

TM Forum Revenue Assurance Survey Report

2017/18 EDITION

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Preface

On behalf of the survey team I'd like to invite you to explore TM Forum's global Revenue Assurance (RA) survey report 2017/18. The purpose of this survey is to share and discuss insights and trends in the RA area to strengthen RA's overall value contribution.

This report provides RA practitioners valuable facts and community reflections, as well as detailed observations. For RA practitioners it is worthwhile to deep dive question by question and to study chart by chart. My advice is to use the report as a structured self-reflection tool for your very own journey and to use the insights to plan your way forward. Happily, you are not alone, we've got a great and open community to share and spar with you! Please check our LinkedIn group TMForum Revenue Assurance and engage in discussions.

If you are not familiar with RA, you'll recognize that RA is a very mature, active risk management discipline within CSPs. You'll also discover capabilities of these well-established practices beyond traditional value chains, which may be useful in other areas of an organization, for example:

- Automated tools to monitor the flow of data and money across value chains
- Detailed and data-driven risk management
- Cross-domain access to and knowledge of data analytics practices

As CSPs are transforming into digital service providers/enablers it is very important for RA organizations to become more proactive. If we don't transform fast enough, we'll be outplayed. Therefore it is not only important to understand and sharpen the current roles and capabilities within each CSP, but also to actively strive to generate future value.

To further enhance collaboration beyond the RA core and to enable evolution, TM Forum recently established an open working group focusing on "Business Assurance in the context of IoE and Ecosystem Business". The overall goal is to create and share best practices to leverage the impact of the the range of BA disciplines on overall business performance and customer experience. The group comprises participants of a broad diversity of disciplines that contribute to assuring business . Current article on Business Assurance with contact information.

I'd like to thank all survey participants who generously provided their input and all colleagues who have shared their passion and time to realize this collaborative project.

Enjoy the report and your journey!
Rene, on behalf of the RA survey team



RENE FELBER

Telia Company

Head of Risk & Assurance at Telia Company, Finland.

Rene Felber is responsible for managing GRC (governance, risk & compliance), fraud management, revenue assurance and credit control.

He has also been the leader of TM Forum's global RA survey since 2014. Additionally, Rene is one of the driving forces behind TM Forum's new Business Assurance initiative. In his co-lead role, Rene's ambition is to help professions in the Business Assurance area to acquire capabilities to master future challenges and to become proactive value drivers in their companies.

Rene has over 15 years of industry expertise and has spent 10 years in international consulting and auditing, with a background in GRC, RA and outsourcing/partner management. He recently received an outstanding contributor award for thought leadership in his area.

Impact of digital on RA

Welcome to the calm before the storm…

In the fourteen years since we set up the TM Forum Revenue Assurance (RA) workgroup, more and more CSPs have been actively taking part in our initiatives, and adopting RA practices and methodologies within their organizations. Our annual RA survey is viewed as an instrumental tool for RA practitioners for benchmarking, identifying trends, and creating roadmaps.

This year's survey is no exception; it provides valuable information for RA practitioners –including some interesting trends. Although the results may not be dramatic, don't be misled, read on…

We all know that CSPs are quickly evolving, from offering OTT, to exploring NFV, 5G, artificial intelligence (AI) and machine learning, from becoming digital service providers, to creating API economies, and adopting completely new business models. And yet, in contrast to this reality, this year's RA survey shows "business as usual".

How is that possible? Doesn't RA need to be able to support the digital evolution? Shouldn't RA be changing too?

The answer is that RA still predominantly ensures the "old" traditional revenue streams and costs, with most of its activities and KPIs focusing on these – hence the relative lack of "revolution" in the report results.

However, fast forward a year, and the RA story might start to look pretty different. Advanced RA practitioners are looking ahead and investigating how to apply AI and machine learning to detect and prevent leakages, making RA far more dynamic and adaptive (check out the TM Forum Business Assurance Initiative, and the Empowering Business Assurance with Artificial Intelligence Catalyst for more information).

The changes taking place in communications service providers – or rather *digital* service providers — will definitely impact the way RA operates, as well as its goals, and its technologies, and this will certainly be reflected in future surveys.

In the meantime, enjoy the calm before the storm.



DR. GADI SOLOTOREVSKY

amdocs

Revenue Guard - Amdocs
Ambassador & Distinguished Fellow - TM Forum

Dr. Gadi Solotorevsky is a well-known industry thought-leader in telecommunications and revenue analytics, with years of experience developing and deploying solutions, methodologies, and consulting. Dr. Solotorevsky is one of the founders and the Chair of the Revenue Assurance team, a Distinguished Fellow and Ambassador of the TM Forum. He is one of the authors of the TM Forum's Revenue Assurance TR131 and GB941 that are the de-facto standards and best practices widely used by the telecom industry. Dr. Solotorevsky holds a BSc, MSc, and PhD in Computer Science, and he authored several scientific papers on Distributed Artificial Intelligence and Resource Allocation, and is the inventor of patents in the fields of outlier detection, and time series and utilization forecasting.

Content and Nature of the RA survey 2017/18



- Maturity-centric report with transparent questions and answers
- Self-assessment based survey for revenue assurance managers (anonymous)
- TM Forum Revenue Assurance Maturity Model (RAMM version 2) provided for free
- Collaboratively developed by experienced experts (CSP lead)
- 5th edition since 2012

Reader guidance:

- Invalid responses were spotted and removed prior to the analysis phase (technical checks). The number of valid responses is stipulated for each of question
- Correlation analysis: Results were only depicted if clear patterns were found

Executive Summary - Top 10 facts

1,9%
The estimated average revenue leakage is 1,9% (stable)

51%
The measured average revenue recovery rate is 51% (10% increase)

Automation
Limited automation: Capability score 2.6 out of 4

52%
Half of the companies' revenues are covered

Prevention
Four out of ten incidents prevented

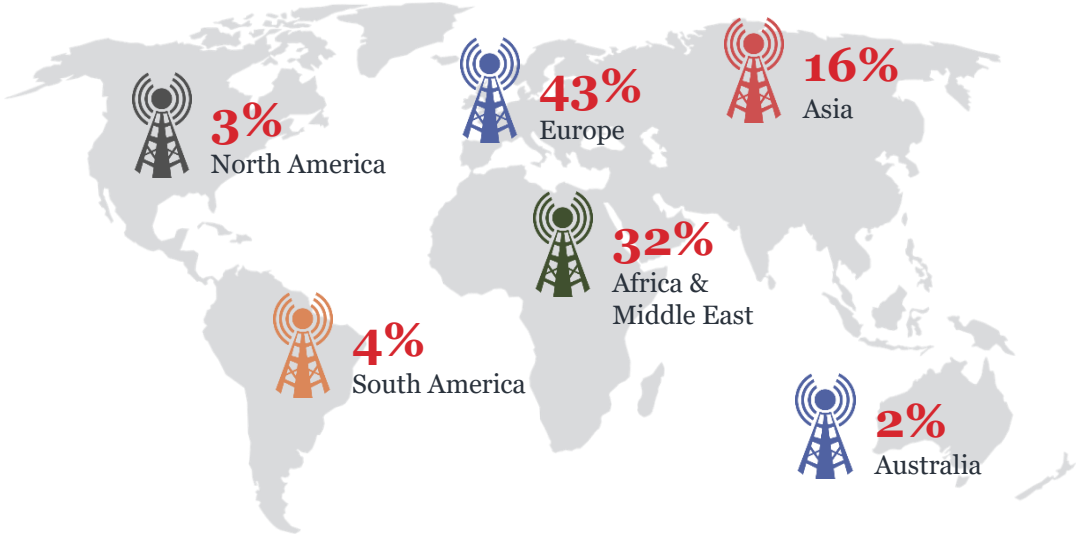
RA in Finance
Three out of four RA organizations are in Finance

0.2 maturity increase
Maturity gains by 0.2 points (3.3 out of 5) based on RAMM

Dedicated RA departments
Over 90% have dedicated RA departments

50%
Fraud management roles by 50% of the RA organizations.
Strong increase of Risk management

143 contributors
143 survey contributors, global footprint





RA MATURITY

Understanding the big picture - aligning RA strategy to keep pace with change.

RA Maturity

Section summary

General use of RAMM

- An increased number of survey participants are using TM Forum's Revenue Assurance Maturity model (RAMM version 2): 37% vs. 25% two years ago.

RAMM overall score

- Revenue assurance maturity has improved by 0.2 points globally compared to two years ago. The average score is 3.3 (level "defined").

Maturity by region

- The strongest revenue maturity improvements were reported in Western Europe (+0.5 points).

Maturity by area

- Maturity increases were noted for the areas "Degree of automation" , "Coverage of RA technology", "Access to information" and "Correction of identified issued", whereas decreases were noted for "Business knowledge", "Staffing levels", "Communications", "Change mgmt. involvement & sign-off" as well as "Use of RA technology".

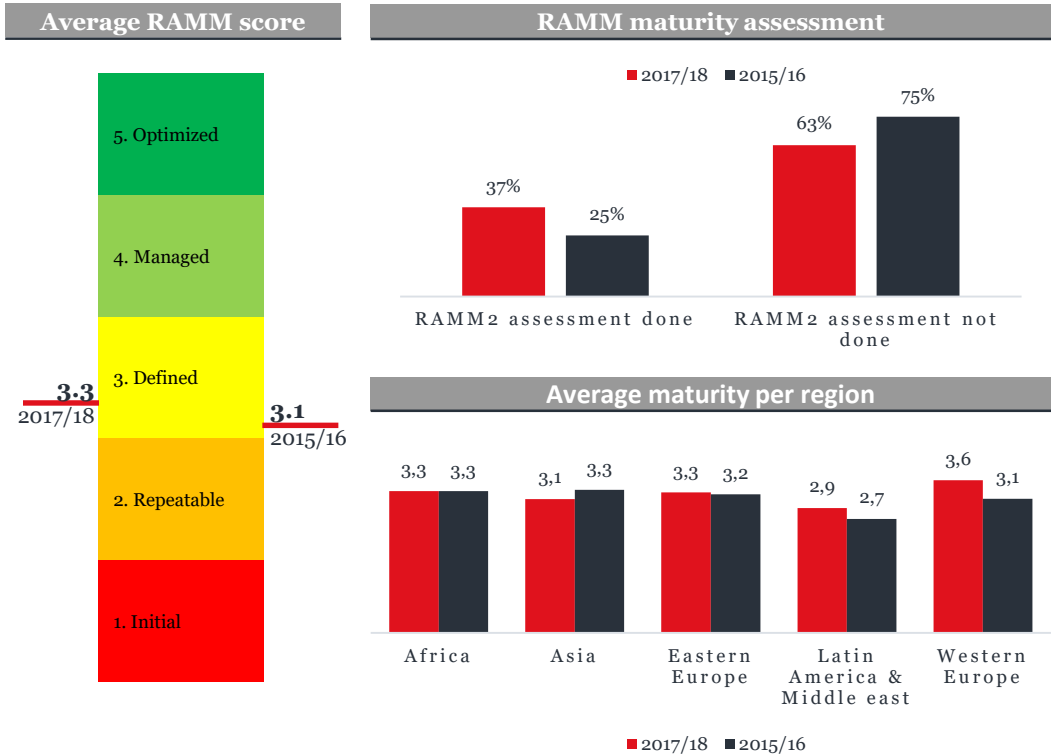
  Note: The figures originate from RAMM topic level scores (participant's self-assessments)

