Open API Adoption Assessment Reports
V3 (Q2 2020) Vendor & CSP Results

June 2020

Key Takeaways from V3 survey (Q2 2020)

- 39 companies participated

  - 34% increase since v2 (Q3 2019) with 8 new vendors and 2 new CSPs

- Significant increase in momentum towards Open API adoption

  - Average industry **Intent**[†] increased by 9 percentage points

- Vendors are responding to CSP demand

  - Vendor **Maturity**[†] increased 7 percentage points

- CSPs and vendors are well aligned on priorities

  - CSPs have a slightly broader focus on a wider range of APIs

- CSP maturity remains (on average) higher than the vendors

  - Average is skewed by the leaders wrapping legacy APIs pending native support in vendors' products

[†] See Appendix for explanation of terminology and scoring

Significant Momentum Towards Open API Adoption

- **Good levels of participation in the survey**
  - The V3 (Q2 2020) survey included 25 vendor participants and 14 CSP participants (34% increase on the Q3 2019 survey)

- **Significant industry momentum towards Open API adoption**
  - Average industry **Intent**[†] (combined scores for CSPs and vendors) increased by 9 percentage points since the previous survey
  - CSP and vendor **Intent** are well aligned

- **Increasing maturity of Open API deployments**
  - Vendor **Maturity** increased by 7 percentage points – faster than CSPs (single point increase)
    - Vendors appear to be responding to CSP demand, with several moving into the top right quadrant
  - CSP Maturity remains (on average) higher than the vendors, but results are skewed by the leaders
    - Leading CSPs (eg Vodafone) are wrapping their legacy APIs as a placeholder pending native support in vendors' products

- **CSP demand creates opportunity for vendors**
  - Average CSP **Intent** is higher than average vendor **Maturity**, providing motivation for vendors – demand outstrips availability
  - There is plenty of opportunity to serve CSPs with low **Maturity** and high **Intent**
  - Leading CSPs need native Open API support from their vendors in order to replace their DIY wrappers

- **CSP and vendor prioritization of API collections are well aligned**
  - CSPs have a somewhat wider focus (also seen in download stats from the Open API table)

[†] See Appendix for explanation of terminology and scoring

Perspective of a market-leading CSP
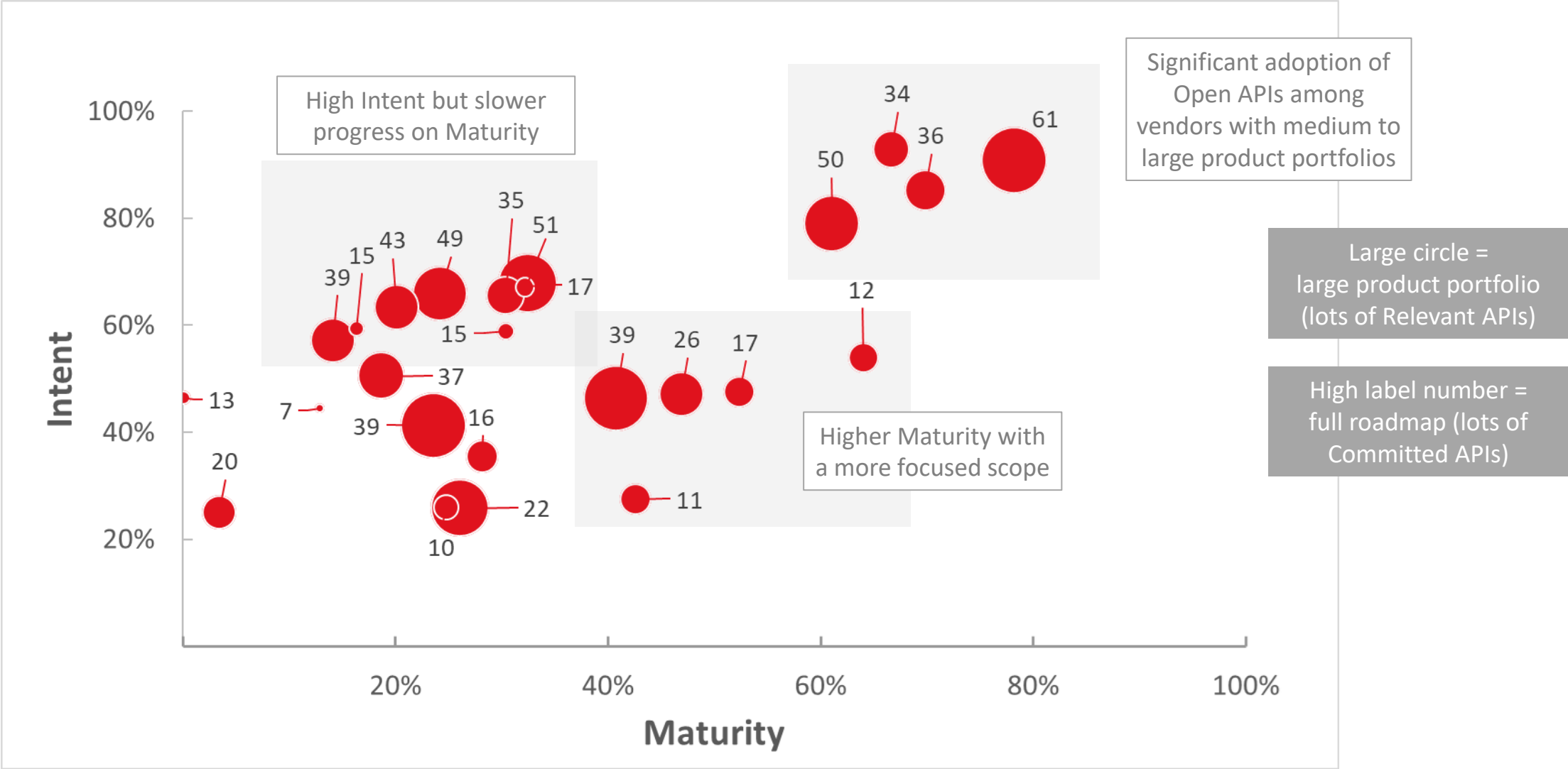
Lester Thomas
Chief IT Systems Architect
at Vodafone Group

"The majority of our Open API implementations to date have been wrapping our product vendors' legacy APIs. This is partly driven from the fact that we are building a Digital Experience layer across all our markets, whilst we are modernising the back-end vendor systems-of-record at a slower rate.

"We have started to see native TMF Open API implementations from some of our vendors, and all the new BSS implementations we have done over the last 2 years have included native support for TMF Open APIs.

"In the enterprise space, we are also seeing some enterprise customers mandating the use of Open APIs as part of their RFPs, and we are starting to see inter-operator use-cases based on Open-APIs."

Vendor Results V3 (Q2 2020)

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Intent (y-axis): 20%, 40%, 60%, 80%, 100%
Maturity (x-axis): 20%, 40%, 60%, 80%, 100%

High Intent but slower progress on Maturity

Significant adoption of Open APIs among vendors with medium to large product portfolios

Higher Maturity with a more focused scope

Large circle = large product portfolio (lots of Relevant APIs)

High label number = full roadmap (lots of Committed APIs)

Data labels: 13, 20, 7, 39, 15, 43, 49, 35, 51, 17, 15, 37, 39, 16, 22, 10, 39, 26, 17, 11, 50, 34, 36, 61, 12

- Each circle represents the scores for an individual respondent (anonymized)
- Size of circle indicates the number of Relevant APIs | Label represents the number of Committed APIs

