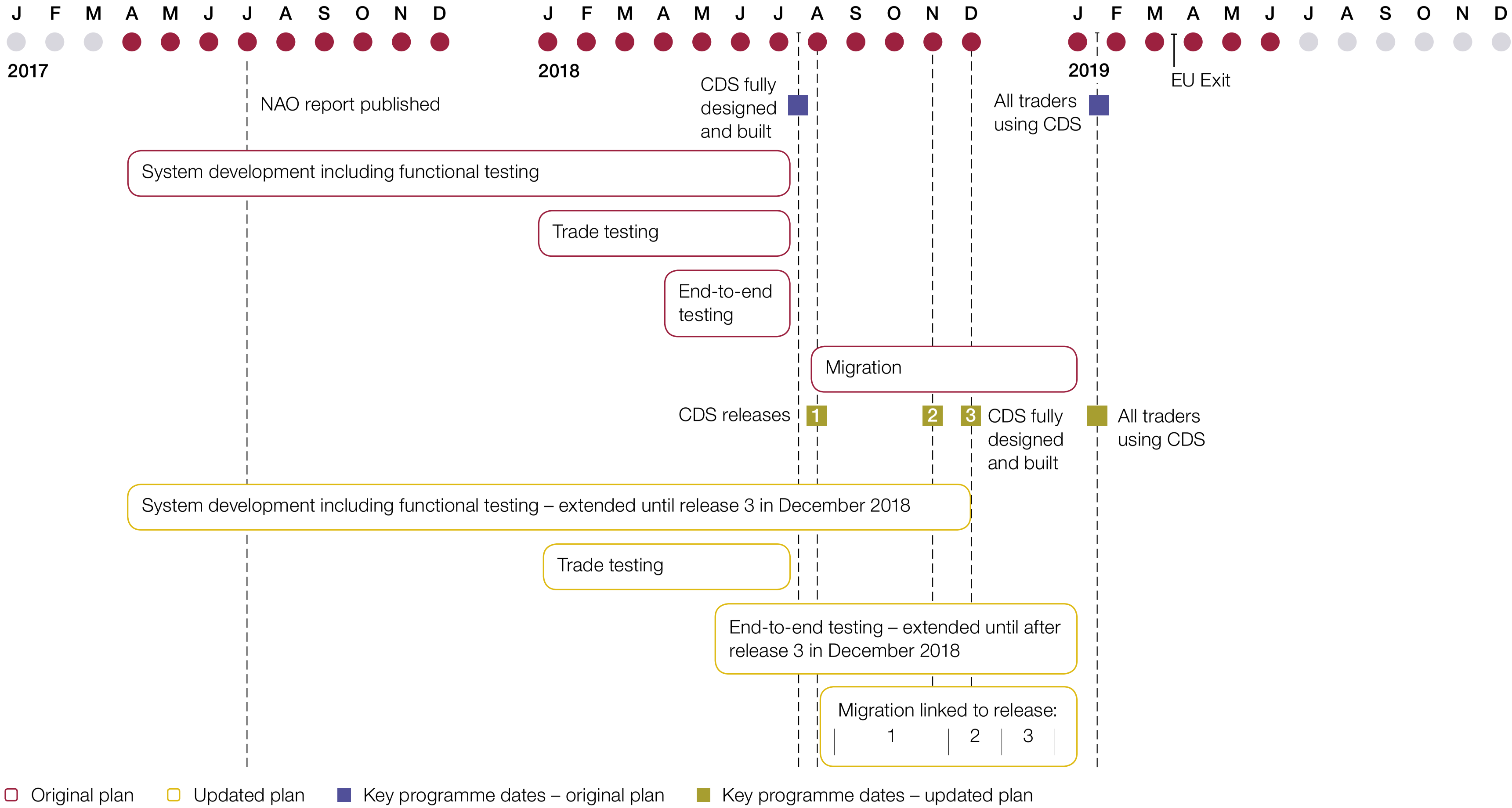
1.16 Since we last reported, HMRC has made progress but it will not have built the full CDS system by July 2018 as it previously intended. We provide more detail on the causes of this in Part Two.

1.17 HMRC still plans for the system to go live in August when it will start to migrate users on to CDS as intended. However, having reviewed its approach, it now plans to release only certain import functionality in August and will continue to develop and test functionality that it intends to release in November and December 2018 (**Figure 5** overleaf). The first and second CDS releases will bring in import functionality and the third release will allow traders to make customs declarations for exports. HMRC has also delayed the integration of CDS with its strategic finance system, previously planned for April 2018, until January 2019.

Figure 5

Main changes to the Customs Declaration Service (CDS) timetable

HM Revenue & Customs (HMRC) now plans to continue implementing CDS at the same time as migrating traders



Notes

1 HMRC's release strategy means export functionality will be implemented in CDS in December 2018. This means HMRC only has one month to complete migration of traders who make exports if it is to complete the migration process by January. HMRC notes that the date for release 3 and associated migration remains under review.

2 This is a simplified representation of the CDS programme timetable.

3 Activities and milestones marked as the original plan are as described in our report on CDS in July 2017, Comptroller and Auditior General, *The Customs Declaration Service*, Session 2017–2019, HC 241, National Audit Office.

Source: National Audit Office analysis of HM Revenue & Customs information

1.18 HMRC has told us that its intention would always have been to phase the release of functionality, as it mitigates the risk of implementing a complex system all at once. It has also engaged with industry in developing this approach and has told us that key stakeholders consider it fits with their development timetables. However, it has also taken this approach in order to manage the risks that have arisen in the programme since we last reported, which have resulted in delays in development and mean that HMRC has less control over the timing of releases. Release 3 in December 2018 is late in the timetable as HMRC plans for CDS to be fully operational by January 2019.

1.19 HMRC plans to closely manage the migration of traders who submit high volumes of declarations and has a communications campaign in place for lower-volume traders. Migration will start in August as intended. However, HMRC's new release strategy has forced it to change its detailed plans. HMRC's customer migration strategy from January 2018 sets out plans to initially migrate 32 traders who are responsible for around 36% of all customs declarations made each year. However, its latest migration overview shows that 34 traders responsible for 13% of import volumes will migrate between August and November 2018. This reflects the reduced functionality offered by the first release.