TM Forum RA team Comments

- ✓ TM Forum's Revenue Assurance Maturity Model (RAMM version 2) is widely and actively used as a strategic planning and benchmarking tool for targeted improvements. Maturity scores are generally increasing despite wider adoption of the stricter assessment methods in the RAMM. The RAMM provides more details as opposed to a high level assessment without specific, balanced questions.
- ✓ Constant maturity improvements are important to keep pace with change and disruption. High maturity also facilitates re-evaluating tools to ensure they are "fit for purpose".
- ✓ It is positive that key core RA competences are developing further, for example, the use of analytics, which contributes to coverage. On the other hand, there is a decrease in the use of RA technology, which may relate to the suitability of technology for new challenges. Therefore, it is important to permanently assess the added value of technology.
- ✓ Concerning are maturity decreases on staffing levels, business knowledge and communication, this may indicate a lack of management attention and more complex business in general. Most RA departments have existed for many years and their focus has been on existing work. In addition to getting better at their core responsibilities, RA teams need to ensure close cooperation with teams/departments that drive change, such as product/service development and sales teams to ensure effective controls are established. The evolution of new business models is expected to accelerate, triggering new assurance challenges, which cannot be tackled with existing technology solutions.

Maturity Scores Are Rising, Especially In Western Europe

Q11: What is your overall RAMM2 maturity score?



Observations

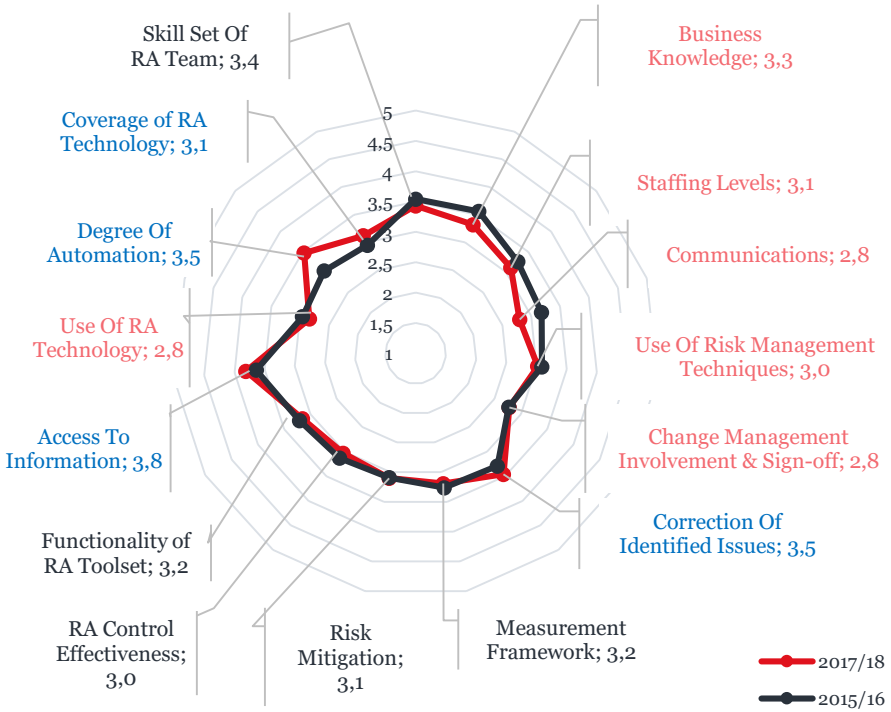
1. The average RAMM score is 3.3. The average score increased in the last two years by 0.2 points.
2. The percentage of respondents who assessed and reported their overall maturity score increased to 37 % (from 25% in 2015/16)
3. The highest average maturity scores (3.6) were reported in Western Europe
4. 64% of the reported RAMM scores are from Eastern Europe (22) and from Western Europe (12). In these regions, 56% of the respondents have performed the RAMM assessment

- Note: Some of the regions did not provide maturity scores e.g. North America. Latin America & the Middle East were combined to ensure that the bars on the chart represent at least five responses
- Note: RAMM2=Revenue Assurance Maturity Model by TM Forum version 2, which was provided for free to carry out the assessment
- 53 valid responses to this question

Higher maturity averages were noted for RAMM topics “Access to information” and “Degree of automation”

Q12: What are your RAMM2 topic level scores for the following areas?

RAMM topic level scores



Observations

1. Most topic level average scores remain unchanged compared to two years ago. The average maturity score for the selected topics is 3.2 (same as 2015/16)
2. Maturity increases were noted for the topics “Access to information” (strongest increase: +0.5), “Degree of automation”, “Coverage of RA technology”, and “Correction of identified issued”
3. Maturity decreases were noted for the topics “Communications” (strongest decrease: -0.5), “Business knowledge”, “Staffing levels”, “Change mgmt. involvement & sign-off” as well as “Use of RA technology

- 42 valid responses to this question



RA PERFORMANCE & REPORTING

Establishing targets, effective metrics and KPIs to drive performance.

RA Performance & Reporting

Section summary

KPI sets

- KPIs related to revenue leakage, revenue loss and average detection time are more commonly used, while the use of risk and coverage KPIs is decreasing.

KPI values:

- Selected KPI averages 2017/18 (vs. 2015/16):
  - Revenue leakage (before recovery) measured: 0.9% (1.0%)
  - Revenue leakage (before recovery) estimated: 1.9% (2.0%)
  - Recovery rate: 51% (41%)
  - Final loss: 0.6% (0.6%)
  - Prevented incident rate: 38% (34%)

  Note: Calculation explanations are on following pages

KPI trends :

- An increasing number of RA organizations reported revenue losses before recovery of below 0.2%. Their average maturity level is considerably higher.
- An increasing number of RA organizations reported a revenue recovery rate of above 75%.
- The top 30% RA organizations reported a final loss of under 0.01%. Average maturity levels are considerably higher for respondents who reported up to 0.5% final loss.
- An increasing number of RA organizations reported incident prevention rates above 75%.

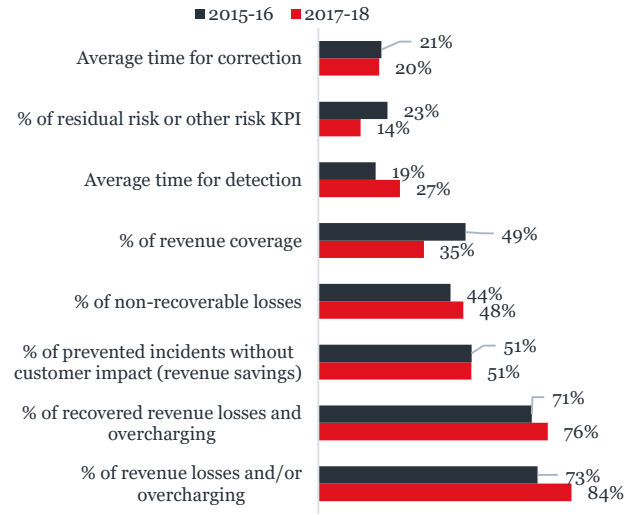
TM Forum RA team Comments

- ✓ It is positive to see that RA organizations have a strong financial impact on reduced revenue leakages and final losses. This is reflected in the average maturity scores of such organizations.
- ✓ The average loss value has not changed, although the maturity has increased. This is probably due to increased complexity and limited business knowledge.
- ✓ The increasing number of organizations reporting leakages below 0.2% may be offset by unknown unknowns.
- ✓ Recovery rates of above 75% have become more common these days, which emphasizes RA organizations' capabilities for fast and effective detection, and correction of errors thus protecting financial value.
- ✓ Coverage KPI measurement is decreasing. Existing standard coverage models may be too complex to use. Revenue stream and risk-based models could add coverage transparency and ensure simplicity.
- ✓ Risk KPIs are typically absent because RA organizations are still mainly steered on financial contribution and not on risk mitigation.
- ✓ Preventative KPIs are still not commonly used, possibly because they are more complex to construct and maintain, and possibly because the financially-focused measures still gain managerial traction. Preventative KPIs are usually more complex and may be out of the RA comfort zone (rating & billing).

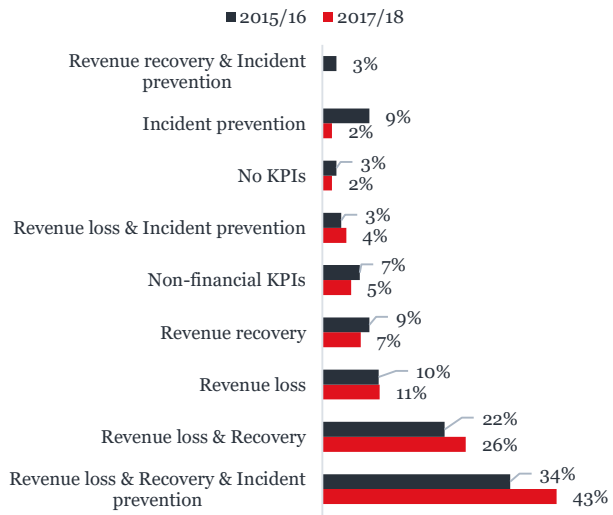
Increase of KPI use in areas Revenue loss, Recovery and detection time

Q21: Which of the following KPIs do you regularly use? (multiple answer options)

KPIs commonly used



KPI set types



Observations

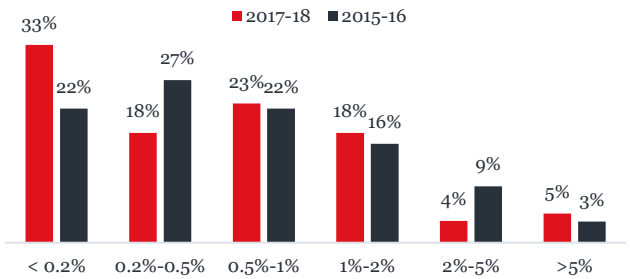
1. An Increase in the use of the following KPIs was reported: "% of revenue losses an/or overcharging" (leakage), "% of recovered revenue losses and overcharging" (recovery) and "Average time for detection". Decreases were reported for "% of revenue coverage" and "% of residual risk or other risk KPIs"

- Note: The KPI questions relate to KPI definitions from GB-941A, a TM Forum Revenue Assurance deliverable accessible for free for TM Forum members
- The most commonly used KPI set types relate to Revenue loss (leakage) and Revenue recovery
- 114 valid responses to this question

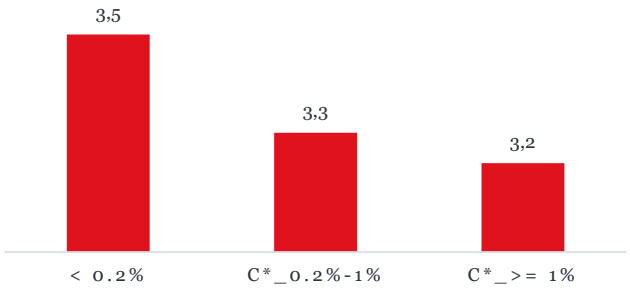
Top tier RA organizations report less than 0.2% Revenue leakage

Q22: What was your last year's value for the KPI "% of revenue losses" before the recovery procedures calculated vs revenues?