CSP Results V3 (Q2 2020)
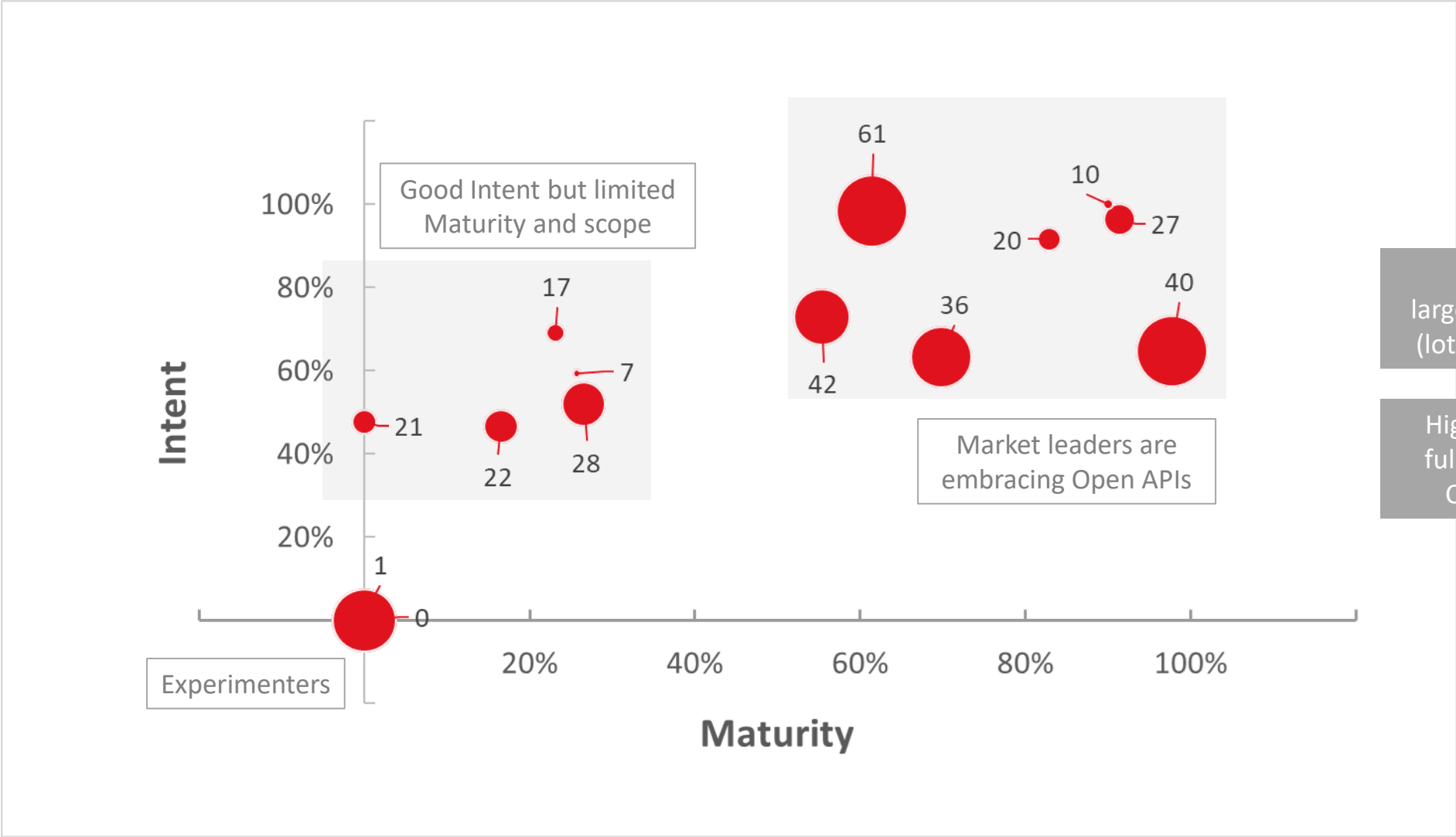
- Each circle represents the scores for an individual respondent (anonymized)
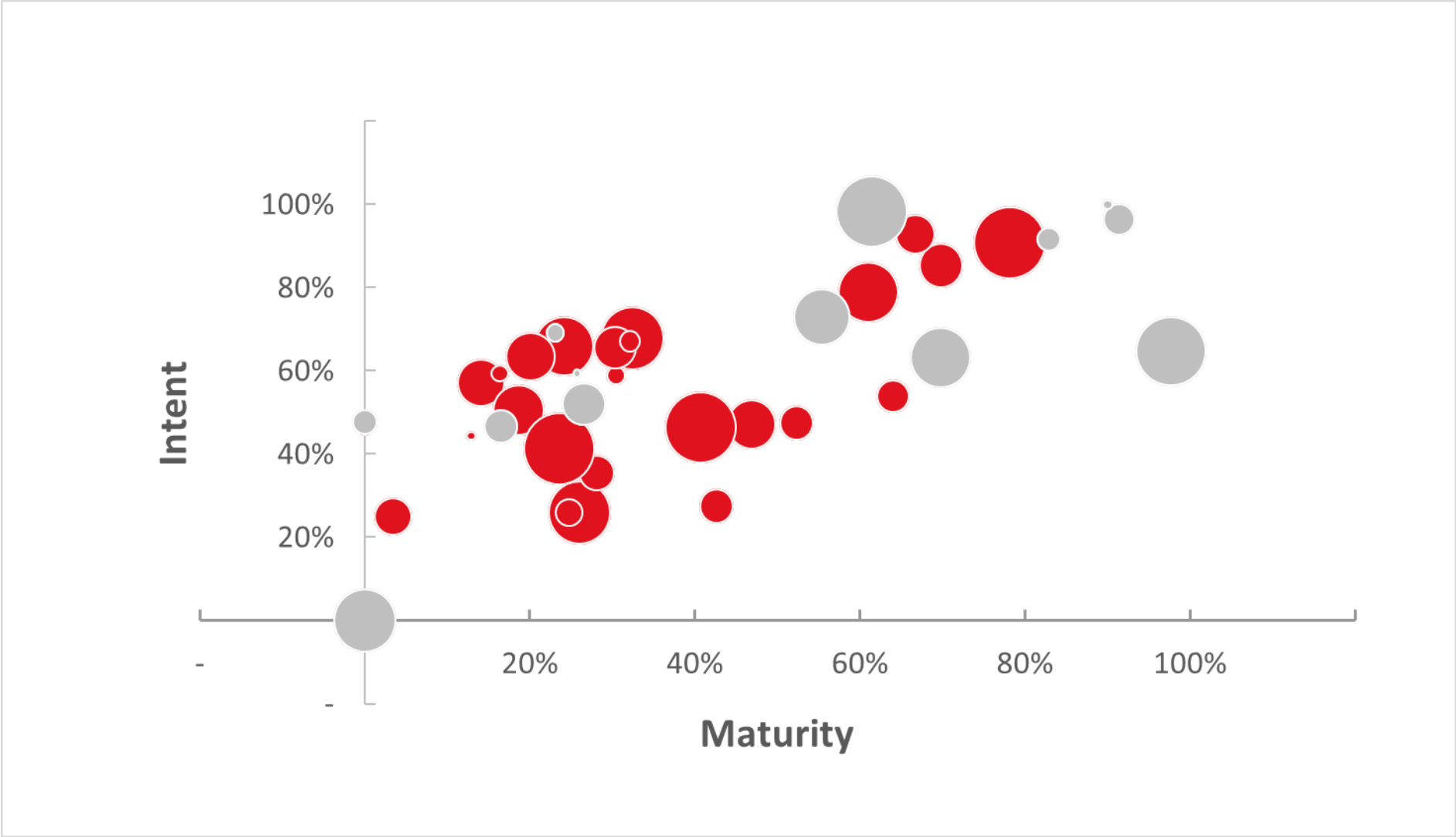- Size of circle indicates the number of Relevant APIs | Label represents the number of Committed APIs

# Combined CSP and Vendor Results V3 (Q2 2020)

● Red circles – Vendor results
● Grey circles – CSP results

Average Scores and Growth Trends

	Participants		Average Maturity†		Average Intent†	
	V3 Number	Increase‡	V3 Score	Increase‡	V3 Score	Increase‡
Vendors	25	8	38%	7 points	56%	7 points
CSPs	14	2	58%	1 point	59%	12 points
Combined	**39**	**10**	**45%**	**4 points**	**57%**	**9 points**

- 8 new vendors and 2 new CSPs participated in V3
  - 34% increase in participation compared to V2 (Q3 2019)
- Significant increase in industry intent to deploy Open APIs
  - CSP **Intent** increased 12 percentage points
  - Vendor **Intent** increased 7 percentage points
- Vendor maturity is increasing but still lags CSP maturity
  - Average vendor **Maturity** score increased 7 percentage points
  - Several vendors reported significant improvement since V2*
  - CSP **Maturity** remains higher than vendors but increasing more slowly
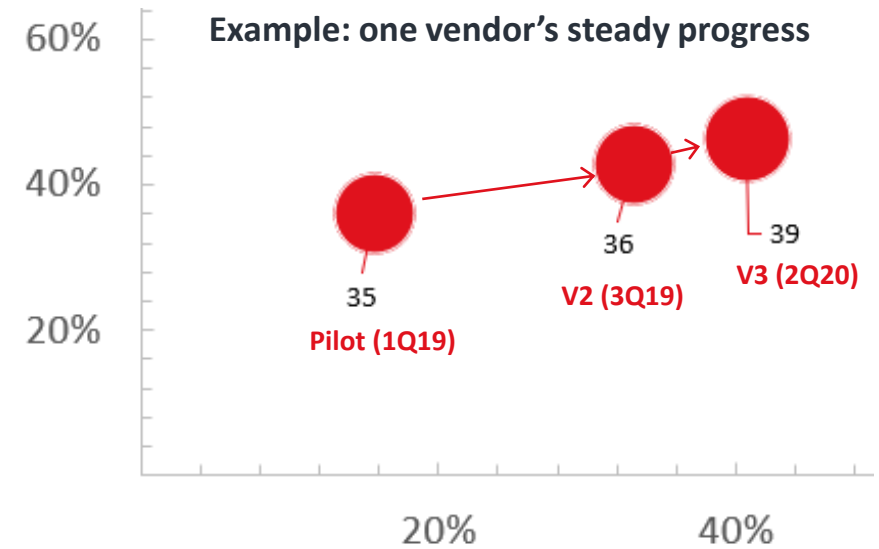
Example: one vendor's steady progress
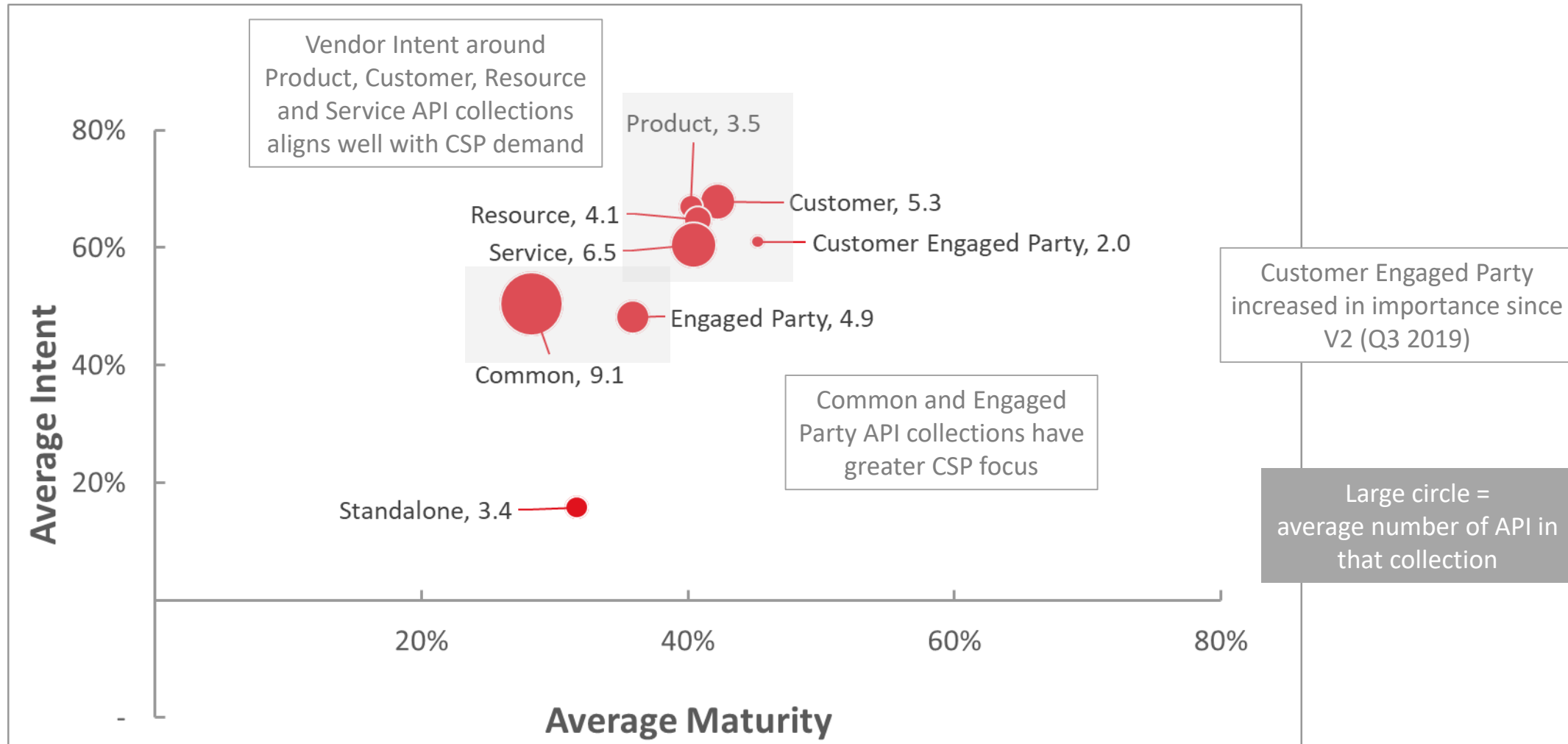
Pilot (1Q19) — 35
V2 (3Q19) — 36
V3 (2Q20) — 39