1.20 HMRC plans to migrate the remaining traders in its 'managed migration' from CHIEF to CDS following the second and third releases of CDS functionality in November and December. HMRC still aims to complete migration of these traders by the end of January. However, there is a risk that migration of export traders in particular will go beyond January because export functionality will only be implemented in release 3 in December. This means that these traders only have one month to migrate to CDS if HMRC is to complete the process by January 2019. HMRC accepts that the timing of release 3 is later than it would have liked, and its release and migration approach remains under review to see if work can be completed earlier.

1.21 HMRC has always planned to run CHIEF in parallel with CDS during the migration of traders and beyond. This means that traders will continue to have access to CHIEF if CDS is not ready by January 2019 or if they are not able to migrate on time. HMRC considers that it may lead to some traders choosing to continue to use CHIEF for longer than necessary, which could also delay the completion of migration.

1.22 The change in release strategy means that HMRC will now be developing and testing the new system at the same time as it migrates users. This increases the risks to the programme because traders involved in the first release will have to support a further two releases and associated changes to their own systems and processes before the end of the year.

CDS programme governance and assurance

1.23 Until April 2018, HMRC's Director General Transformation was the programme's senior responsible owner and chair of the programme board. HMRC's Deputy Chief Executive and Second Permanent Secretary then took on these roles.

1.24 The CDS programme director also oversees the HMRC's Border Systems Programme, which will provide or upgrade other HMRC systems and processes to ensure that goods, passengers and postal consignments continue to flow across the border after the UK leaves the EU (see **Figure 6**). This programme has a number of interdependencies with the CDS programme but is outside the scope of this report.

1.25 The Infrastructure and Projects Authority (IPA) carried out one full review of CDS in November 2015 and four more limited 'critical friend' reviews, the most recent of which was in March 2018. This rated the IPA's delivery confidence as 'amber/green'. It reported that the programme had made good progress since it had received an 'amber' rating from the previous critical friend review in May 2017.[4]

Figure 6
The Border Systems Programme

Important system changes required before the UK leaves the European Union (EU) are in these projects

Project name	Description
RoRo (roll on roll off)	The solution for moving freight at ports including Dover and EuroTunnel.
Northern Ireland land border	The processes and IT for goods moving between Northern Ireland and Ireland.
Passengers	The processes and IT for UK passengers returning from the EU to declare and settle tax and duty on goods.
Parcels	The policy, processes and systems for parcel services liable for import VAT.
Excise	IT to monitor goods under excise duty suspension without EU data and to enable continued smooth movement of goods.
UK safety and security	IT to handle an increase in safety and security declarations and communicate them to Border Force.
Trade in goods service	Services to allow HMRC to collect and publish statistics for UK international trade.
Tariffs and quotas	IT to receive tariff information from Department for International Trade.
Transit	The processes and systems to enable a national transit service if the UK leaves the Common Transit Convention.

Source: HM Revenue & Customs

4 The IPA's amber/green rating is defined as: "Successful delivery appears probable; however, constant attention will be needed to ensure risks do not materialise into major issues threatening delivery". The IPA's amber rating is defined as: "Successful delivery appears feasible but significant issues already exist, requiring management attention. These appear resolvable at this stage and, if addressed promptly, should not present a cost/schedule overrun".

Part Two

Technical challenges

2.1 This part covers the progress that HM Revenue & Customs (HMRC) has made with technical work, including integrating the system, scaling it to meet high volumes and implementing contingency arrangements.

System development

2.2 To implement the Customs Declaration Service (CDS), HMRC needs to complete a set amount of technical work. HMRC monitors its progress in completing this work in a number of ways. It tracks its performance against the programme's 13 high-level milestones as set out in Part One. It considers the feedback and progress demonstrated from its trade testing with software suppliers (see paragraph 2.15 and Figure 10). In each 10-week planning period known as a programme increment, HMRC also measures its completion of functional features against its plan.[5] This last measure is known as the programme 'burndown'.

2.3 In March 2017, HMRC reduced the number of CDS functional features from 968 to 519 after identifying many duplicated or redundant ones.[6] It subsequently identified a further 432 of these features that need to be completed to successfully implement CDS. This means that, as at 15 May 2018, HMRC must deliver a total of 951 functional features to complete CDS. Of these, HMRC:

- had already completed 84 before deciding on the release strategy, so they are not assigned to a specific release;
- must deliver 292 for the first release of CDS in August 2018 – see Figure 8 for additional information;
- must deliver 164 for release 2 and 72 for release 3 – to date, it has completed 42 of these in total; and
- plans to deliver 339 later than release 3, for example those which HMRC considers do not deliver critical functionality for the submission and processing of customs declarations, or those which relate to decommissioning activities that will come after CDS implementation.[7]

5 Functional features are actions that the system and associated processes must perform to meet specific user needs or requirements. For example, in certain circumstances a trader may suspend duty and make a security deposit. A CDS feature will allow this deposit to be calculated and recorded.
6 We previously reported that HMRC had reduced the total number of features from 968 to 519 on the basis of information provided to us by HMRC. HMRC has since confirmed that this related to functional features only.
7 Figures as at 15 May 2018 following an HMRC exercise to review attribution of features to a release. HMRC is continuing to review feature requirements so this number is subject to change.

2.4 In addition to the functional features, HMRC must also develop the infrastructure on which the system operates. HMRC is using the Scaled Agile Framework (SAFe) approach that supports the development of 'enablers' such as technical infrastructure, database management tools and other background applications that are needed to enable the functional features to work effectively. As at 14 May 2018, HMRC told us it had built 89.5% of the required CDS infrastructure, which was slightly ahead of schedule, and had deployed 53% of the applications, which was slightly behind against its plan.