Revenue leakage percentage



RAMM average score per revenue leakage %



* A Clustered bar was plotted to ensure each bar consists of at least five responses

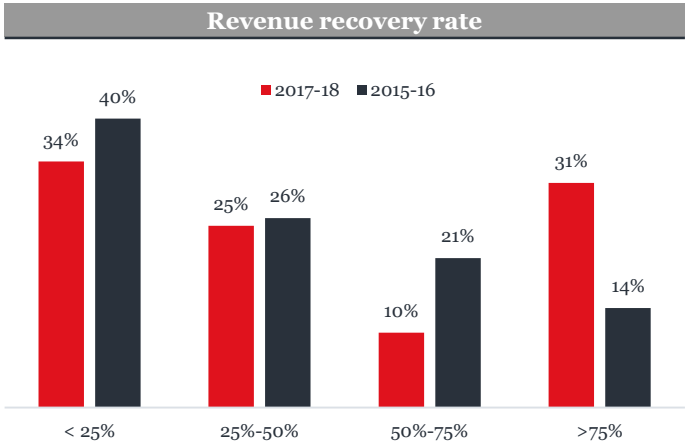
Observations

1. One third of the respondents indicated that their revenue leakage is below 0.2% (+11% as compared to two years ago). The leakage range 0.2-0.5% decreased by 9%. There is a 5% decrease in the category 2-5%
2. 0.9% average (measured) revenue leakage in 2017/18. Notes on calculation: Mid-range values were used because the answer options were range values. Exception: For the values of the range above 5%, we used 5% revenue leakage, due to industry observations of the TM Forum RA survey team). In 2015/16 the value was 1% based on the same calculation method
3. 1.9% average (estimated) revenue leakage in 2017/18. Notes on calculation: Extrapolation of the measured revenue leakage with the revenue coverage rate on a survey response level, based on data records where both the coverage rate and the revenue leakage value was provided. Extrapolated leakage values above 5% have been fixed as 5%. In 2015/16 the value was 2.0% based on the same calculation method
4. The respondents who reported <0.2% revenue loss before recovery yielded an average RAMM maturity score of 3.5. The average maturity score of respondents who reported this KPI is 3.4 (0.1 above the overall average)
5. Longer established RA functions have a stronger representation in the ranges with smaller revenue loss before recovery (not pictured)

- 114 valid responses to this question. 27% of the respondents did not provide a value for this KPI

Recovery rates above 75% have increased the strongest

Q24: What was your last year's value for the KPI "% of recovered revenue losses" calculated vs revenue losses?



Observations

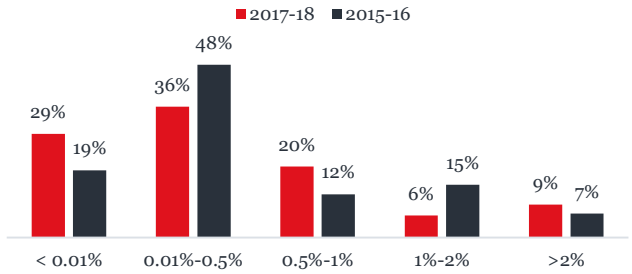
1. About one third of respondents reported recovery percentages below 25% (34%), above 75%(31%) and in between (35%) each. The percentage of the participants who reported over 75% recovery, doubled compared to 2015/16
2. The average recovery value is 51% (2015/16: 41%). Note: The KPI value was calculated based on the provided mid-range values
3. The RAMM maturity scores are at about the same level for all recovery rate ranges (not pictured). The average maturity score of respondents who reported this KPI is 3.4 (0.1 above the overall average)

- 114 valid responses to this question. 40% of the respondents did not provide a value for this KPI

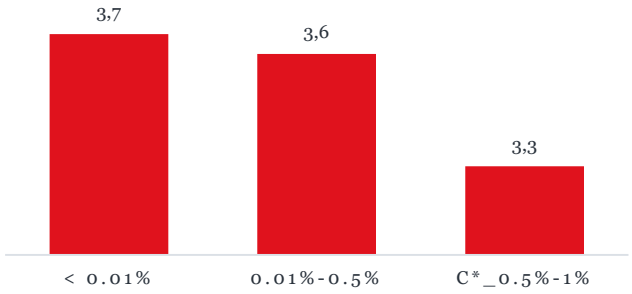
An increasing number of RA organizations report less than 0.01% final Revenue loss

Q23: What was your last year's value for the KPI "% of non-recoverable losses" calculated vs revenues?

Final loss rate



RAMM average score per final loss rate



* A Clustered bar was plotted to ensure each bar consists of at least five responses

Observations

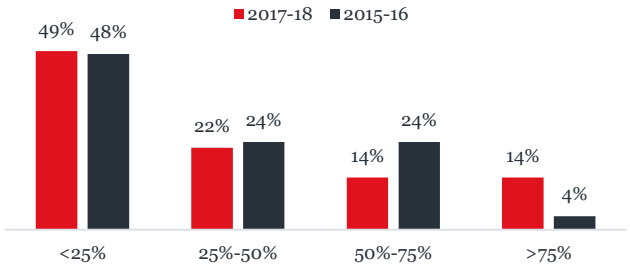
1. Three out of ten survey respondents reported less than 0.01% final loss. Two third of all respondents reported a final loss value in the range up to 0.5%. As compared to 2015/16, increases were noted in the 1st and the 3rd categories, and a decrease was noted in the 2nd and 4th categories
2. The average final loss value is 0.6% (2015/16: 0.6%). Note: The KPI value was calculated based on the mid-range values provided
3. The average maturity score for the ranges up to 0.5% is higher compared to the value cluster 0.5% - 1%. The average maturity score of respondents who reported this KPI is 3.5 (0.2 above the overall average)

- 114 valid responses to this question. 42% of the respondents did not provide a value for this KPI

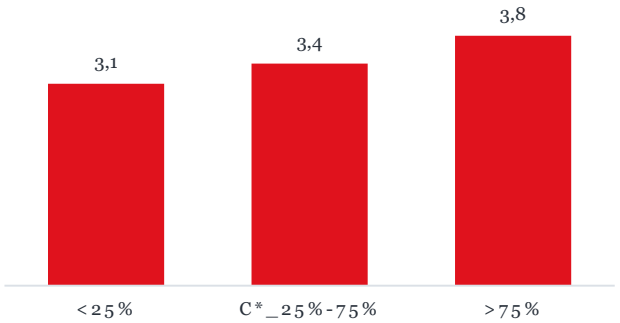
The average incident prevention rate has increased

Q25: What was your last year's value for the KPI "% of prevented incidents without customer impact (revenue savings)" calculated vs total volume of RA incidents?

Incident prevention rate



RAMM average score per incident prevention rate



* A Clustered bar was plotted to ensure each bar consists of at least five responses

Observations

1. About half of respondents reported less than 25% prevented incidents. Compared to 2015/16 the range above 75% has grown the strongest
2. The average incident prevention rate is 38% (2015/16: 34%). Note: The KPI value was calculated based on the provided mid-range values
3. Higher maturity averages were reported for the group 50%-75%. The average maturity score of respondents who reported this KPI is 3.4 (0.1 above the overall average)

- 114 valid responses to this question. 57% of the respondents did not provide a value for this KPI



RA ORGANIZATION SET-UP

Finding the perfect organizational setup to optimize business value creation.

RA Organization Set-up

Section summary

- Home of RA: Finance is the home for RA (73%). Risk management is catching up as a RA sponsor.
- RA departments: The percentage of dedicated RA departments has increased by 15 percentage points to 95% since 2015/16.
- Purposes: The most typical RA purposes are “Issue correction & recovery”, “Control performance” and “Risk mgmt. and control monitoring”. These purposes have gained additional emphasis since 2015/16.
- Centralization: Completely centralized RA organizations are on the rise, while the highest average maturity gains have been reported for RA organizations with high distribution levels (from 2.7 two years ago to 3.2).
- Manpower: Higher maturity scores have been achieved with more manpower.
- Other roles of RA: RA in combination with fraud management is very typical (50%). Increasingly, RA also has risk management roles (37%, +9% since 2015/16).

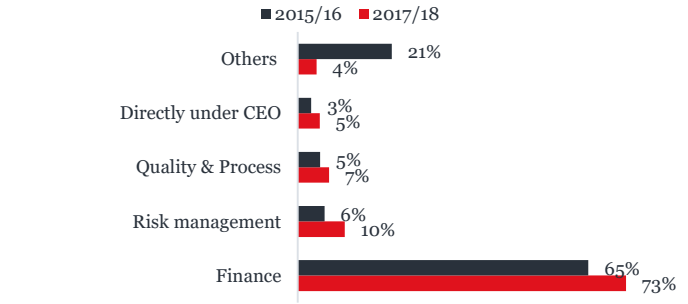
TM Forum RA team Comments

- ✓ RA teams falling under finance departments are more mature, centralized and focused on revenue loss and recovery KPIs because this has a direct impact on overall financial numbers. A disadvantage of being in finance may be a lack of independence, being skewed towards providing financial reporting rather than focusing on broader aspects of RA. A strong risk management function may be good place for RA teams to be integrated to ensure the big picture.
- ✓ RA needs to go through a centralization phase to ultimately distribute the operation of primary control to operational teams, whilst retaining centralized secondary controls focusing on the effectiveness of primary controls.
- ✓ More organizations now have dedicated RA teams, reflecting an increased awareness of RA and the need for investment.
- ✓ Most RA organizations have a mix of active & proactive and proactive & reactive purposes. Higher maturity scores are reported in organizations with less reactivity and more proactivity. The main purposes of RA organizations remains finding and fixing issues, which relate to organizations’ strong core.
- ✓ Organizations that do risk management and other adjacent roles have gained higher maturity, e.g. as compared to RA and fraud management only because they have broader roles and are better embedded in other departments, processes and decision making. The increase in risk management roles of RA indicate that organizations are addressing converging functions, which improves maturity.