† Average Maturity is weighted by the number of Committed APIs | Average Intent is weighted by the number of Relevant APIs
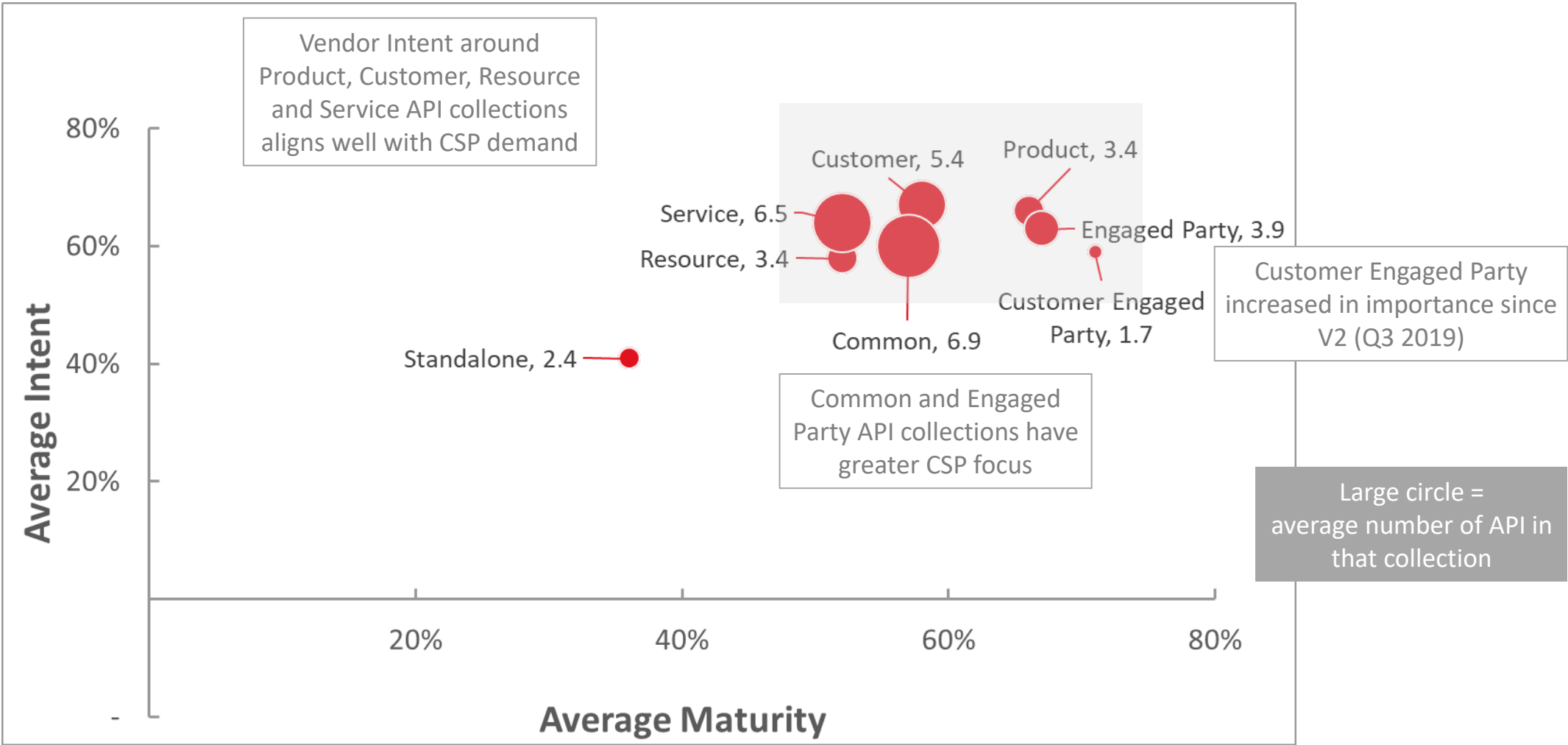‡ Increase compared to v2 (Q3 2019)
* For participants who did not update their scores, small backwards **Maturity** moves are due to new availability of conformance certification for some APIs since 3Q19, which increases the maximum available Maturity score (ie participants now need certification to score maximum Maturity points)

Vendor Focus by API Collection V3 (Q2 2020)

Vendor Intent around Product, Customer, Resource and Service API collections aligns well with CSP demand

Product, 3.5

Customer, 5.3

Resource, 4.1

Customer Engaged Party, 2.0

Service, 6.5

Customer Engaged Party increased in importance since V2 (Q3 2019)

Engaged Party, 4.9

Common, 9.1

Common and Engaged Party API collections have greater CSP focus

Large circle = average number of API in that collection

Standalone, 3.4

Average Intent

Average Maturity

- **Maturity** & **Intent** scores for each Open API collection are averaged across all respondents
- Label and circle size indicate the average number of Relevant APIs

CSP Focus by API Collection V3 (Q2 2020)

Vendor Intent around Product, Customer, Resource and Service API collections aligns well with CSP demand

Customer, 5.4

Product, 3.4

Service, 6.5

Engaged Party, 3.9

Resource, 3.4

Customer Engaged Party increased in importance since V2 (Q3 2019)

Common, 6.9

Customer Engaged Party, 1.7

Standalone, 2.4

Common and Engaged Party API collections have greater CSP focus

Large circle = average number of API in that collection

Average Intent

Average Maturity

80% 60% 40% 20% -

20% 40% 60% 80%

- **Maturity** & **Intent** scores for each Open API collection are averaged across all respondents
- Label and circle size indicate the average number of Relevant APIs

Combined Focus by API Collection V3 (Q2 2020)
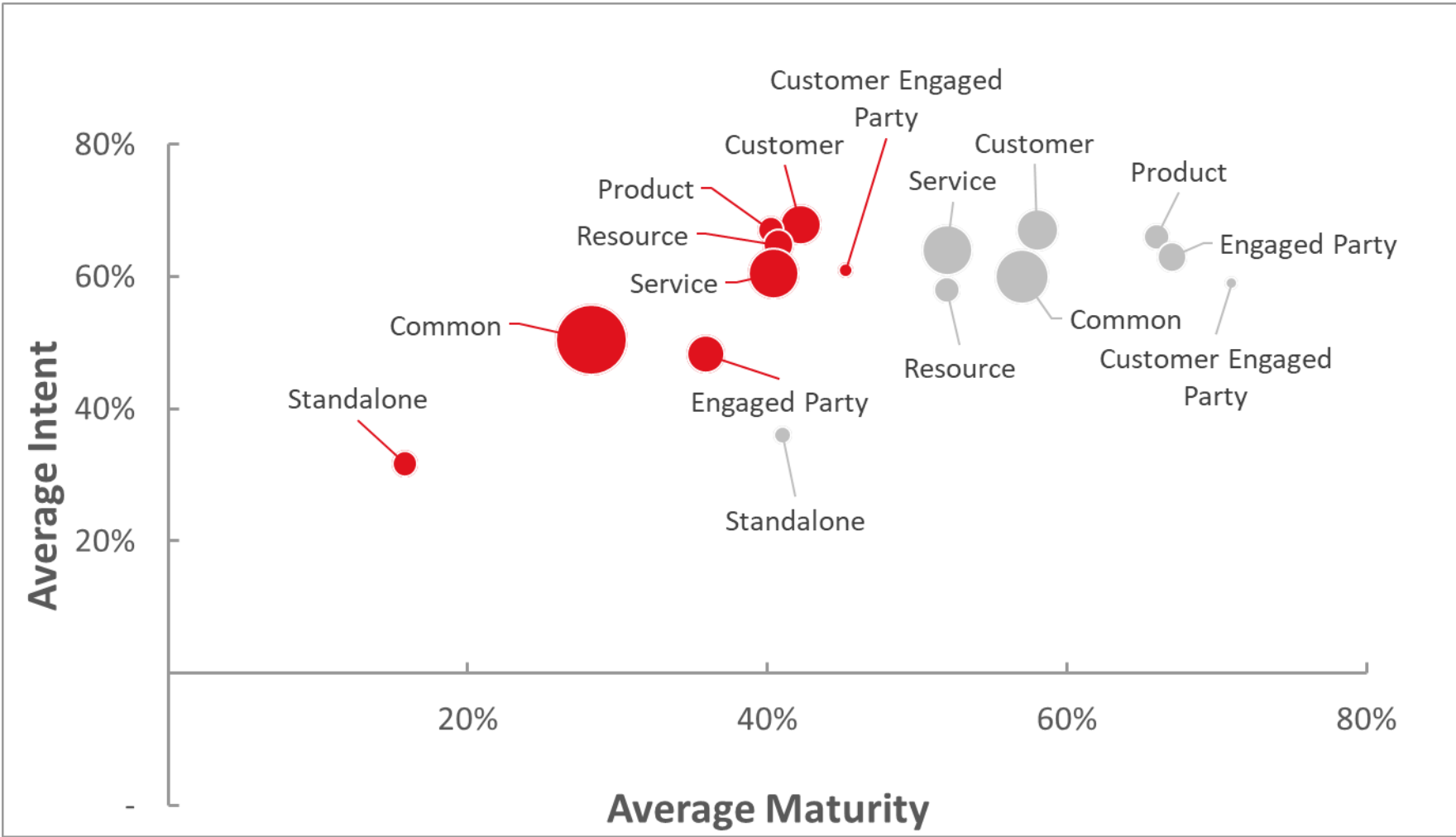
Red circles – Vendor results