2.5 **Figure 7** shows that, since April 2017, HMRC has consistently completed no more than three-quarters of the features planned for each programme planning period, carrying the rest over to complete later than expected. Reasons for this slower than expected progress include the following:

- Delays in accessing the production environment in which CDS will sit, which led to delays in features being developed and tested.[8] HMRC successfully accessed this system in March 2018 and considers it has resolved this issue.
- Difficulties in integrating CDS with HMRC's main finance system, one of CDS's 13 critical milestones. HMRC has found the integration to be more complex than expected. It did not complete this in April 2018 as planned. Instead, it will initially integrate CDS with the legacy finance system currently used for indirect taxes (CECAS). HMRC told us that CECAS offers all the functionality that CDS requires in the short term. HMRC is still determining what work is required to integrate CDS with CECAS. It continues to work on integrating CDS with its main finance system and expects to complete this work by January 2019.
- HMRC has identified gaps between the functionality offered by the declaration management system and that previously offered by CHIEF (Customs Handling of Import and Export Freight). This means that changes are required to the declaration management system. HMRC has commissioned its supplier to make these changes, and will undertake further work itself.

2.6 These issues have delayed HMRC's progress in developing CDS. As a result, a significant amount of work will need to be done in the final months of the programme. This increases the risk that CDS will not be implemented on schedule.

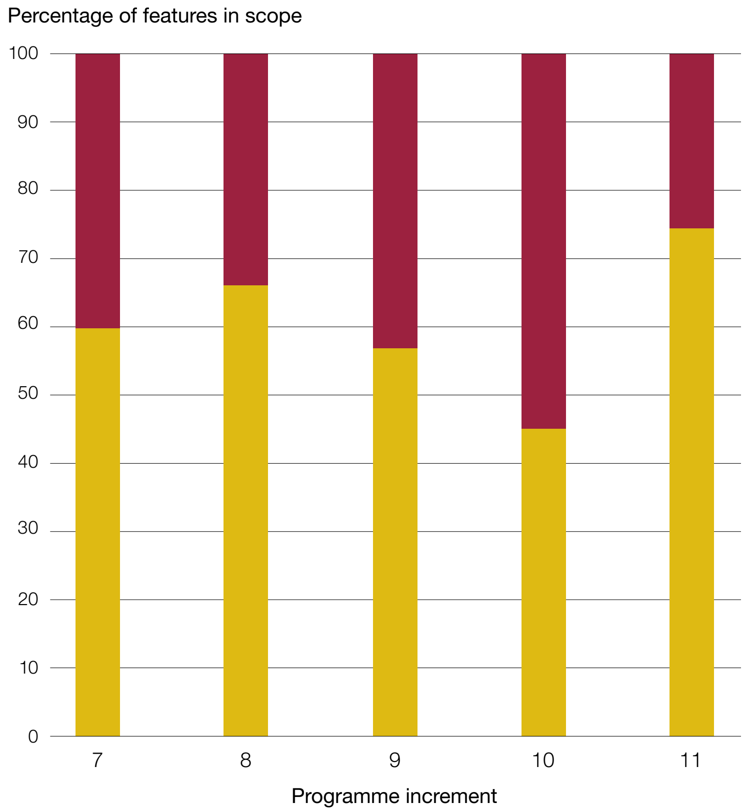
2.7 HMRC has responded to these delays by adopting the phased release strategy we set out in Part One. It is now measuring its progress towards the first release as well as full implementation of CDS. **Figure 8** on page 24 shows that by 15 May 2018, HMRC had completed 66% of the functional features required for the first release in August 2018. Of the 98 outstanding features, 37 were carried forward as incomplete from earlier planning periods. This means that HMRC is not as far advanced as planned with its development work because it had expected to have completed 79% of the work at this stage. At 15 May 2018, HMRC planned to complete the remaining features for the first release by 27 June 2018. HMRC considers that it is on track to deliver release 1 by August. As set out in paragraph 2.3, HMRC has already completed 126 features that are not specifically related to release 1. This means HMRC expects to have 44% of the CDS functionality in place at the time of the first release in August.

8 Amazon Web Services (AWS) cloud environment

Figure 7

Programme burndown over last five completed planning periods

Since the start of the seventh programme planning period in early April 2017, HM Revenue & Customs (HMRC) has completed no more than three-quarters of the work it planned to deliver in each 10-week period



	7	8	9	10	11
Carried over features	41	36	44	78	46
Delivered features	61	70	58	64	134

Notes

1 For a feature to be completed, HMRC must design, develop and test it when integrated with other features to ensure that it works as expected.

2 A programme increment is a 10-week planning period in which HMRC plans to complete a set amount of work.

Source: National Audit Office analysis of HM Revenue & Customs data

Figure 8

Progress on the functional development for the first Customs Declaration Service (CDS) release as at 15 May 2018

HM Revenue & Customs (HMRC) has completed around two-thirds of the functional features planned for the August release

Status	Features
Total features required	292
Features completed	194 (66%)
Features outstanding	98 (34%)
Of which:	
Carried forward from earlier period	37
Work in programme increment 12 (by 27 June 2018)	61

Source: HM Revenue & Customs

System integration and testing

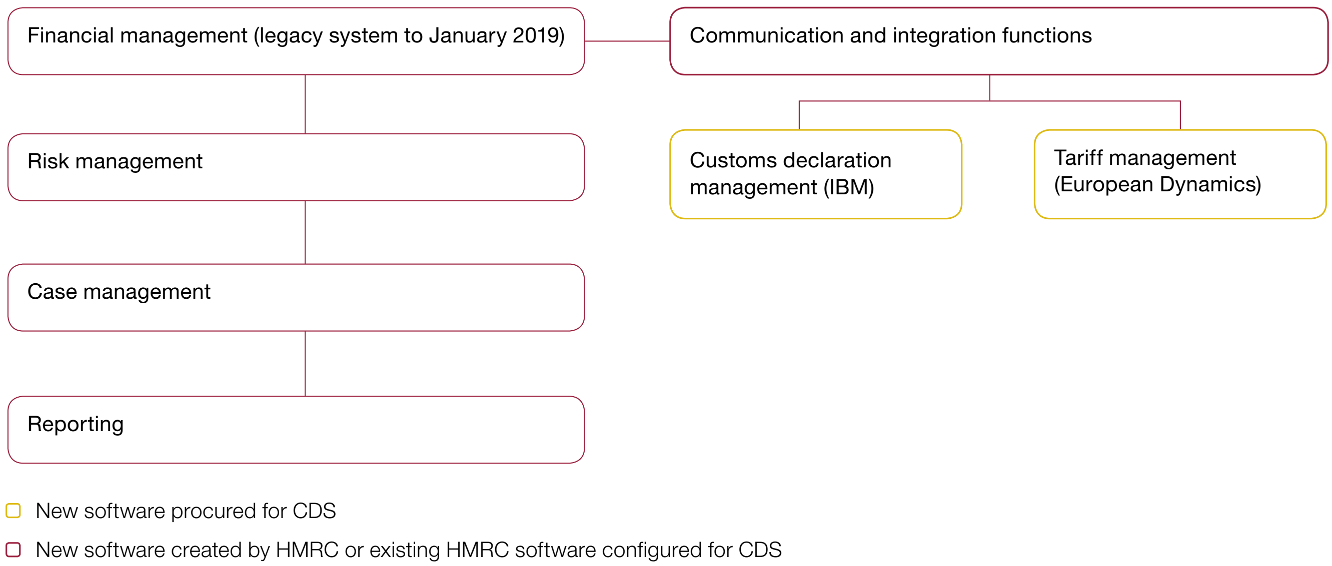
2.8 CDS is a modular system made up of software to manage customs declarations (provided by IBM), software to calculate tariffs (provided by European Dynamics) and HMRC technology that carries out functions such as financial and risk management, reporting and communication (**Figure 9**).