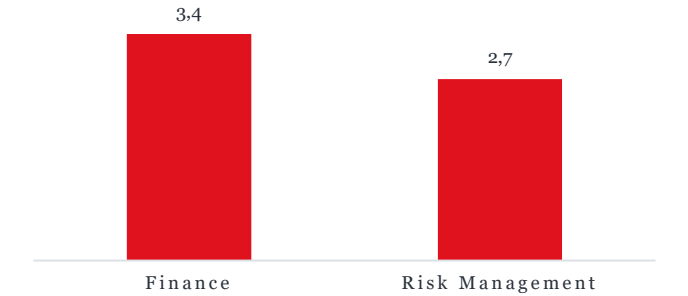
Finance remains the most common sponsor of RA organizations

Q3: Where is the lead of the Revenue Assurance department positioned within the organization?

Lead of RA department



Average maturity score by RA organization lead



Observations

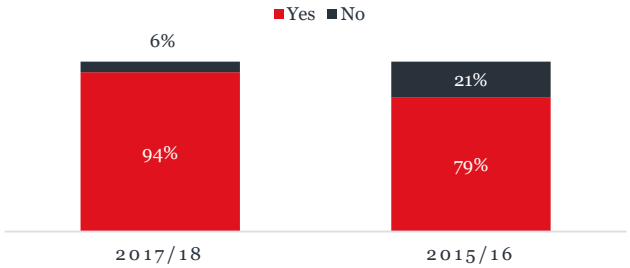
1. Three quarters of survey respondents reported that their RA organizations are I positioned within Finance (+8% as compared to 2015/16)
2. An increasing number of respondent work in Risk management (10%, representation in numerous regions)
3. Higher average maturity levels were reported by organizations located in Finance (3.4). Beyond Finance, the average maturity score is 2.7

- Note: The category "Others" represents "Quality & Process" (over 80%), Information security and RA, Risk & Audit. In 2015/16, this category contained responses from organizations that were in Billing, Business and Customer support areas.
- 143 valid responses to this question

The percentage of dedicated departments increased

Q1: Does a separate revenue assurance department or team (organizational unit) exist within your company?

RA organizational unit existence

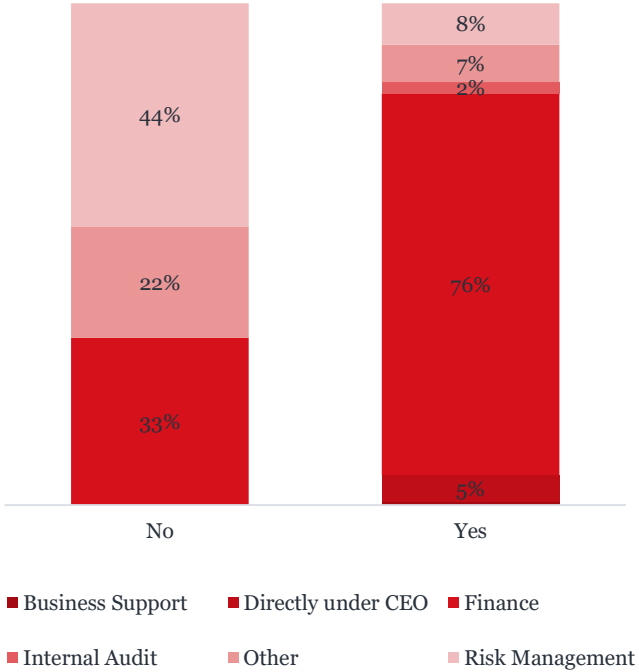


Observations

1. 94% of respondents reported they have a separate organizational unit for Revenue Assurance
2. The percentage of dedicated RA organizations increased by 15% compared to two years ago
3. Where no RA organizations exist, the department responsible for RA is typically Risk management, Finance, Quality/Process, or Information Security

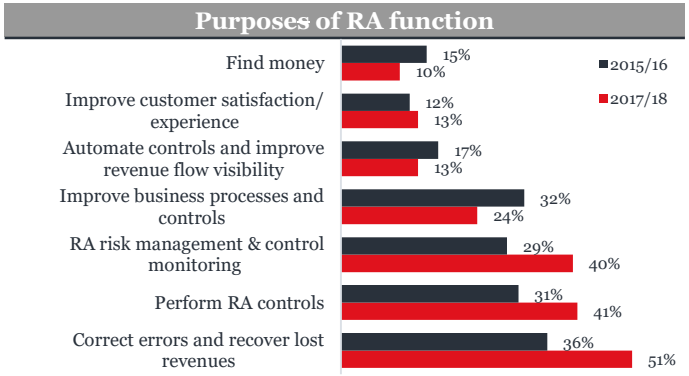
- 143 valid responses to this question

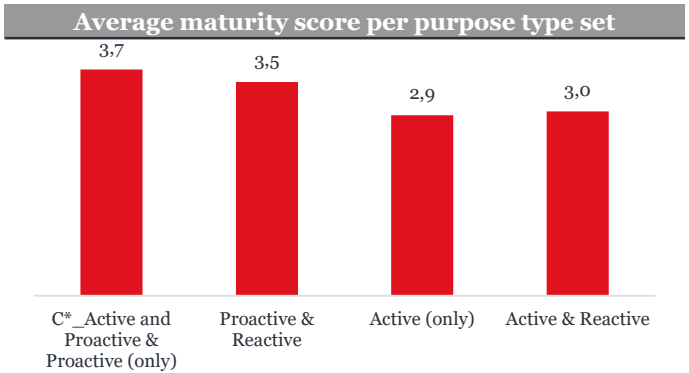
RA org (No/Yes) by lead of RA



RA risk management, control performance and issue correction/ recovery have got additional emphasis

Q14: How would you characterize the main purpose(s) of your revenue assurance function? (max 2, the most applicable options)





* A Clustered bar has been plotted to ensure each bar consists of at least five responses

Observations

1. Half of survey respondents reported their purpose as "Correct errors and recover lost revenues", which has significantly increased along with the purposes "Perform RA controls" and "RA risk management & control monitoring" compared to 2015/16

2. The purposes "Improve business processes and controls", "Automate controls and improve revenue flow visibility" and "Find money" have decreased

   To facilitate additional analysis, the survey team grouped the purposes into purpose type-sets as follows:
   - Active purposes:
     - RA risk management and control monitoring
     - Perform RA controls
   - Reactive purposes:
     - Find money
     - Correct errors and recover lost revenues
   - Proactive purposes:
     - Improve business processes and controls
     - Automate controls and improve revenue flow visibility
     - Improve customer satisfaction/ experience

3. Purpose type-sets containing proactive purposes and combinations with active and reactive purposes yielded higher average maturity scores

- Note: The lower cumulative percentage of purposes in 2015/16 is explained by a higher number of one option only choices

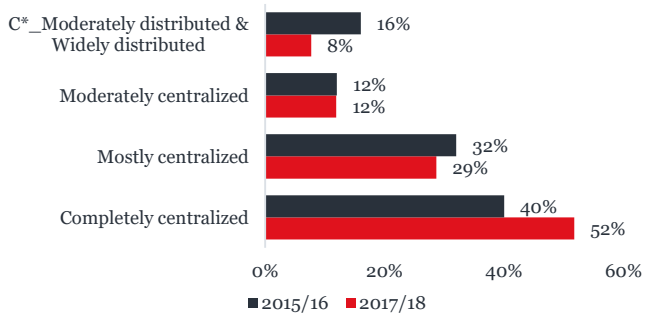
- 126 valid responses to this question

© 2018 TM Forum

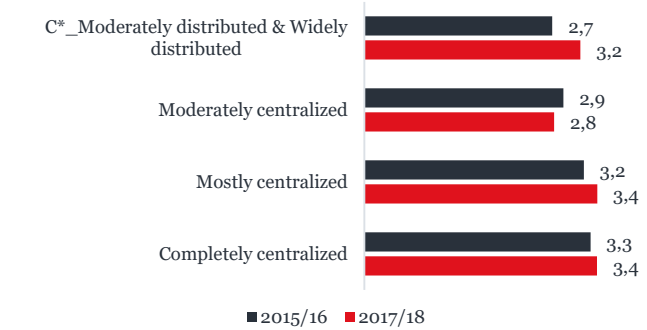
Completely centralized RA organizations are on the rise. Distributed organizations have gained maturity

Q4: What is the level of distribution of your Revenue Assurance Function within your company?

RA distribution level



RAMM average score per distribution level



* A Clustered bar has been plotted to ensure each bar consists of at least five responses

Observations

1. There is a considerable increase in completely centralized RA functions and a modest increase of moderately- and widely-distributed RA functions
2. RA purpose type-sets with proactive elements were found in all distribution models (not pictured). Coverage level correlation patterns are similar across distribution models (not pictured). RA organization age correlation patters are similar across distribution models (not pictured)
3. Completely and moderately centralized organizations yielded a slightly higher overall maturity average compared to more distributed RA organizations. Distributed organization models gained in maturity compared to two years ago

- Note: Distribution levels:

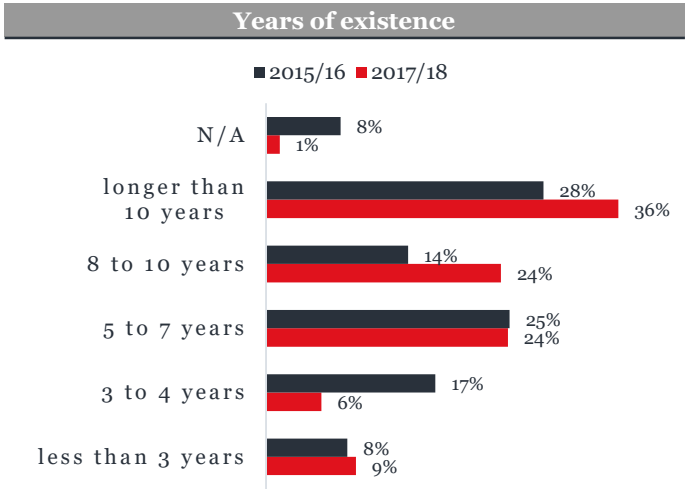
Completely centralized	Centralization of Revenue Assurance tasks
Mostly centralized	5-25% of the Revenue Assurance tasks are performed by other departments/ are outsourced
Moderately centralized	25-50% of the Revenue Assurance tasks are performed by other departments/ are outsourced
Moderately distributed	50-75% of the Revenue Assurance tasks are performed by other departments/ are outsourced
Widely distributed	Over 75% of the Revenue Assurance tasks are performed outside the Revenue Assurance core function

- 139 valid responses to this question

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The majority of the RA organizations are 8 years and older

Q2: For how long has the Revenue Assurance department/ team existed?