Grey circles – CSP results

Useful links

Links to materials and surveys

- Main Open API adoption assessment webpage
  - https://www.tmforum.org/open-apis/adoption-assessment-report/

- Two V3 Surveys
  - CSP Survey: https://www.surveymonkey.co.uk/r/VAAR_V3_2020
  - Vendor Survey: https://www.surveymonkey.co.uk/r/CAAR_V3_2020

- Open API Table
  - https://projects.tmforum.org/wiki/display/API/Open+API+Table

- **CALL TO ACTION**
  - **TM Forum Members to participate**
  - Still open for inclusion in V3 update planned for our Q4 events
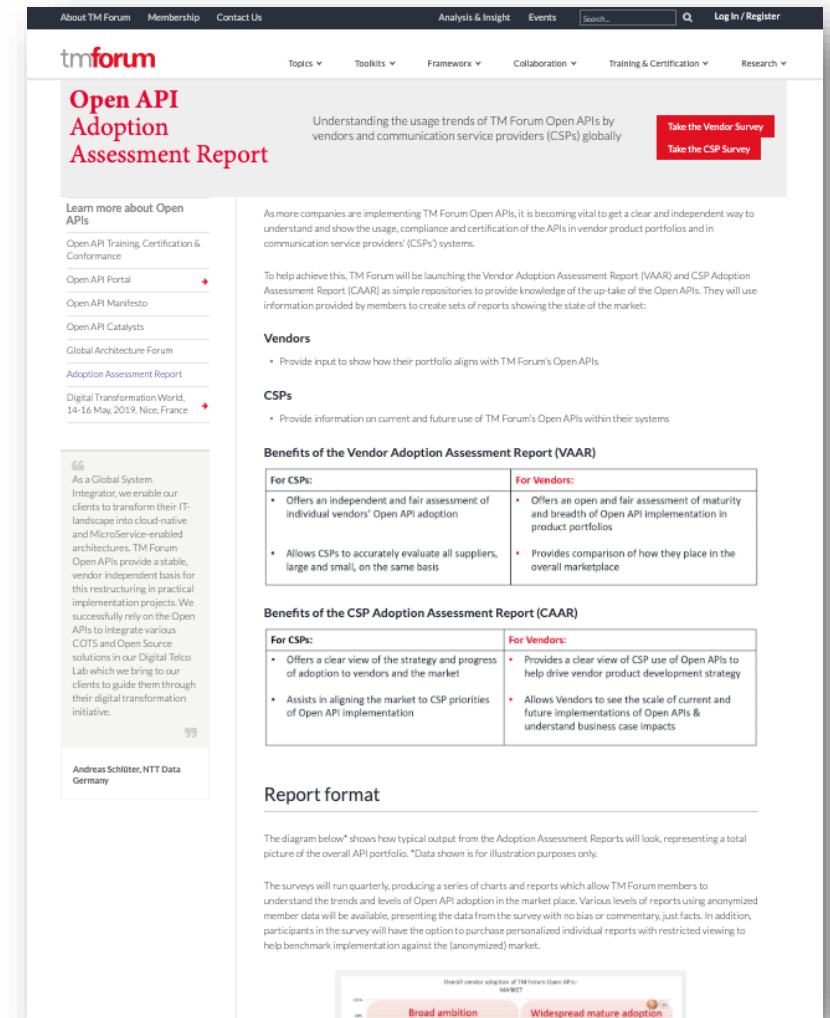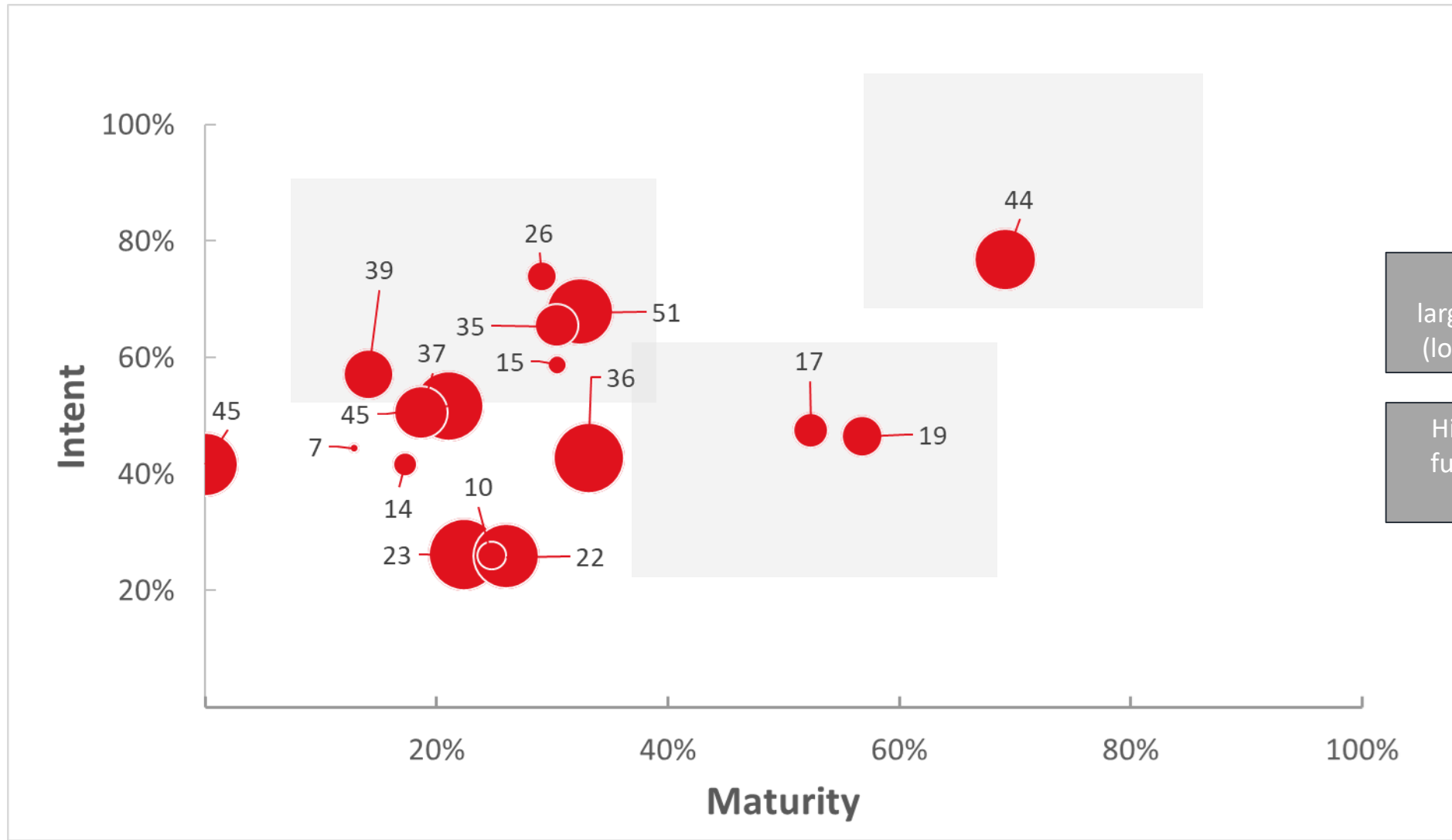
V3 (2Q20) Comparisons to v2 (3Q19)