2.9 HMRC needs to test CDS to ensure that it operates as expected. This includes testing:

- the features to ensure that they work as intended – HMRC will continue to progressively test the system functionality until the third release of functionality in December 2018;
- the individual modules to ensure that they can handle the increased volumes of declarations that could be required after the UK leaves the EU;
- the integrated system to ensure that the individual modules work together effectively; and
- the overall system performance to ensure that the end-to-end CDS system will work when traders make customs declarations.

Figure 9
Modular design of the Customs Declaration Service (CDS)

CDS will bring together off-the-shelf products providing customs declaration management and tariff services with HM Revenue & Customs (HMRC) software



Notes

1 This is a simplified presentation of the CDS service.

2 The IBM product for managing declarations is called the Declaration Management System.

Source: National Audit Office analysis of HM Revenue & Customs information

Performance and integration testing

2.10 Because of the number of customs declarations that might be required after the UK leaves the EU, HMRC has forecast that CDS might need to handle a peak volume of 100 declarations each second. CHIEF currently handles a peak volume of 14 declarations each second.[9] HMRC has asked IBM and European Dynamics, suppliers of the declaration management and tariff modules respectively, to test their systems at the baseline and peak volumes. This testing consists of two stages:

- The first is to demonstrate that the system can process declarations at current volumes.[10]
- The second is to demonstrate that the system can process declarations at the volume expected after the UK leaves the EU.

9 Average number of 'insert declaration' transactions per second during the busiest hour in the period March to May 2018.
10 HMRC asked IBM to test its system to 12 declarations per second in January 2018.

2.11 In March 2018, HMRC told the Committee of Public Accounts that the CDS modules had been tested successfully at current volumes.[11] HMRC also stated that testing of CDS modules at higher volumes was progressing to plan. However, HMRC raised a new risk in March 2018 that the declaration management system may not be able to handle the expected increase in volumes without changes being made to the system. HMRC has prioritised testing to understand any further work that may be required. However, it is confident that the two modules will be able to handle all required volumes.

2.12 HMRC has started to integrate the different modules of CDS. In May, it started testing how the integrated modules perform. However, the CDS integration with the legacy finance system is planned for late June 2018. As a result, end-to-end testing including finance, which is critical for the first release, will only start around two months before the August go-live date.

2.13 HMRC plans to start performance testing in June. HMRC considers that this will give it early sight of any performance issues ahead of the second and third release. As is common with IT systems, even after testing issues may also emerge in the live environment. HMRC will continue to monitor the performance of the system as it releases functionality and users migrate on to CDS from CHIEF. However, HMRC's release and migration strategy means that it will not know whether CDS works in live service until after it has implemented the third release of functionality in December 2018. This increases the risk that HMRC will not have sufficient time to resolve any issues that emerge as this is only one month before it plans for the full CDS service to be operational.

Trade testing

2.14 HMRC is running a series of 'trade tests' to allow stakeholders to test their software and connections to CDS. The scope of each trade test is different, with more traders or new functionality added each time. These tests are crucial to ensure that stakeholders are ready for full implementation of CDS.

2.15 **Figure 10** shows that, at 8 June 2018, 28 of a total of 57 software providers whose IT systems will directly interact with CDS, of which five are community system providers (CSPs), have been involved in trade testing. Of these CSPs and software suppliers, 19 have confirmed that they have completed some testing, of which 15 have reported that they have successfully completed all scenarios to date. At that point, HMRC rated its progress in the latest test as 'amber'. Trade Test 5 is planned for July. This will further extend the functionality available for testing. Trade Tests 6 and 7 are planned to support CDS releases 2 and 3.

11 Committee of Public Accounts, *Brexit and the Future of Customs*, Correspondence with HMRC, dated 28 March 2018

Figure 10

Scope and results of HM Revenue & Customs' (HMRC's) trade tests to date

At 8 June 2018, 15 software suppliers and community system providers have successfully undertaken all trade test activity to date

Stage	Scope	Number signed up for testing	High-level results
Trade test 1 (December 2017 to January 2018)	Submission of a simple supplementary declaration with limited validation	5	All 5 participants tested successfully
Trade test 2 (January to February 2018)	As above but open to all suppliers	25	11 participants reported testing successfully in trade tests 1 and 2
Trade test 3 (March to May 2018)	Extended the testing to include more complex scenarios, eg for common agricultural policy goods	27	15 participants reported testing successfully trade tests 1 and 2 scenarios to date
Trade test 4 (May to July 2018)	Further extended the testing, eg to allow the clearance of goods not placed in customs warehousing	28	19 participants reported completing some testing, of which 15 have completed all scenarios

Source: National Audit Office analysis of HM Revenue & Customs information

Contingency arrangements

2.16 HMRC's contingency plans are to use CHIEF to continue processing some or all customs declarations. CHIEF handles two types of import declarations. Frontier declarations must be cleared before the goods leave the border. Supplementary declarations are less time critical and can be made up to one month after goods have crossed the UK border. They account for around 80% of all import declarations in CHIEF. If CDS is ready to process supplementary declarations but not frontier declarations, HMRC plans to use CHIEF and CDS together to process the different types of declaration. If CDS is not ready to handle any declarations, HMRC plans to use CHIEF to continue to process all customs declarations until CDS is ready. HMRC intends to run CHIEF alongside CDS during the migration period.