Observations

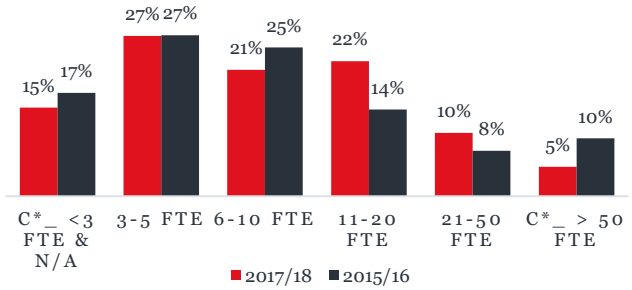
1. More than a third of RA organizations are more than ten years old. There were fewer survey participants in the category "3 to 4 years" compared to two years ago. 60% of the participating organizations' RA organizations are over 8 years old
2. There is an indication that new RA departments have been established but we don't have information on whether they relate to new entities or organizational restructuring
3. Wider organization distribution levels were reported for recently established RA organizations as well as for 5+ year old organizations. Younger RA organizations have higher centralization levels compared to 2015/16 (not pictured)

- 143 valid responses to this question

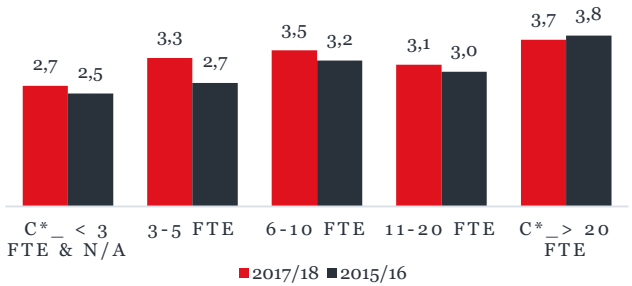
Companies with more manpower achieve higher maturity averages

Q5: How many people (in FTE -Full Time Equivalent) work on Revenue Assurance activities? (including full-time and part time RA resources of other departments as well as external & outsourced full-time and part-time resources)

RA FTEs



RAMM average per FTE category



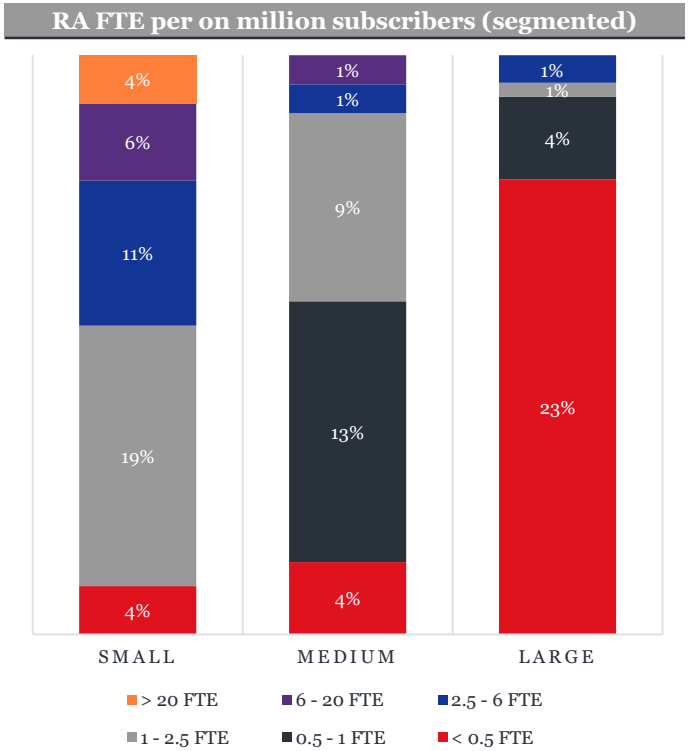
Observations

1. 70 % of survey participants reported they have between three and twenty RA FTEs
2. Maturity averages correlate with the number of RA FTEs. RA organizations with less than 3 FTEs have an average score of 2.8 (vs. 3.3 average overall)

- 142 valid responses to this question

* A Clustered bar was plotted to ensure each bar consists of at least five responses

Medium sized companies have on average 1.5 FTE per one million subscribers



Observations

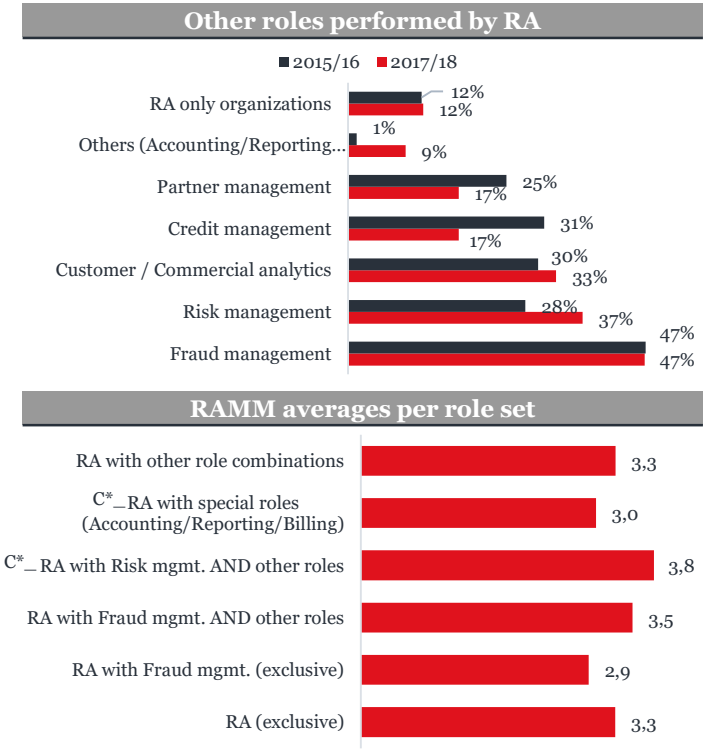
1. The overall average FTE per million subscribers is 2.2 (vs. 2.5 two years ago). Calculation note: Cases with more than 20 FTEs per 1M subscribers were not considered. Such occurrences entirely relate to companies with a small number of subscribers
   - For large organizations (above 20M subscribers) the average FTE per million subscribers is 0.61 (vs. 0.78 two years ago)
   - For medium sized organizations (5-20M subscribers) the average FTE per million subscribers is 1.50 (vs. 1.70 two years ago)
   - For small organizations (Up to 5M subscribers) the average FTE per million subscribers is 3.97 (vs. 7.44 two years ago)

2. Additional insights (not pictured): Overall, 30% of RA organizations have less than half a resource per million subscribers. 10% have above 6 FTEs per million subscribers. There are increases in the classes of up to 2.5 FTEs and decreases in the class of 2.5-6 FTEs compared to two years ago

- 142 valid responses to this question

Fraud management and Risk management roles are typically combined with RA

Q6: What other roles are performed by your Revenue Assurance function that you consider are not primary RA activities? (multiple options)



* A Clustered bar was plotted to ensure each bar consists of at least five responses

Observations

1. About half the RA functions also perform fraud management
2. 12% of organizations exclusively focus on RA
3. Risk management as a role of RA has increased the most (+9% since 2015/16). The decrease in credit management may partly be explained by rewording: Formerly the term "credit control" was used in the survey
4. The lowest average maturity score was noted for RA in combination with fraud management (without further roles). The highest average scores were achieved where RA is practiced in combination with risk management and other roles

- 143 valid responses to this question

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RA COVERAGE, RISK & CONTROLS

Improving revenue coverage levels to support achievement of companies' objectives.

RA Coverage, Risk & Controls

Section summary

Coverage:

- RA organizations cover on average only about half their company's revenues (52%, a slight decrease since 2015/16). As Compared to two years ago, more respondents report low coverage and more companies report higher coverage levels.
- RA organizations with high levels of technology solution coverage are more mature.
- Slight coverage improvements have been reported across process areas and market segments.

Risk & Controls

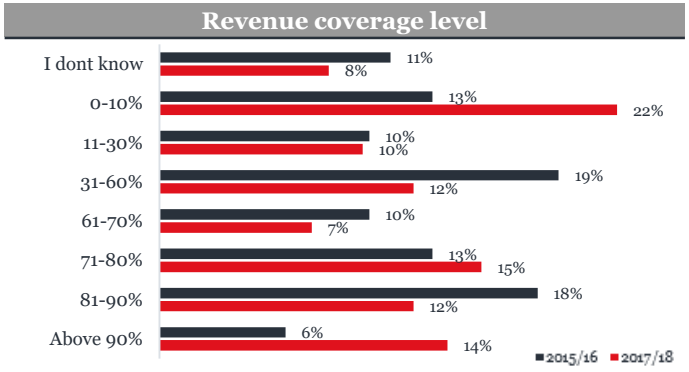
- RA organizations that review their RA controls at least once a year have achieved higher maturity levels compared to organizations who review controls on an ad-hoc basis.

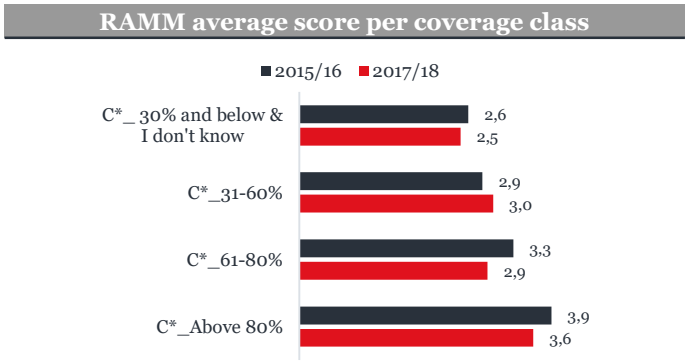
TM Forum RA team Comments

- ✓ The lack of focus on RA coverage is alarming because unclear or low coverage levels undermine the trust of senior management in the added value of RA. Some organizations may not be fully aware of areas they may have leakages in.
- ✓ Use of technology aids coverage, and coverage generally correlates with maturity. Coverage is the highest in traditional areas of billing, usage and provisioning, where technology is proven and understood. Those growing in maturity may have a more realistic understanding of what is actually covered compared to those that assume the best without really knowing.
- ✓ Coverage of large business/enterprise customers remains lower than mass market consumers, reflecting the more complex assurance techniques often needed.
- ✓ There is a gap in industry standard methods of assessing coverage levels, which makes it difficult to benchmark results since some operators evaluate control coverage, and others risk coverage. The trend of adopting risk techniques in revenue assurance should lead to alignment on a common level for the adoption of risk coverage as an industry standard.
- ✓ It is important to carry out a regular review of controls to mitigate the risk impact of change, e.g. Most Viable Product (MVP – Careful – MVP is a universal acronym for MINIMUM Viable Product) launches. Unadjusted controls may not indicate that something is wrong or may deliver wrong results. Because the business is changing so fast, existing controls may need to be retuned to hold their coverage. Effective and frequent risk mitigation measures contribute to achieving higher coverage levels.