Vendor Results V3 (Q2 2020)
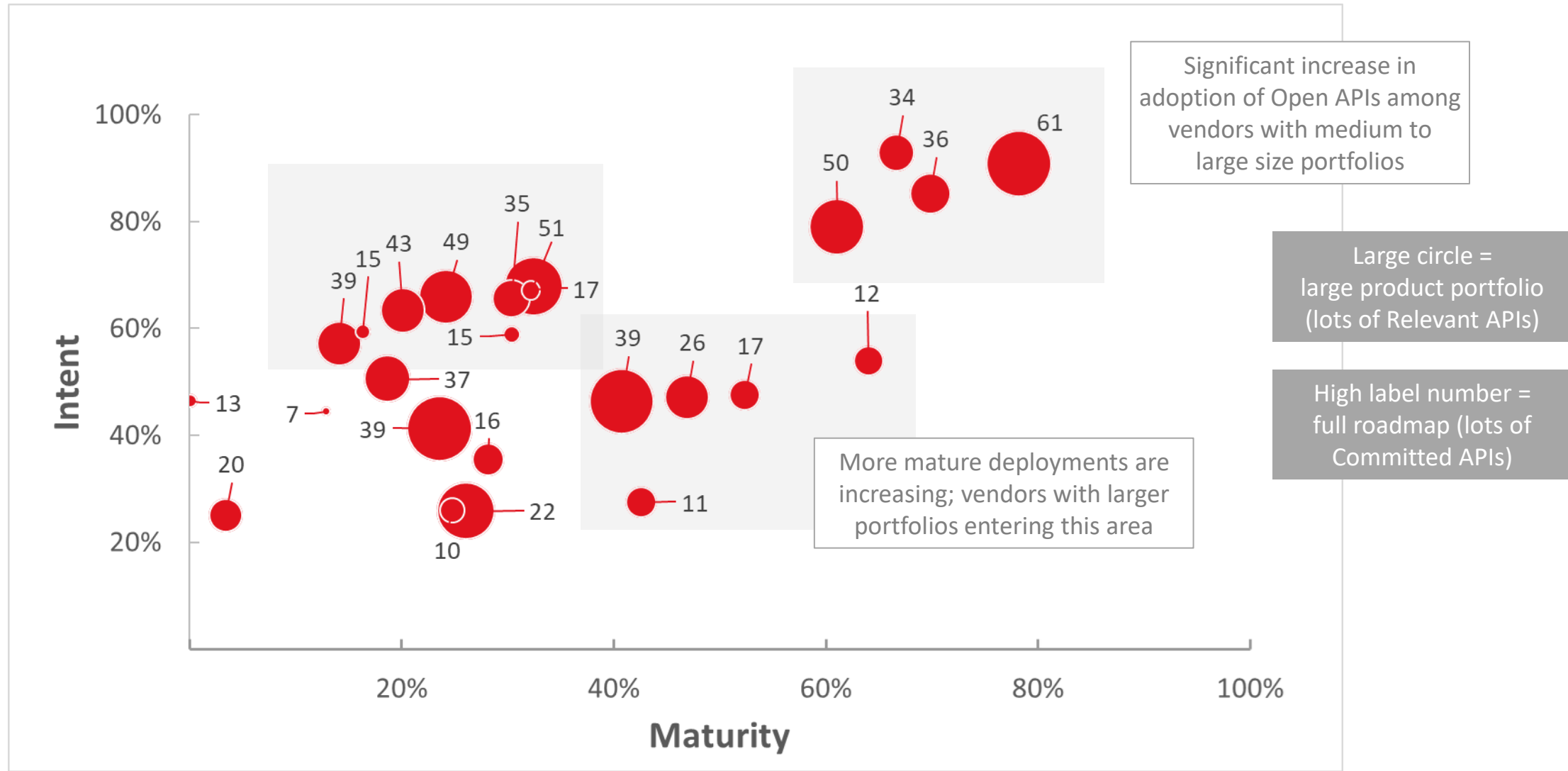
- Each circle represents the scores for an individual respondent (anonymized)
- Size of circle indicates the number of Relevant APIs | Label represents the number of Committed APIs

Vendor Results V2 (Q3 2019)

- Each circle represents the scores for an individual respondent (anonymized)
- Size of circle indicates the number of Relevant APIs | Label represents the number of Committed APIs

CSP Results V3 (Q2 2020)

Many CSPs have increased intent compared to previous surveys although with limited scope

Increasing number of market leaders embracing Open APIs

Large circle = large product portfolio (lots of Relevant APIs)

High label number = full roadmap (lots of Committed APIs)

- Each circle represents the scores for an individual respondent (anonymized)
- Size of circle indicates the number of Relevant APIs | Label represents the number of Committed APIs
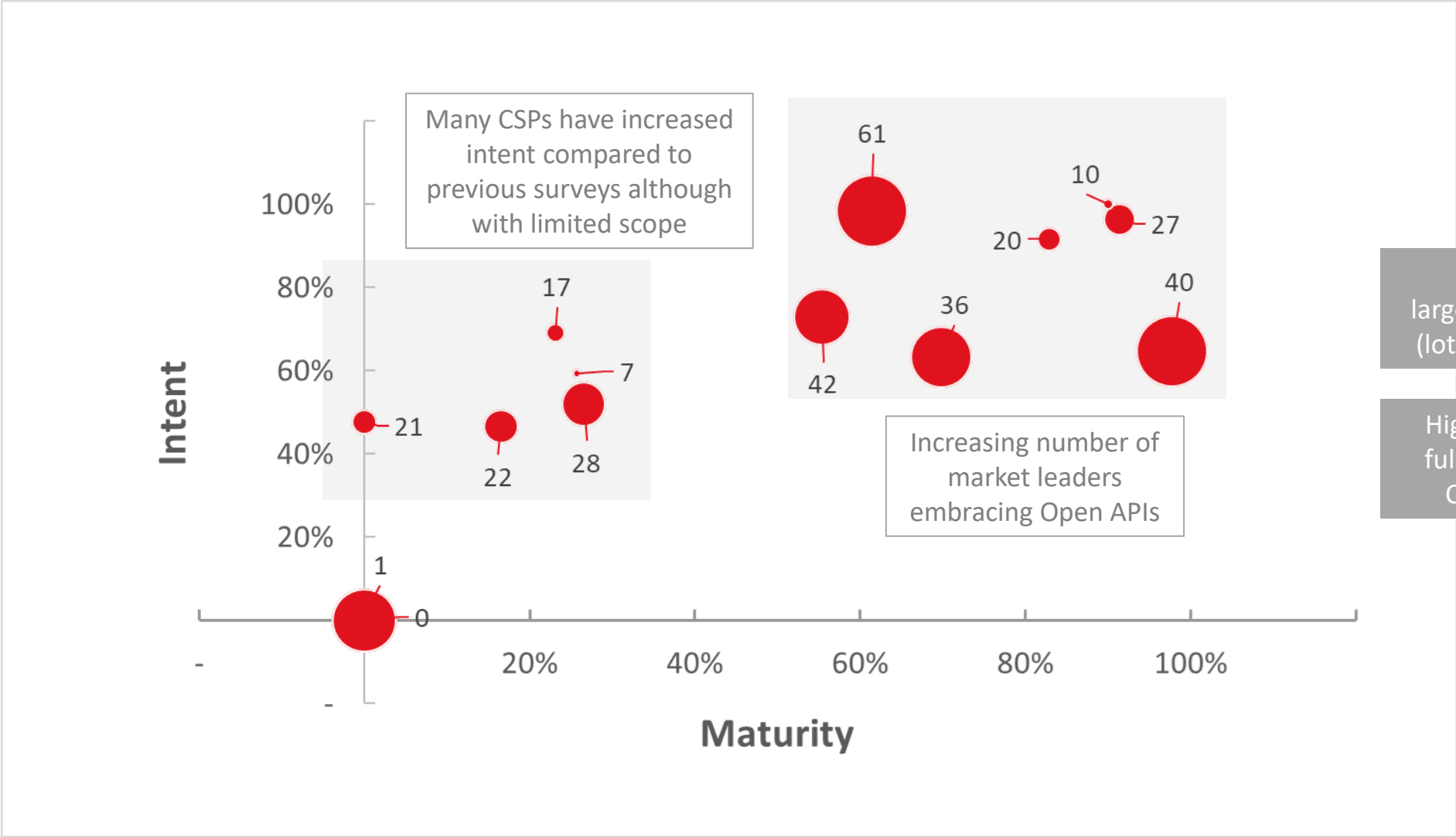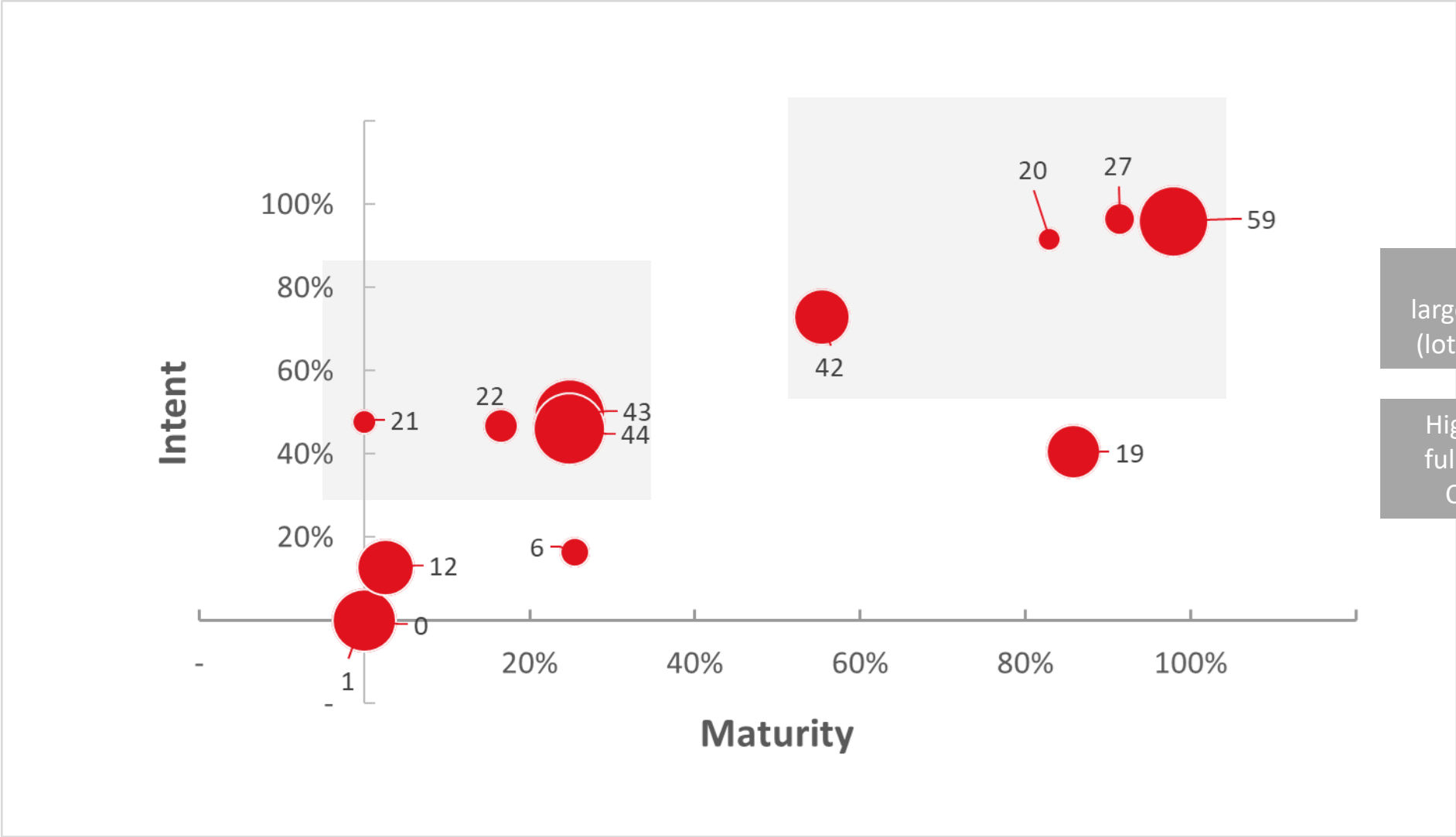
CSP Results V2 (Q3 2019)