2.17 For CHIEF to be a full fall-back contingency option, HMRC needs to increase the system's capacity. CHIEF is designed to handle a maximum annual volume of 100 million transactions but HMRC estimates that there could be 255 million transactions annually after the UK leaves the EU.

2.18 We highlighted the need for a full contingency option in our July 2017 report. At that time, HMRC had identified contingency arrangements but not yet planned these in detail. Since then, HMRC has initiated a separate contingency programme to:

- determine the capacity to which CHIEF can be increased and carry out work to scale up the system;
- update the agreement with HMRC's commercial partner to support the larger volume of declarations;
- analyse and, where necessary, increase the capacity of the internal and external services that connect to CHIEF; and
- examine and update the CHIEF fall-back provisions.

2.19 To date, HMRC has updated its agreement with its commercial partner, Fujitsu; finalised the approach to increase the capacity of CHIEF and put a test environment in place; and identified all services connecting to CHIEF that it may also need to update. HMRC has started to test the volume of declarations that CHIEF can handle. By July 2018, HMRC intends to have demonstrated CHIEF's capacity under its existing design, although this may go into August. It previously intended to know this by December 2018. HMRC expects it would take up to three further months to scale up CHIEF to be a full contingency service.

2.20 HMRC is confident that CHIEF will be able to handle 255 million declarations but scaling it significantly beyond this level is more difficult. This means HMRC should have the system capacity to handle customs declarations no matter what the outcome of negotiations between the UK and the EU. CHIEF is a stable system that is well known by HMRC but is more than 20 years old. CHIEF is based on aged technology, which means it would be too expensive and difficult to upgrade to meet the long-term requirements of the Union Customs Code (UCC) and future UK customs system. This was part of the rationale for implementing CDS.

Part Three

Stakeholder readiness

3.1 This part considers how HM Revenue & Customs (HMRC) manages the organisations that are involved in submitting customs declarations, including community system providers (CSPs), software suppliers, agents and traders. It also briefly considers government's own readiness to use Customs Declaration Service (CDS).

Stakeholders outside of government

3.2 Successful use of CDS relies on organisations and individuals outside HMRC changing their systems and processes. Typically, these stakeholders fall into two main groups:

- Delivery partners who need to develop their own systems for CDS to operate as planned – these include CSPs, customs software suppliers, and some fast parcel operators (FPOs), often referred to as couriers.
- End users who make the customs declarations to HMRC – these can be companies or individuals making declarations directly, or freight forwarders, couriers or customs agents making declarations on behalf of others.

CDS delivery partners

3.3 CSPs are five specialist organisations that serve hundreds of carriers, transit sheds and freight forwarders. CSPs operate inventory systems that control the movement of import and export freight at UK ports and airports. CSPs connect to the existing customs system, CHIEF (Customs Handling of Import and Export Freight), allowing traders to submit customs declarations electronically. HMRC has assessed that around 22% of import declarations and 83% of export declarations go into CHIEF via CSP systems.[12] CSPs need to change their software to enable their customers to use CDS.

3.4 Customs software suppliers make software that is used by importers, exporters and agents to submit customs declarations. HMRC has identified 52 software suppliers whose systems directly interact with CHIEF and will continue to interact with CDS. This includes four FPOs (see below). Software suppliers need to change their software and ensure that their customers can provide all the data required to CDS.

12 This is the average volume of declarations through CSP systems over the last 4 years.

3.5 FPOs are key stakeholders in the express parcel delivery industry. They can operate their own customs software, as well as provide customs services for their customers globally. A small number of FPOs make a large proportion of customs declarations. For example, HMRC has identified four FPOs in the UK who account for 88% of import declarations currently made by these companies. These four FPOs are responsible for around 16% of all import declarations.

CDS users

3.6 International traders are importers and exporters who bring goods into and out of the UK. Data on traders are set out in paragraph 1.6 and Figure 2. Traders may need to change their systems, and train and recruit new staff. All traders might need to update their business processes to record and submit the right information to CDS.

3.7 Freight forwarders are companies that organise the movement of goods from the manufacturer or producer to a market, customer or final point of distribution. They may act as a customs agent and offer a range of other services to importers, including customs clearance. HMRC estimates that there are approximately 8,700 registered users of CHIEF, including customs agents, freight forwarders and similar intermediaries operating in the UK.[13] These organisations may also need to change their system, train and potentially recruit new staff, and update their business processes.

HMRC's engagement plan

3.8 HMRC is engaging and informing CDS stakeholders via a range of activities, including workshops and stakeholder forums and through trade bodies. Since early 2018, HMRC has also had nominated staff in place to oversee the relationship with delivery partners (**Figure 11**).

3.9 HMRC's plan also sets out a high-level communication strategy with traders (**Figure 12**). In line with its plan, HMRC started communicating with current CHIEF users in January 2018 when it published information on its website explaining the rationale for, and impact of, replacing CHIEF. In February 2018, it emailed all current CHIEF users with an email address registered with HMRC, followed by letters to all users. HMRC planned to start its engagement with intra-EU traders in March 2018 but delayed this following the European Council meeting that month. This meeting saw progress towards, but not agreement on, an implementation period between the UK and EU, which would mean that intra-EU traders would not need to make customs declarations until December 2020. Because this remains uncertain, HMRC has planned, but not yet started, a campaign to communicate with intra-EU traders. HMRC told us it is unable to do so until EU negotiations are clearer or have concluded and it is more certain about the customs arrangements that may be in place following the UK's exit from the EU.