RA organizations cover on average about half of their companies' revenues

Q15: What percentage (%) of the total company revenue do you estimate are covered by your Revenue Assurance activities? "Company" refers to the range of activities of your RA function





* A clustered bar was plotted to ensure each bar consists of at least five responses

Observations

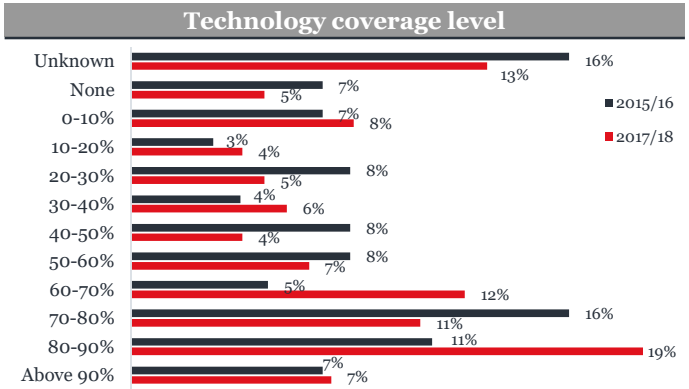
1. Considerable increase of CSPs with coverage levels above 90%. Slight increase of CSPs with coverage levels of up to 10%. Still 8% are not able to estimate the coverage level
2. The calculated, approximate coverage average is 52% (54% in 2015/16). Note: For the calculation, the cases of the category "I don't know" were scoped out
3. The average maturity is increasing with additional coverage. The average maturity of the respondents in the cluster above 80% is over 0.5 points higher compared to the categories above 30% coverage
4. Six survey respondents performed their coverage assessment based on TM Forum's guidance to evaluate coverage (not pictured)

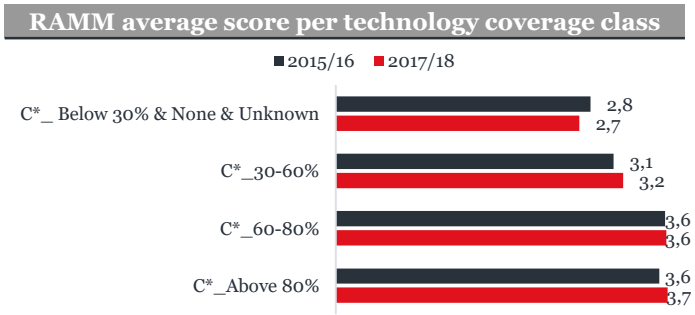
- Note: The coverage category 0-10% has four times fewer responses compared to two years ago, which may explain the relative increase in that category
- 124 valid responses to this question

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RA organizations with high levels of technology solution coverage are more mature

Q18: What is the percentage of revenue that is covered with the support of technology solutions?





Observations

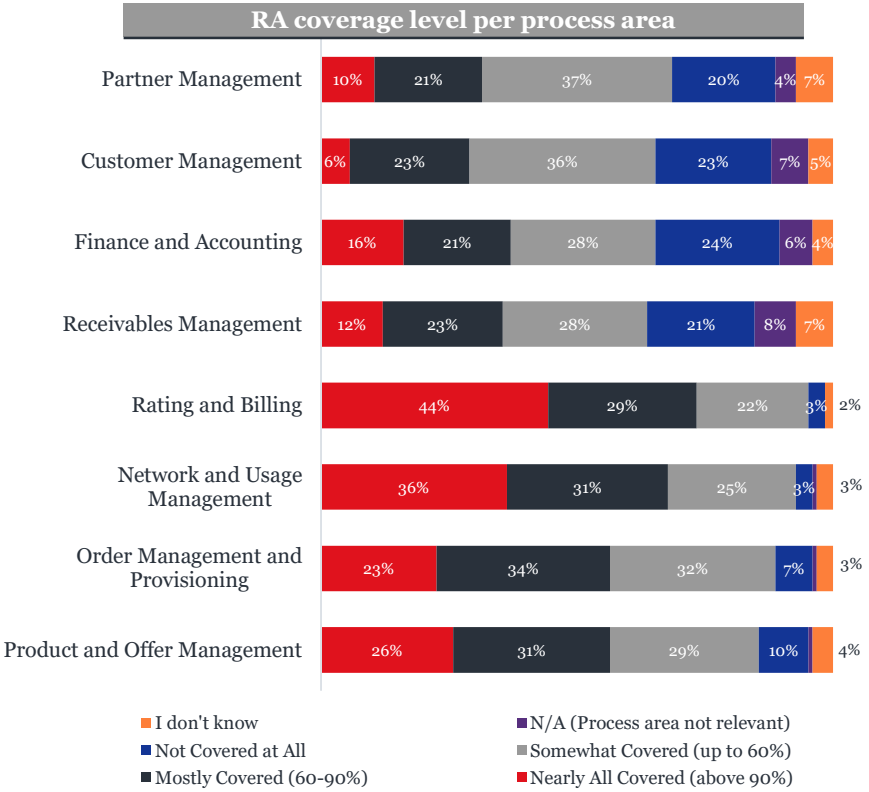
1. About a quarter of respondents reported above 80% coverage with the support of technology solutions. The categories “80-90%” and “60-70%” have increased the most
2. There are more respondents who reported over 50% technology solution coverage compared to two years ago
3. The calculated, approximate technology solution coverage average is 59% (56% in 2015/16). Note: For the calculation, the cases of the category “I don’t know” were excluded
4. The fact that the technology solution coverage average has been reported as higher compared to the overall coverage may link to possible varying interpretations of this question
5. The average maturity increases with additional technology solution coverage. The average maturity of respondents in the clusters above 60% is 1 point higher compared to the clusters “Below 30%”, “None” & ”Unknown”

- 123 valid responses to this question

* A clustered bar was plotted to ensure each bar consists of at least five responses

Coverage levels are increasing across process areas

Q16: Within the following process areas, what is the extent of your Revenue Assurance Coverage? Please tick mark if assessed based on TM Forum's revenue coverage model



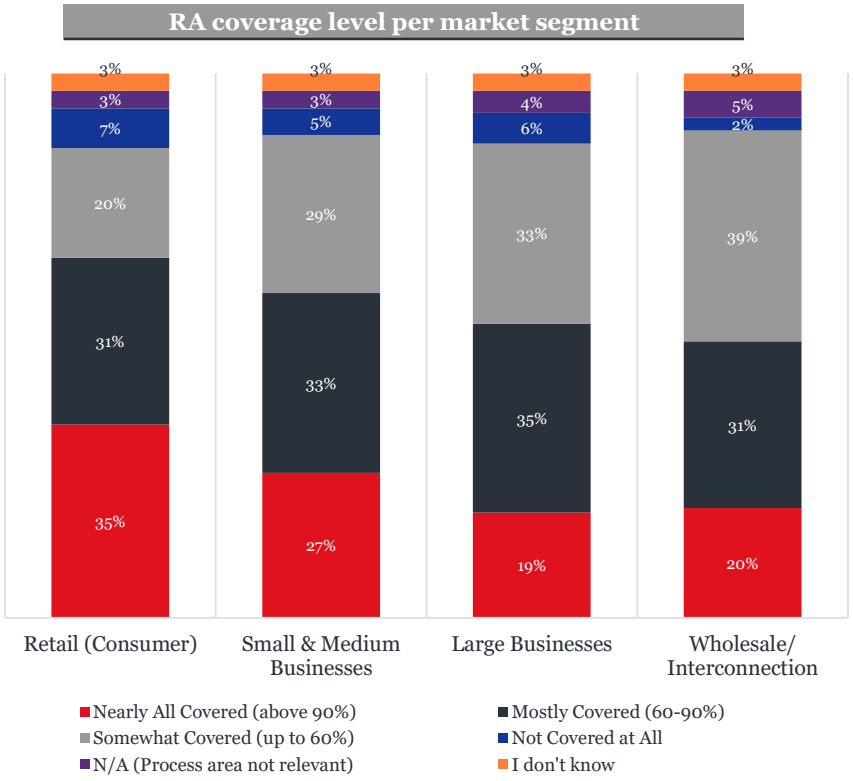
Observations

1. Coverage improvements can be observed across process areas. Distribution patterns remain widely unchanged compared to 2015/16 (not pictured, see 2015/16 report)
2. Seven survey respondents performed their coverage assessment based on TM Forum's guidance to evaluate coverage

- 123 valid responses to this question

Coverage levels are increasing across market segments

Q17: Within the following market segments, what is the extent of your Revenue Assurance Coverage?



Observations

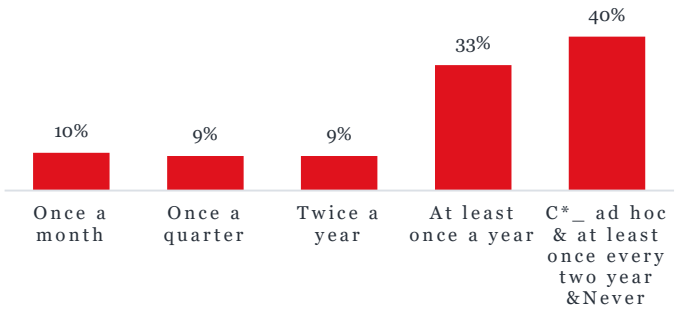
1. Coverage increases can be observed across market segments. Distribution patterns remain widely unchanged compared to 2015/16 (not pictured, see 2015/16 report)

- 124 valid responses to this question

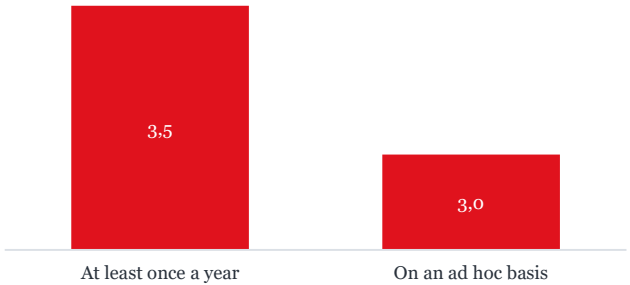
RA organizations that review their RA controls at least once a year have achieved higher average maturity levels

Q19: How frequently are RA controls reviewed and adjusted?