Large circle = large product portfolio (lots of Relevant APIs)

High label number = full roadmap (lots of Committed APIs)

- Each circle represents the scores for an individual respondent (anonymized)
- Size of circle indicates the number of Relevant APIs | Label represents the number of Committed APIs

Comparison of survey results

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Vendor	Average Maturity[†]	Average Intent[†]	Participants
Pilot (1Q19)	30%	44%	12
v2 Q3 2019	31%	49%	17
v3 Q2 2020	38%	56%	25

CSP	Average Maturity[†]	Average Intent[†]	Participants
Pilot (1Q19)	33%	39%	7
v2 Q3 2019	56%	47%	12
v3 Q2 2020	58%	59%	14

Combined	Average Maturity[†]	Average Intent[†]	Participants
Pilot (1Q19)	33%	40%	19
v2 Q3 2019	41%	48%	29
v3 Q2 2020	45%	57%	39

[†] Average Maturity is weighted by the number of Committed APIs | Average Intent is weighted by the number of Relevant APIs

* For participants who did not update their scores, small backwards **Maturity** moves are due to new availability of conformance certification for some APIs since 3Q19, which increases the maximum available Maturity score (ie participants now need certification to score maximum Maturity points)
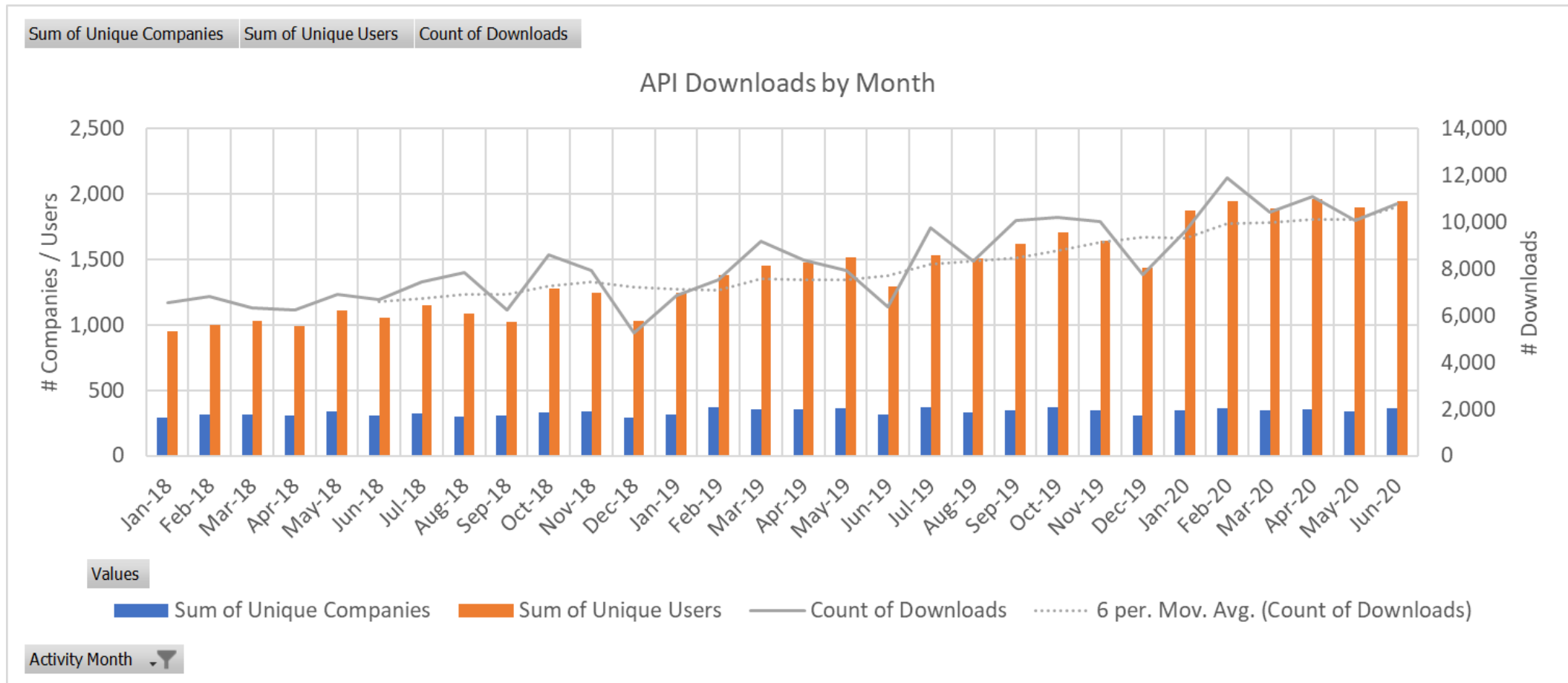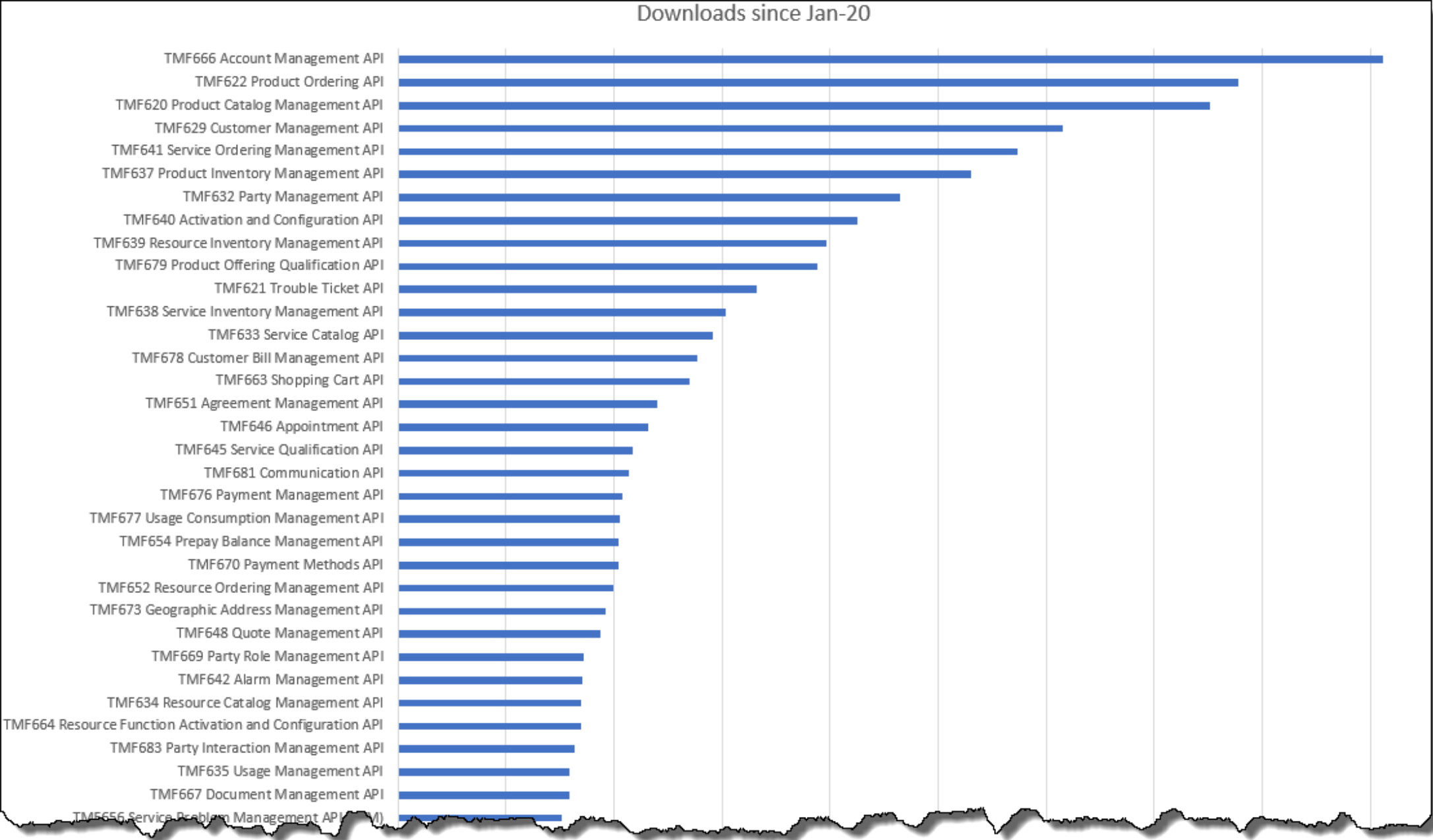
Open API Table Downloads

API downloads from the Open API Table and resource library

Each month we consistently have:

- Over 1,800 unique users

- From over 350 unique companies

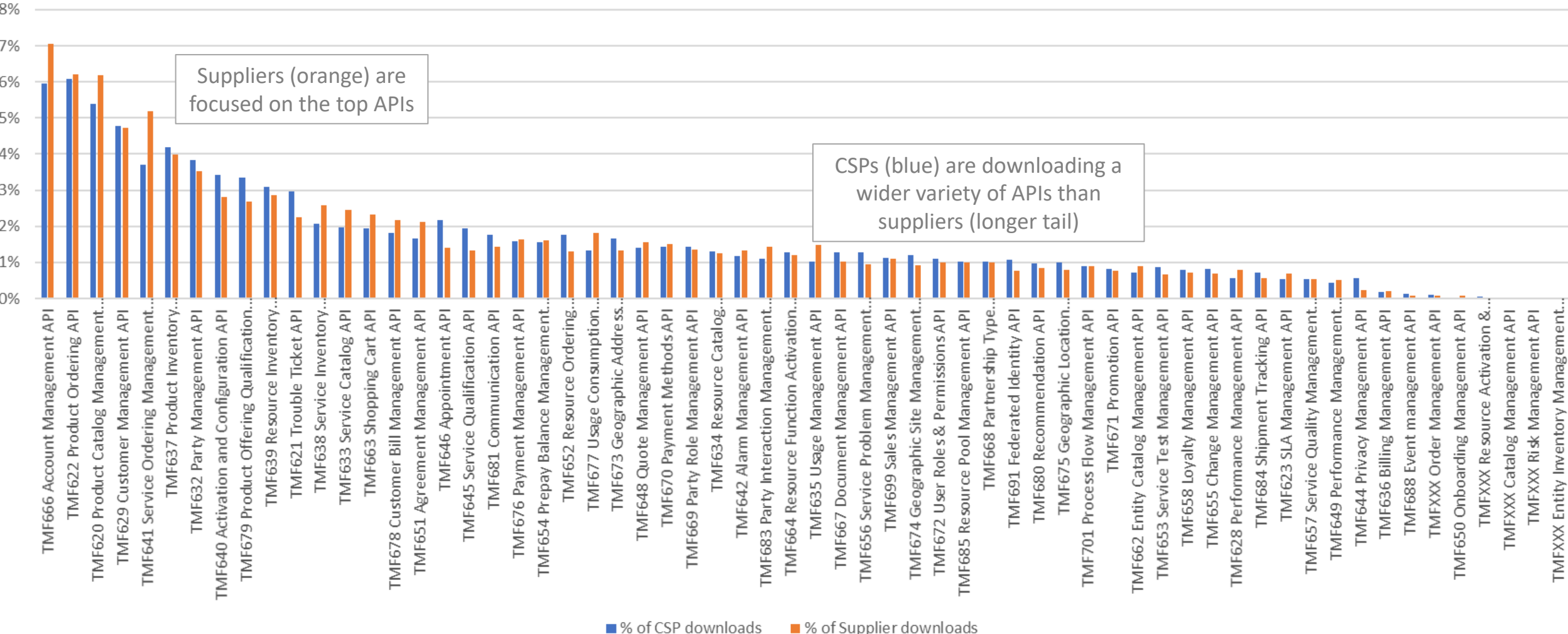- Downloading more than 10,000 API assets

Most popular APIs

Downloads since Jan-20

API	
TMF666 Account Management API	
TMF622 Product Ordering API	
TMF620 Product Catalog Management API	
TMF629 Customer Management API	
TMF641 Service Ordering Management API	
TMF637 Product Inventory Management API	
TMF632 Party Management API	
TMF640 Activation and Configuration API	
TMF639 Resource Inventory Management API	
TMF679 Product Offering Qualification API	
TMF621 Trouble Ticket API	
TMF638 Service Inventory Management API	
TMF633 Service Catalog API	
TMF678 Customer Bill Management API	
TMF663 Shopping Cart API	
TMF651 Agreement Management API	
TMF646 Appointment API	
TMF645 Service Qualification API	
TMF681 Communication API	
TMF676 Payment Management API	
TMF677 Usage Consumption Management API	
TMF654 Prepay Balance Management API	
TMF670 Payment Methods API	
TMF652 Resource Ordering Management API	
TMF673 Geographic Address Management API	
TMF648 Quote Management API	
TMF669 Party Role Management API	
TMF642 Alarm Management API	
TMF634 Resource Catalog Management API	
TMF664 Resource Function Activation and Configuration API	
TMF683 Party Interaction Management API	
TMF635 Usage Management API	
TMF667 Document Management API	
TMF656 Service Problem Management API (SPM)	

Most popular APIs by CSP & supplier

% of CSP and Supplier downloads since Jan-20

Suppliers (orange) are focused on the top APIs

CSPs (blue) are downloading a wider variety of APIs than suppliers (longer tail)

■ % of CSP downloads   ■ % of Supplier downloads

Long tails

1. 24 APIs have more than 1000 downloads since Jan 2020 (9 have more than 2000 downloads)