13 In 2017, 4,211 of the 8,700 registered users of CHIEF made a customs declaration.

Figure 11
HM Revenue & Customs' (HMRC's) engagement strategy

Engagement is tailored to the stakeholder's role in the implementation of the Customs Declaration Service (CDS)

CDS stakeholder	Main engagement method	Frequency	Further details
Community system providers	Workshops, technical meetings and programme updates, representative on programme board	Regular	Nominated staff support this relationship
Customs software suppliers	Technical meetings and programme updates, representative on programme board	Regular	Nominated staff support this relationship
Fast parcel operators	Meetings with trade body, programme updates	Regular	Nominated staff support this relationship
Other government departments	CDS internal readiness team, representation on CDS programme board	Ad hoc	
Large businesses	Direct engagement with largest importers and exporters and via software suppliers	Ad hoc	
Freight forwarders and agents	Direct engagement with largest organisations and via trade bodies and HMRC's Joint Customs Consultative Committee	Regular	
Small to medium enterprises and individuals	Updates via trade bodies, communication strategy from January 2018	Ad hoc	
EU-only traders	Flexible communication strategy	Not yet started	HMRC is keeping the need to communicate under review

Source: National Audit Office analysis of HM Revenue & Customs information

Figure 12
High-level timeline of communications activity with traders

HM Revenue & Customs (HMRC) started to communicate with current CHIEF (Customs Handling of Import and Export Freight) users in January 2018 and plans to communicate with intra-European Union (EU) traders subject to the outcome of EU negotiations

Activity	January to July 2018	August 2018 to January 2019	February 2019 onwards
Migration from CHIEF to the Customs Declaration Service (CDS)	Build awareness and understanding	Encourage traders to migrate	Reinforce the need to migrate with ongoing CHIEF users
Preparing intra-EU traders	Build awareness and understanding of the actions required to make customs declarations for the first time (dependent on negotiations)		
Promotion of CDS to new users		Build awareness and understanding among new users	

Source: HM Revenue & Customs

Stakeholders’ views on the implementation of CDS

3.10 In February and March 2018, we asked stakeholders about HMRC’s implementation of CDS. This included a survey of software suppliers, interviews with CSPs and discussions with a number of trade associations. We sought views from stakeholders in three main areas: awareness and understanding of CDS; HMRC’s communication, engagement and programme management; and the readiness of both HMRC and stakeholders for going live. The findings below represent the responses we received. HMRC has told us that it has since undertaken further activity to engage with these stakeholders.

Community system providers

3.11 In March 2018, CSPs told us that engagement with HMRC was generally good, and highlighted a marked improvement since late 2017. CSPs also told us that documentation had improved in early 2018. However, they felt that there were gaps in the information initially provided. They also thought that the completeness, quality and stability of the initial documentation was varied. Two CSPs noted that the quality and timeliness of HMRC’s documentation remained a risk that they were having to manage. Four CSPs told us that, in March 2018, they still did not know the final specifications of CDS, and one of these had only just started developing its system.

3.12 Three CSPs were not confident that the full scope of CDS would be ready in January 2019. They expected that at least some of the functionality would be in place but were particularly concerned about the likelihood of inventory-linked functionality, which is critical for their systems, being ready on time. Two CSPs also noted that CDS depends heavily on customs software suppliers and users being ready, as well as HMRC and CSPs. They thought this was a big challenge.

Customs software suppliers

3.13 In February and March 2018, we surveyed members of the Association of Freight Software Suppliers (AFSS), which represents many of the leading suppliers of software to the freight and transportation industry. We received 19 responses from the 32 AFSS members we invited to complete the survey. We provide more detail on the methodology employed in Appendix Two. The responses we received are set out in **Figure 13**.

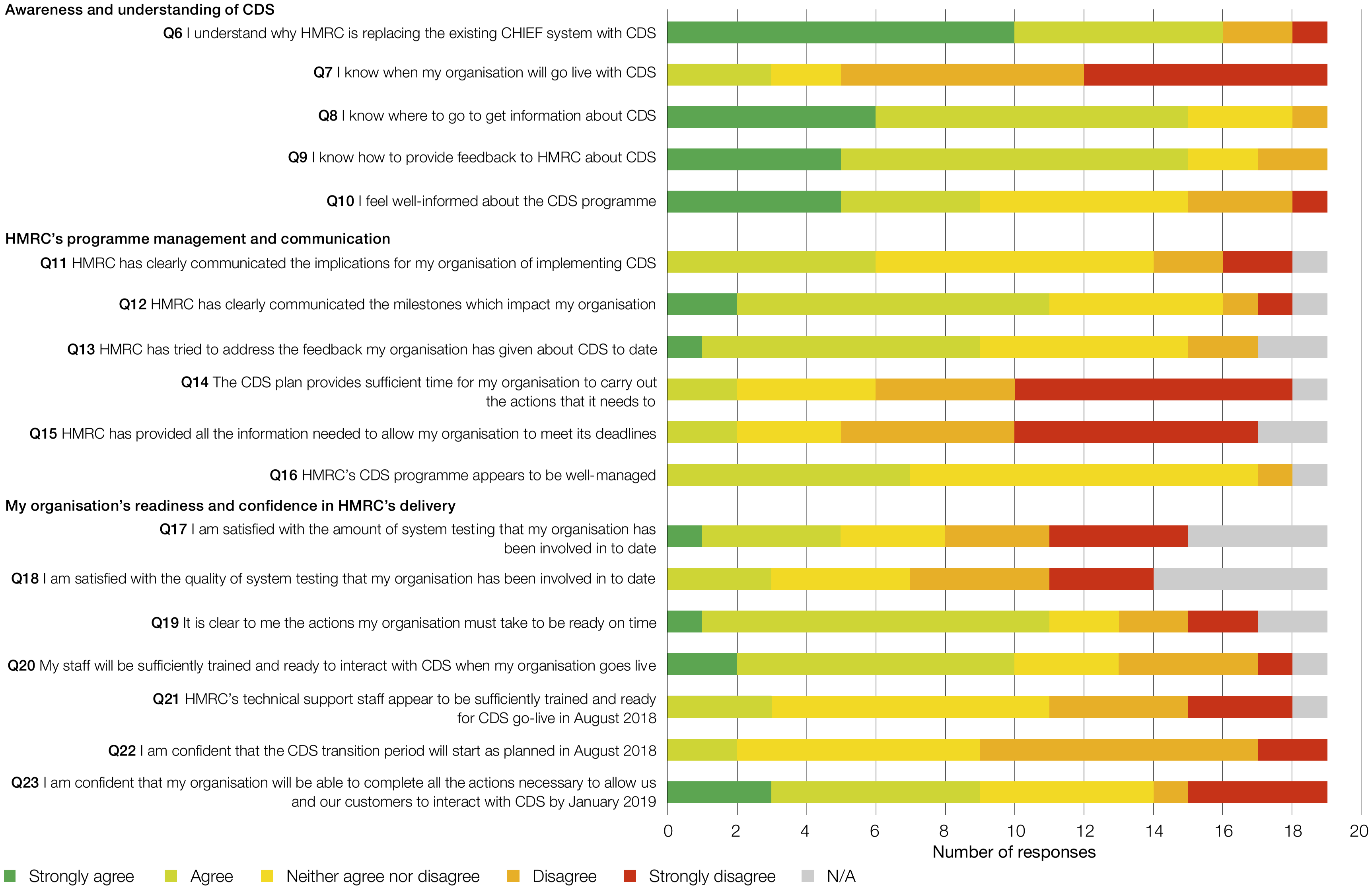
3.14 Software suppliers we surveyed mostly understood the rationale for CDS, where to go for information about it and how to provide feedback to HMRC, although not all were confident of getting a quick response.[14] Generally, they were positive about HMRC’s engagement. When our survey was undertaken, many were unsure when their systems would be ready. One main reason cited for this was that they did not yet have the final specifications for the system and therefore were not confident about exactly what they needed to deliver.[15] A majority of software suppliers also felt that the CDS plan had given them insufficient time to carry out all the required actions.[16]