RA control review frequency



RAMM average score per RA control review/ adjustment frequency



* A clustered bar was plotted to ensure each bar consists of at least five responses

Observations

1. About 30% of survey participants reported they review and adjust RA controls more often than once a year. Around a third have a scheduled RA control review at least once a year
2. The reported average maturity for companies saying they review their controls "At least once a year" scored on average .5 percent higher compared to respondents who selected "On an ad hoc basis". The average maturity of the other categories was not plotted due to limited valid responses for this question

- Note: Two years ago, we asked: "How frequently are RA controls monitored for effectiveness?". Comparing the distribution of answers with the new survey, a strong decrease has been noted for RA control review frequencies below one year. The answer option "At least once a year" has an equal increase of responses
- 123 valid responses to this question



RA KNOWLEDGE & CAPABILITIES

Fostering the right skills and enabling a collaborative environment.

RA Knowledge And Capabilities

Section summary

Knowledge:

- Knowledge levels have improved across domains.
- The strongest improvements were noted in the areas “Network operations”, “IT operations”, “Order management” and “Business models”.

Capabilities:

- Core way forward capability sets:
  - Skills: The top three capabilities are data analytics, end-to-end understanding and collaboration. Lagging capabilities are risk management and business models.
  - Execution: The top capability is access to data. The lagging capability is automation.
  - Risk management: Control-related capabilities scored the highest, whereas C-Level risk management, governance & steering scored the lowest.
  - Change management: Transformation process and change management process involvement scored the highest, while process and information related factors are lagging.
  - Performance measurement and reporting: The top two capabilities are KPI reporting and leakage measurement. The lowest scores were achieved in the link between personal KPIs and scorecards.

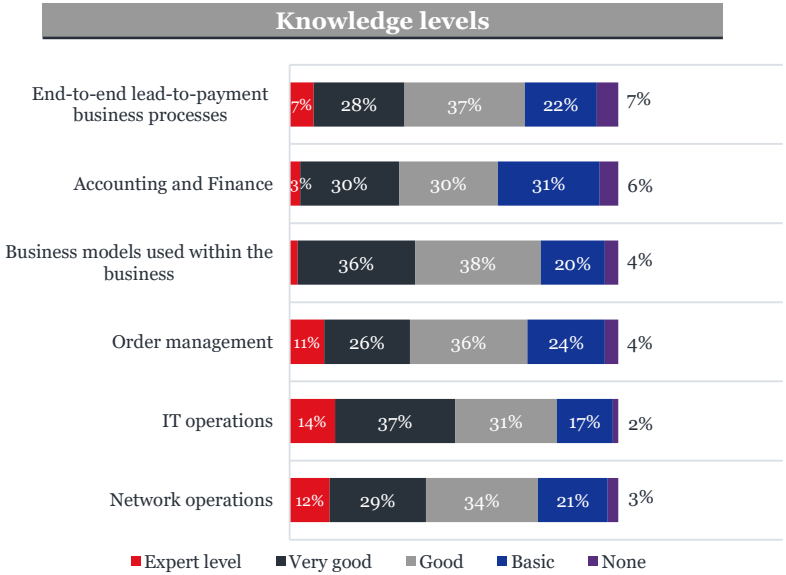
TM Forum RA team Comments

- ✓ The knowledge level improvements relate to strengthening core skills. This indicates, that RA practitioners are better versed and comfortable in principal areas of operation, and that teams have probably been drawn from across IT, Networks and operations.
- ✓ Processes related to new business models and revenue streams are less well understood and under-represented, although knowledge has improved in this area since last survey.
- ✓ The strong improvements in “Network operations”, “IT operations”, “Order management” and “Business models” are an indicator that the general scope of RA is getting broader. Only an end-to-end process view guarantees comprehensive results. Therefore, a good balance of capabilities is equally important.

- ✓ Strong analytics capabilities along with end-to-end process understanding are a good basis for scope expansion, because combined these deliver expert knowledge of the business, which is a prerequisite for issue detection.
- ✓ Effective execution demands data, which is growing exponentially. It is worrying that automation has scored the lowest. Constant performance of comprehensive controls with limited staff requires automation.
- ✓ C-Level support is key to align all areas within the organization to a common goal and to enable seamless cooperation.
- ✓ Mastering change demands formal involvement in top projects. Visibility and risk-based approaches are needed to have an impact on assurance, processes and data levels. Due to rapid changes outside projects, a regular review of controls and KPIs is necessary.
- ✓ Successful evolution can only be achieved with clear and measurable targets. Preferably, KPIs should be linked with the RA team scorecards.

Slight improvements of knowledge levels (1/2)

Q20: What is the level of knowledge in the following areas within the RA team?



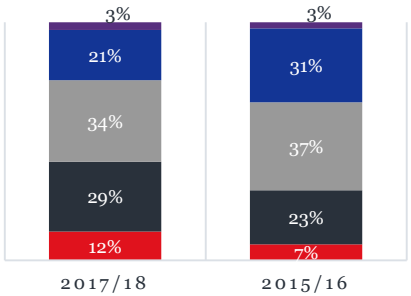
Observations

1. Distribution patterns remain widely unchanged compared to the last survey (see 2015/16 report)
2. The strongest improvements are noted in the areas “Network operations”, “IT operations”, “Order management” and “Business models”

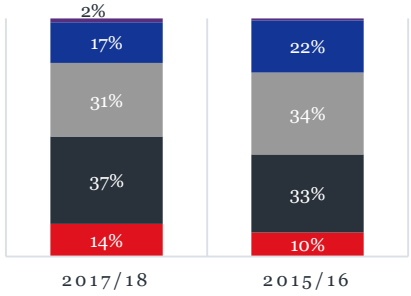
- 123 valid responses to this question

Slight improvements of knowledge levels (2/2)

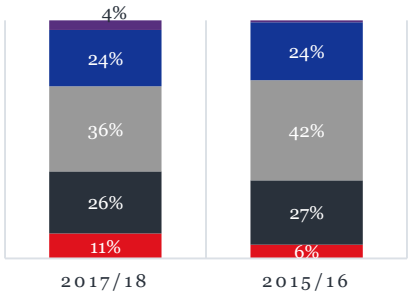
NETWORK OPERATIONS



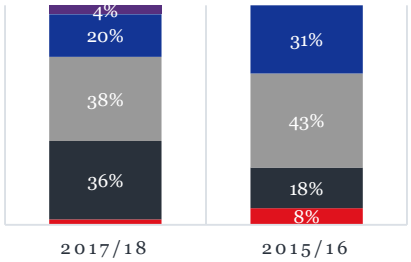
IT OPERATIONS



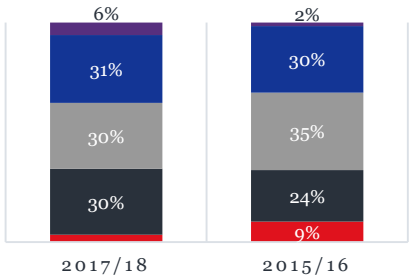
ORDER MANAGEMENT



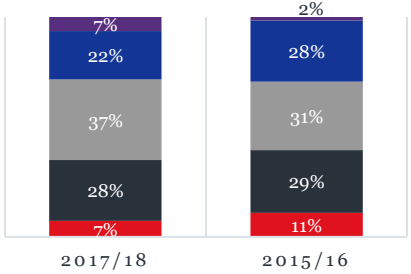
BUS. MODELS USED WITHIN BUSINESS



ACCOUNTING AND FINANCE



END-TO-END LEAD-TO-PAYMENT BUS. PROCESSES

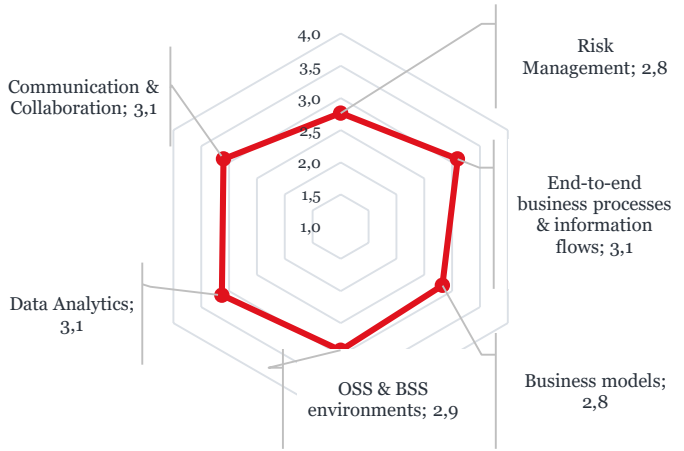


Expert level | Very good | Good | Basic | None

The capability set “Skills” yielded the highest average score

Q13: How do you assess the capabilities of your RA team/ function?
Answer options: Non-existent (1), Basic (2), Good (3) and Excellent (4). Capabilities don’t compare with the five level based RAMM model.

Capability set “Skills”



Capability set description

- The skillset of the RA team covers key competence areas to ensure a sufficient knowledge basis for effective team action and output

Observations

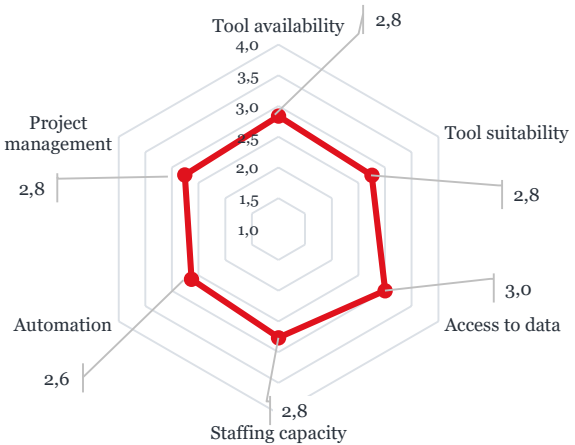
1. The single capability with the strongest average is data analytics
2. The capabilities with the weakest average are risk management and business models
3. The average score for the capability set is 3.0

- 128 valid responses to this question

The capability set “Execution” yielded a high average score

Q13: How do you assess the capabilities of your RA team/ function?
Answer options: Non-existent (1), Basic (2), Good (3) and Excellent (4). Capabilities don’t compare with the five level based RAMM model.