2. 38 companies are each averaging at least 50 downloads per month in 2020

3. 26 companies have each had at least 100 unique users downloading APIs in 2020
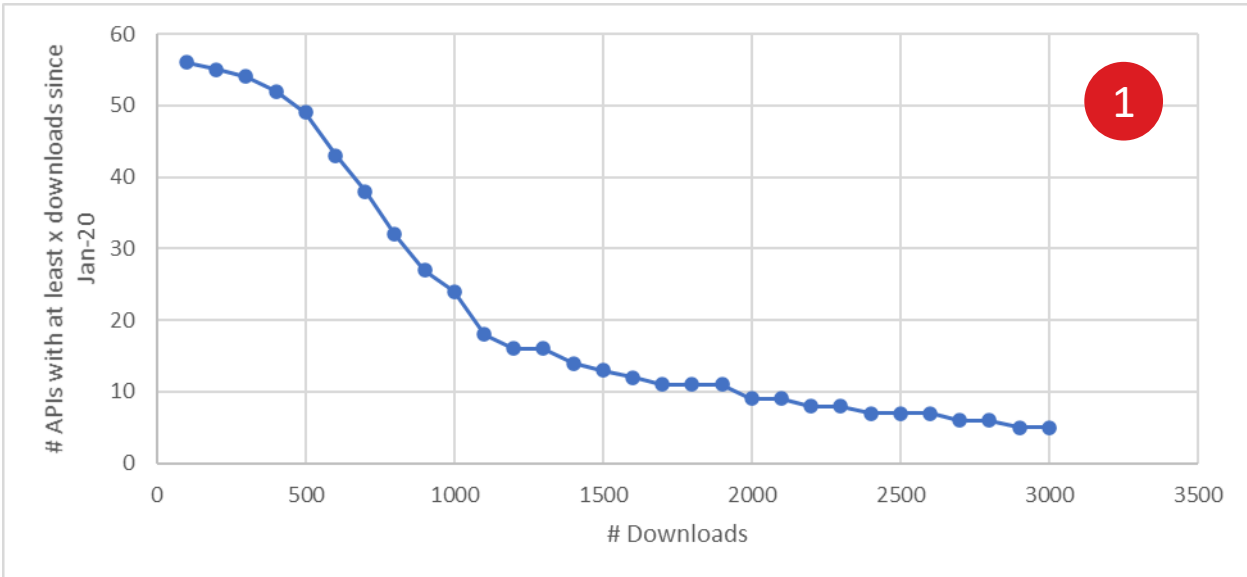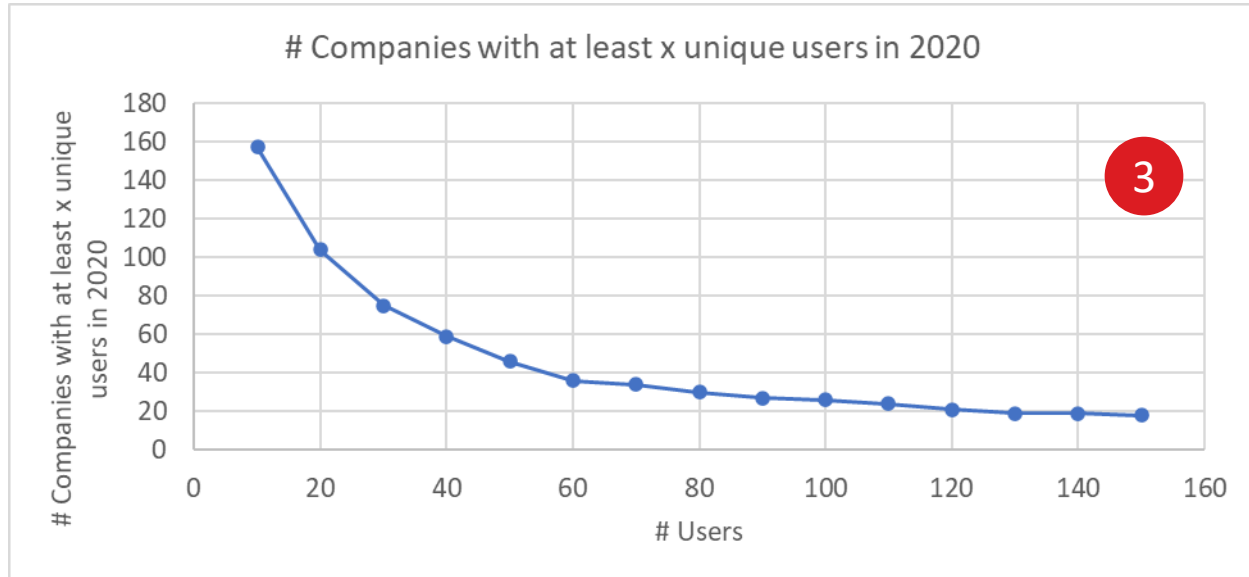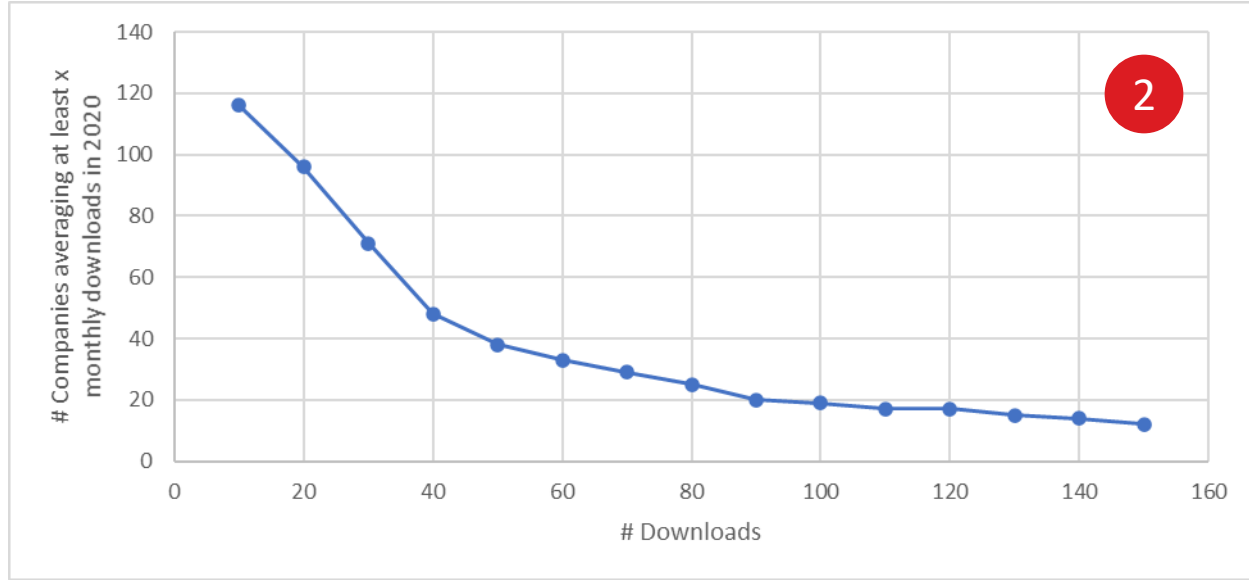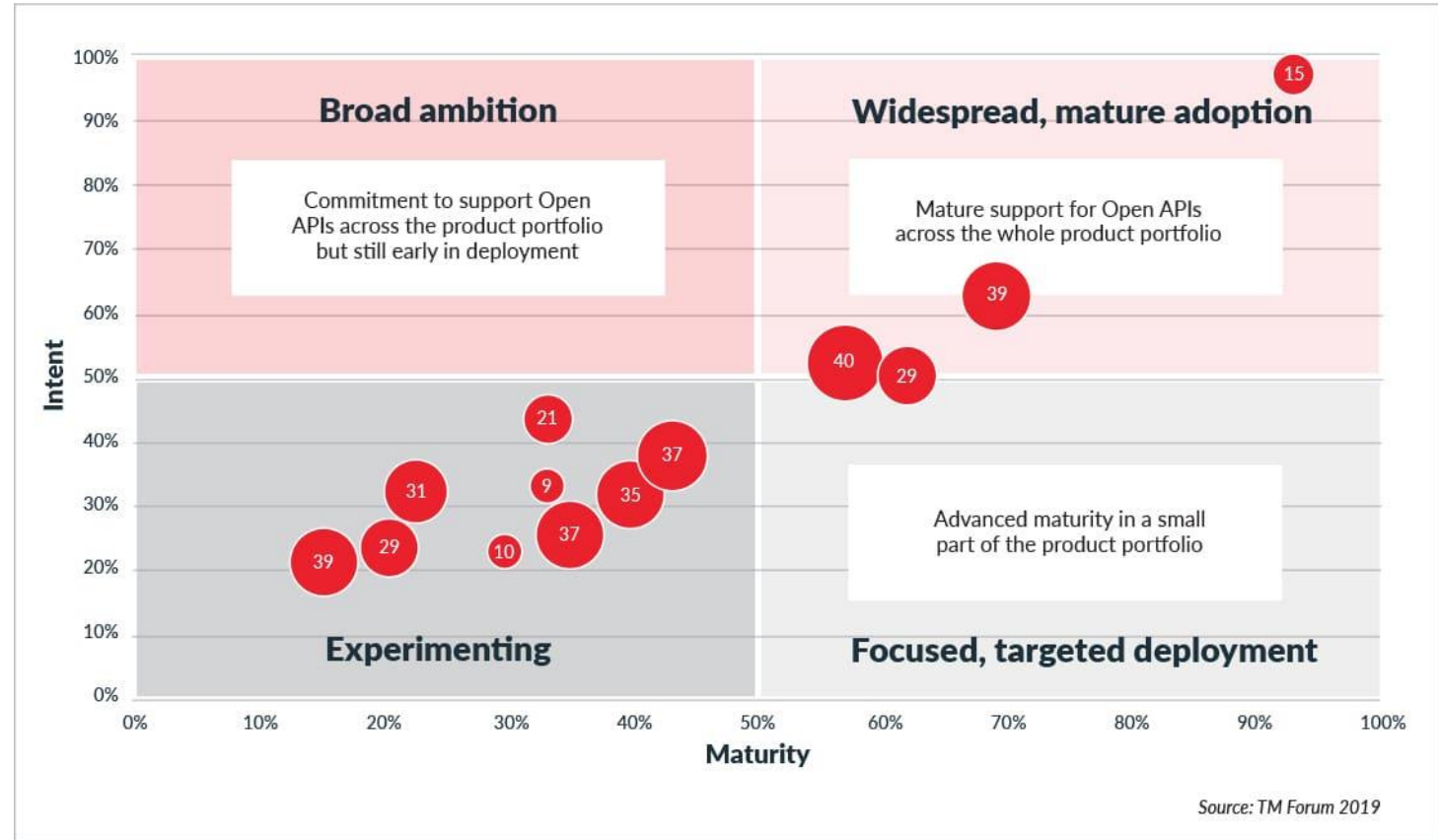
Terminology & Scoring Algorithms

Scoring Algorithm

Y axis: Intent

- Score **Intent** points for each **Relevant API**

- A **Relevant API** is one which is relevant to the respondent's product(s) / systems

- Score points for existing API conformance and near-term roadmap plan, fewer points for longer term plan...

Scores for each respondent are expressed as a percentage of the maximum possible score for all of that respondent's Relevant / Committed APIs

Broad ambition — Commitment to support Open APIs across the product portfolio but still early in deployment

Widespread, mature adoption — Mature support for Open APIs across the whole product portfolio

Experimenting

Focused, targeted deployment — Advanced maturity in a small part of the product portfolio

Source: TM Forum 2019

X axis: Maturity

- Score **Maturity** points for each **Committed API**

- A **Committed API** is one which the respondent already conforms with or has plans to conform with in the future

- Most points for certification (if available), fewer points for conformance against older versions of the API, fewer points for 'in development'

Scoring Algorithm

Response	Intent score	Maturity score
Latest version (N or N-1 Version) of this TM Forum API is certified in my commercial product today	4	10
Latest version (N or N-1 Version) of this TM Forum API is conformant but NOT certified in my commercial product	4	9
An Older version (N-2 or older) of this TM Forum API is certified in my commercial product today	4	7
An Older version (N-2 or older) of this TM Forum API is conformant but NOT certified in my commercial product	4	6
API will be TM Forum conformant / certified and available in my commercial product WITHIN 12 months	3	3
API will be TM Forum conformant / certified and is in the roadmap, but BEYOND 12 months	2	0
No plans for this API to be conformant or certified	0	0
This API is NOT relevant to my product	X	X

- Committed APIs are all Relevant APIs where the respondent has a roadmap to conform in the future (no matter what timescale)

- Maturity score is capped if certification is not available so that respondents can score maximum points for a "***…conformant but NOT certified***" response

Glossary of terms for compliance in the AAR survey

- Terms used in the responses for the survey
  - Conformant:
    - There is full correspondence between architecture specification and implementation.
    - All specified features are implemented in accordance with the specification and there are no features implemented that are not covered by the specification.
  - Certified
    - There is full correspondence between architecture specification and implementation.
    - All specified features are implemented in accordance with the specification and there are no features implemented that are not covered by the specification.
    - This is been reviewed, passed and a certificate received from TM Forum

- Other Terms that are commonly used but not used in the survey
  - Alignment:
    - Some or all the features in the architecture specification are implemented in accordance with the specification. But some more features are implemented that are not in accordance with it.
    - This is not seen been able to directly interoperate and would need significant development to receive TM Forum certification
    - This is not used in the survey as this level is below the level we are working towards

VAAR / CAAR response definitions

- Latest version (N or N-1 Version) of this TM Forum API is certified in my commercial product / System today
  - Your implementation of the current or immediately previous version of the API have passed TM forum certification process

- Latest version (N or N-1 Version) of this TM Forum API is conformant but NOT certified in my commercial product / System
  - Your implementation of the current or immediately previous version of the API fully conforms to the TM Forum intent and CTKs but not yet passed TM forum certification process

- An Older version (N-2 or older) of this TM Forum API is certified in my commercial product / System today
  - Your implementation of the older version (≥ two releases) of the API have passed TM forum certification process

- An Older version (N-2 or older) of this TM Forum API is conformant but NOT certified in my commercial product / System
  - Your implementation of the older version (≥ two releases) of the API fully conforms to the TM Forum intent and CTKs but not yet passed TM forum certification process

- API will be TM Forum conformant / certified and available in my commercial product / System WITHIN 12 months
  - Within 12 months of this survey it is your intent to make this API either conform or be certified to the TM forum certification process

- API will be TM Forum conformant / certified and is in the roadmap, but BEYOND 12 months
  - Beyond 12 months of this survey it is your intent to make this API either fully conform or be certified to the TM forum certification Process

- No plans for this API to be conformant or certified
  - You have this API but have no plans to move it to fully conform or certify against the TM Forum certification process

- This API is NOT relevant to my product
  - This API is not in your portfolio