14 Response to National Audit Office survey questions 6, 8 and 9 and supporting comments.
15 Response to National Audit Office survey question 7 and supporting comments.
16 Response to National Audit Office survey question 14.

Figure 13

Findings from our survey of software suppliers

Software suppliers were generally positive about HMRC's engagement on CDS but less positive about the amount of time they had been given to complete the work



Source: National Audit Office survey of customs software suppliers

Figure 13 *continued*

Findings from our survey of software suppliers

Software suppliers were generally positive about HMRC's engagement on CDS but less positive about the amount of time they had been given to complete the work

Notes

1 HM Revenue & Customs (HMRC) is replacing its existing CHIEF (Customs Handling of Import and Export Freight) system with a new Customs Declaration Service (CDS).

2 Survey results are based on 19 responses from 32 members of the Association of Freight Software Suppliers (AFSS) at the date of the survey, a response rate of 59% of the sample population.

3 Not all suppliers who will provide software to interface with CDS are AFSS members.

4 Questions 1 to 5 were introductory questions to gather information on respondents.

Source: National Audit Office survey of customs software suppliers

3.15 Not all software suppliers were satisfied with the amount and quality of testing they had been involved in.[17] When we surveyed them, they also had mixed levels of confidence in their readiness. Some were confident of being ready while others were concerned about having a system ready in January 2019.[18] Few software suppliers were confident about the chances of the migration of traders from CHIEF to CDS starting as planned in August 2018.[19] Most software suppliers we surveyed were confident that a CDS system would be in place in January 2019. However, they were not confident that the full system functionality would be ready at that time.[20]

Trade associations

3.16 We spoke to three trade associations representing freight forwarders and customs practitioners. They told us that awareness and understanding of CDS, as well as the level of satisfaction with HMRC's engagement, differ greatly. We heard about recent improvements in communications aimed at a wider audience, but also concern about the lack of information that they and their members had received. We also heard concerns about the amount of time that businesses will have to get ready and the need for sufficient time to update business processes and train staff.

Stakeholders inside of government

3.17 Implementation of CDS also requires stakeholders within government to change their systems, update processes and train staff. HMRC has established internal and external readiness teams to ensure that the necessary changes are made in HMRC and other government departments.

3.18 Most HMRC staff who will need to use the new CDS are located at HMRC's National Clearance Hub, which employs around 240 people. Outside HMRC, the main users of CDS will be Border Force, which uses the information on customs declarations to inform its enforcement work. In advance of CDS implementation, Border Force plans a 1-hour training session for each of its more than 500 users. Customs enforcement by Border Force is outside the scope of this report.

17 Response to National Audit Office survey questions 17 and 18.

18 Response to National Audit Office survey question 23 and supporting comments.

19 Response to National Audit Office survey question 22.

20 We asked an additional question about views on the CDS go live. Only 3 of 19 respondents expected CDS would go live with full functionality in January 2019.

Appendix One

Findings of the Committee of Public Accounts

1 The Committee of Public Accounts (the Committee) took evidence on our report, *The Customs Declaration Service*, in October 2017.[21] In its subsequent report, the Committee set out four recommendations to HM Revenue & Customs (HMRC) and HM Treasury.[22] We have set out the Committee's conclusions and recommendations in full in **Figure 14** overleaf.

2 The government subsequently responded to the Committee's findings in a Treasury Minute published in January 2018.[23] We have summarised the government's response to each recommendation in Figure 14.

3 HMRC subsequently provided a more detailed written response to the Committee's chair in March 2018, in which it updated further on the Committee's findings. It explained its approach with stakeholders, plans for testing CDS, contingency arrangements, the funding position and the transformation prioritisation exercise. Overall, it told the Committee that work had progressed significantly since the evidence session but acknowledged that there was a lot more work to do.

21 Comptroller and Auditor General, *The Customs Declaration Service*, Session 2017–2019, HC 241, National Audit Office, July 2017.

22 HC Committee of Public Accounts, *Brexit and the future of Customs*, Second Report of Session 2017–2019, HC 401, November 2017.

23 HM Treasury, Treasury Minutes, *Government response to the Committee of Public Accounts on the Second and Third reports from session 2017-19*, Cm 9565, January 2018.