Capability set “Execution ”



Capability set description

- The RA team is able to execute the roadmap of activities as agreed with the function’s sponsors and can quickly and effectively act on changes to plans without undermining promises

Observations

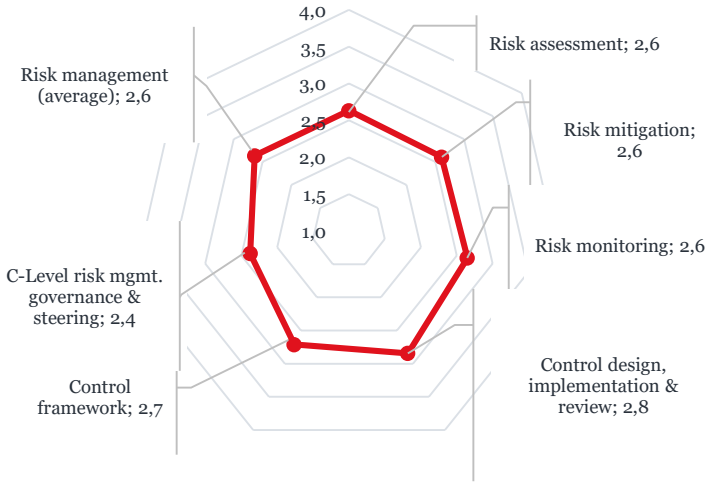
1. The single capability with the strongest average is access to data
2. The single capability with the weakest average is automation
3. The average score for the capability set is 2.8

- 128 valid responses to this question

The capability set “Risk management” yielded one of the lowest scores

Q13: How do you assess the capabilities of your RA team/ function?
Answer options: Non-existent (1), Basic (2), Good (3) and Excellent (4). Capabilities don’t compare with the five level based RAMM model.

Capability set “Risk Management”



Capability set description

- The RA team applies effective risk management techniques and makes use of risk framework processes to assess, mitigate and monitor risks. The organization’s C-level risk management process embraces risk management and reporting as part of their governance and steering activities to actively support decision-making and to achieve strategic goals. The RA team ensures effective controls are built, improved and effectively operated.

Observations

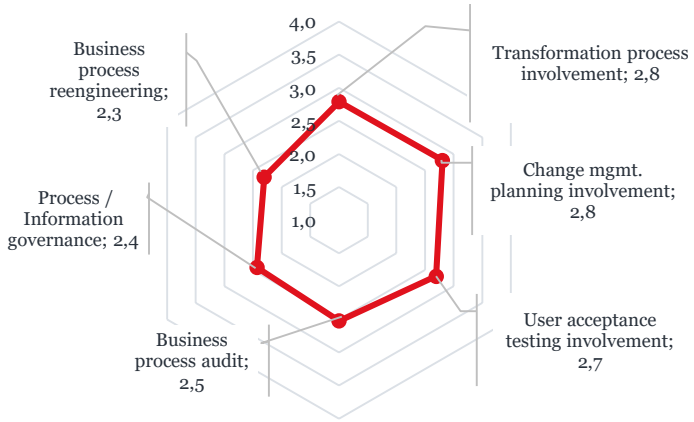
1. The single capabilities with the strongest average are risk monitoring and control design, implementation & review
2. The single capability with the weakest average is C-level risk management., governance & steering
3. The average capability set score is 2.6

- 128 valid responses to this question

The capability set “Change Management” yielded one of the lowest scores

Q13: How do you assess the capabilities of your RA team/ function?
Answer options: Non-existent (1), Basic (2), Good (3) and Excellent (4). Capabilities don’t compare with the five level based RAMM model.

Capability set “Change Management ”



Capability set description

- The RA organization is actively involved in transformation and change management processes. Offerings and products are secured based on assurance by design processes. Changes to processes are reviewed together with the RA team to understand and mitigate their financial impact, to build and adjust controls, as well as to ensure availability of data for future needs

Observations

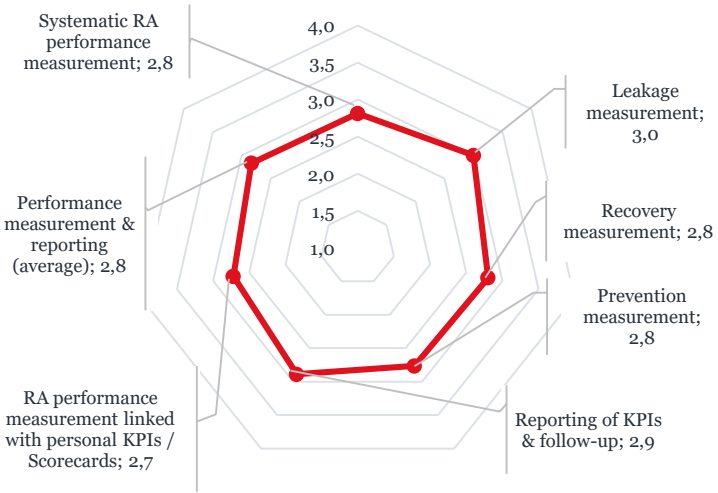
1. The single capabilities with the strongest average are transformation process involvement and change management planning involvement
2. The single capability with the weakest average is business process reengineering
3. The average score for the capability set is 2.6

- 128 valid responses to this question

The capability set “Performance measurement and reporting” yielded and average score

Q13: How do you assess the capabilities of your RA team/ function?
Answer options: Non-existent (1), Basic (2), Good (3) and Excellent (4). Capabilities don’t compare with the five level based RAMM model.

“Performance measurement & reporting”



Capability set description

- Performance of the RA team is consistently and continuously measured. There is a reporting process which targets performance review, feedback and improvement

Observations

1. The single capability with the strongest average is leakage measurement
2. The single capability with the weakest average is risk management RA performance linked with personal KPIs/scorecards
3. The average score for the capability set is 2.8

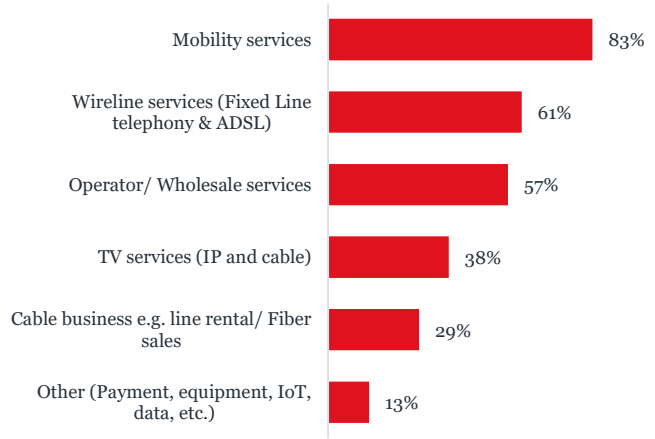
- 128 valid responses to this question



PARTICIPANT PROFILES

Q8: What is the main focus of your company?
"Company" relates to the Operating Company you represent. (Multiple answer options)

Company focus



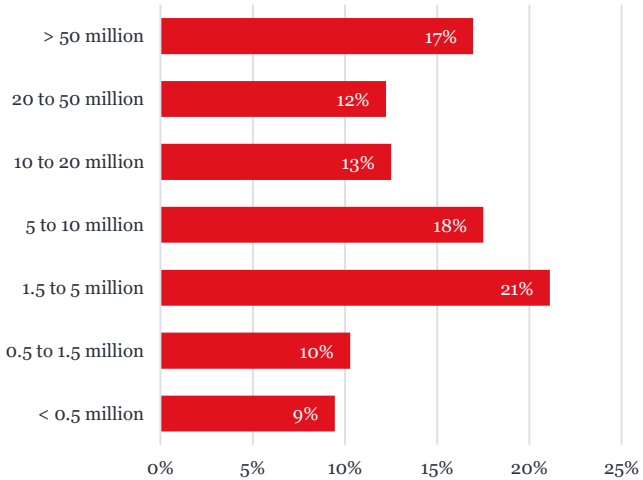
Observations

1. Most respondents' companies have multiple business lines. The majority of survey participants represent multiple service operators, providing mobility services in combination with other services. Wireline only operators and non-CSPs sum up to about 5% (not pictured)

- Note: Based on the performed correlation analysis, no special observations were revealed
- 139 valid responses to this question

Q9: How many subscribers (in millions) does your company have for subscription based services? "Company" relates to the Operating Company you represent

Company's number of subscribers



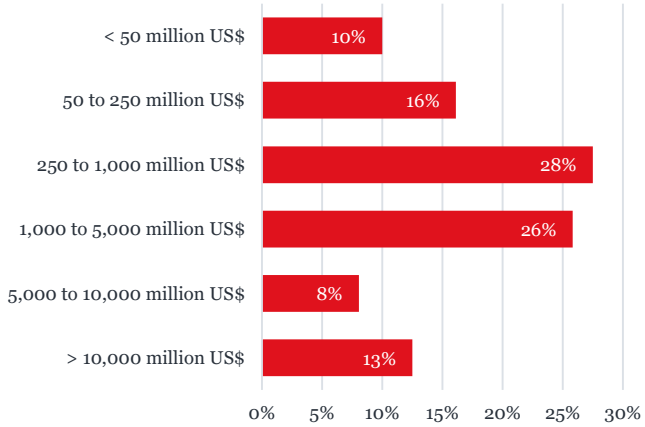
Observations

1. The number of subscribers slightly correlates with the level of maturity (not pictured)

- 139 valid responses to this question

Q10: What is the annual revenue (in million US$) of your company? "Company" relates to the Operating Company you represent

Company's annual revenue



Observations

- Note: Based on the performed correlation analysis, no special observations were revealed
- 139 valid responses to this question

RA survey team

On behalf of the RA survey project team we would like to express our thanks to the numerous contributors to the 2017 Revenue Assurance Survey.

Your valuable input has significantly contributed to the quality and success of this survey!
Rene Felber, RA survey lead

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TM Forum is the global industry association that drives collaboration and collective problem-solving to maximize the business success of communication and digital service providers and their ecosystem of suppliers.

Our vision is to help communications service providers (CSPs) and their suppliers to digitally transform and thrive in the digital era. We do this by providing an open, collaborative environment and practical support which enables CSPs and suppliers to rapidly transform their business operations, IT systems and ecosystems to capitalize on the opportunities presented in a rapidly evolving digital world.

As a neutral, non-profit member organization, TM Forum represents over 850 member companies generating US$2 trillion in revenue and serving five billion customers across 180 countries.