Figure 14

Committee of Public Accounts conclusions and recommendations on the Customs Declaration Service (CDS) and the government's response

Committee's conclusions and recommendations	Treasury Minute response
Conclusion: HM Revenue & Customs (HMRC) has not yet done enough to manage the huge uncertainty faced by a large number of traders. **Recommendation:** HMRC should ensure that traders are informed of the Customs Declaration Service (CDS) timeline and progress by January 2018. As part of its plans to broaden engagement with traders, it should also promote the benefits of obtaining trusted trader status and aim to increase the number of registered traders.	The government agreed, stating it was: • already working closely with trade representatives to prepare businesses who currently use CHIEF and has developed a phased migration plan; • planning to start its education campaign for existing CHIEF traders in January 2018 and was working on an education campaign for EU-only traders; and • engaging with UK businesses on future enhancements to the Authorised Economic Operators (AEO) scheme.
Conclusion: It is vital that HMRC has a flexible service which can handle the increased volume of customs declarations and a well-developed contingency option. **Recommendation:** HMRC should ensure that the CDS system and the CHIEF contingency option are capable of managing 255 million customs declarations every year, while providing the flexibility to meet the wider challenges of an integrated customs and trade system for the UK, such as managing changes to tariffs, free trade agreements and international trade quotas. HMRC should report back to the Committee by March 2018 to update us.	The government agreed, stating it was: • testing the scalability of CDS to manage 300 million declarations a year, with a peak of 100 declarations per second; • testing the scalability of CHIEF as a contingency option, and has extended the contract with its supplier; and • designing and building CDS to have the flexibility to meet the challenges of change to tariffs, free trade agreements and international trade quotas.
Conclusion: HMRC does not yet have funding to increase the capacity of CDS or to develop contingency options. **Recommendation:** HMT should ensure that HMRC has sufficient funding by December 2017 to increase the capacity of CDS to handle 255 million customs declarations each year, and to develop functioning contingency arrangements.	The government agreed and stated that: • HM Treasury meets regularly with HMRC to review funding arrangements, and HMRC has sufficient funding to undertake the contingency work required to date; and • the 2017-18 additional funding will allow HMRC to carry out CDS performance testing and understand scaling requirements for CHIEF, both of which will inform future funding requirements.
Conclusion: HMRC is currently managing an unsustainable amount of change which could put the delivery of CDS at risk. **Recommendation:** HMRC should report back to the Committee by March 2018 with clear plans on how it will manage the many challenges it faces due to Brexit and its ongoing transformation programmes, including how this will help to mitigate the risks in the CDS programme.	The government agreed and stated that: • it recognises the risk from European Union exit on top of its other work and is in the process of reviewing and prioritising. It agreed to report back to the Committee by March 2018.

Note

1 CHIEF is the Customs Handling of Import and Export Freight system.

Source: Committee of Public Accounts and HM Revenue & Customs

Appendix Two

Our audit approach and evidence base

Scope

1 This report looks at HM Revenue & Customs' (HMRC's) implementation of the Customs Declaration Service (CDS). It provides an update on HMRC's progress against risks highlighted in our 2017 report, and sets out the current risks and issues that the programme is having to manage. It looks in detail at the technical and stakeholder challenges associated with the programme, and the progress in identifying and putting in place suitable contingency arrangements. We have not evaluated the overall value for money of the CDS programme.

2 This report does not consider the changes that might be needed to wider customs processes, including infrastructure and resources, or changes that other government departments and agencies might need to make, as a result of the UK's decision to leave the European Union.

Methods

3 We reached our findings following fieldwork conducted between February and May 2018. In examining the programme, we drew on a range of evidence sources. We interviewed:

- the programme team in HMRC responsible for delivering CDS, including the programme director and programme management team, to understand the current status of the programme including risks and issues; progress with technical delivery; progress with business change and stakeholder management; and progress developing contingency arrangements. We undertook these semi-structured interviews in late March and early April 2018;
- key individuals in HMRC's customs directorate to better understand the wider environment in which the implementation is taking place. We undertook this semi-structured interview in early April 2018;
- the CDS programme board member representing Border Force to understand the current position for its staff who will need to use CDS. We undertook this semi-structured interview in early May 2018;

- representatives from IBM, suppliers of the new declaration management service, to understand its progress with system development and testing. We undertook this semi-structured interview in late April 2018;
- representatives from Fujitsu, HMRC's commercial partner for maintaining the Customs Handling of Import and Export Freight (CHIEF) system, to understand the progress with scaling up CHIEF as a contingency option. We undertook this semi-structured interview in early May 2018;
- representatives of all five community system providers (CSPs) to understand their views on HMRC's communication and engagement; HMRC's programme management and progress with implementation; and their own readiness for CDS implementation. Structured interviews were held with two of the five CSPs in March 2018 and three provided written responses to the same questions; and
- representatives from five relevant trade associations, each of which is a member of HMRC's Joint Customs Consultative Committee, to understand their and their members' awareness and understanding of CDS; views on HMRC's communication and engagement; and expectations for the implementation of CDS. We undertook these semi-structured interviews in March and April 2018.

4 We surveyed all 32 members of the Association of Freight Software Suppliers (AFSS) at the time of our survey to gather evidence on their understanding and awareness of CDS; HMRC's programme management and communication; their own readiness for implementation; and their confidence in HMRC's readiness. Questions asked suppliers to state their level of agreement with a number of statements. We also asked for supporting details where respondents were willing to provide them. The survey was carried out online in February and early March 2018. We received 19 responses, representing 59% of the sample population. The survey only covered AFSS members, although not all suppliers who will provide software to interface with CDS are AFSS members. In February 2018, HMRC was still identifying the software supplier population. However, a significant proportion of the customs declarations currently made in CHIEF are made using software provided by AFSS members, including two suppliers whose software processes 60% of all supplementary declarations (which, in total, account for 80% of import declarations in CHIEF). This is expected to continue in CDS.

5 We reviewed a range of documents and other types of evidence to further establish our evidence base, including:

- programme documentation, including programme board papers, weekly programme updates, business case documents, risk registers, timeline and milestone charts, and contingency plans, to understand progress with implementation and new risks since we last reported;
- change requests and work packages for external suppliers to understand changes being made to the underlying system, and testing requirements;
- HMRC's engagement, communications and migration plans for CDS stakeholders to understand the timeline for business change activity;
- evidence from the Infrastructure and Projects Authority's latest review of the programme to understand the findings and recommendations made; and
- other publicly available information to familiarise ourselves with HMRC's plans and the wider customs process.

6 We visited HMRC's CDS programme 'control room' in Southend to interview key project staff in their working environment and check that the appropriate project management tools are in place and operating as expected.

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National Audit Office

Design and Production by NAO External Relations
DP Ref: 005405-001

ISBN 978-1-78604-199-9