2021 Product Management Survey on the current state-of-practice

[Neil Chalk](https://www.researchgate.net/profile/Neil_Chalk)

2021-03-14

The analysis was done using the R Statistical language (v4.0.3; R Core Team, 2020) on Windows 10 x64, using the packages qqplotr (v0.0.4), gridExtra (v2.3), xtable (v1.8.4), rpivotTable (v0.3.0), ggplot2 (v3.3.0), tidyr (v1.1.2), dplyr (v0.8.5), likert (v1.3.5), rmarkdown (v2.6), sp (v1.4.5), rworldmap (v1.3.6) and knitr (v1.28).

# 1 Descriptive Statistics

## 1.1 Demographics - Organisational Context

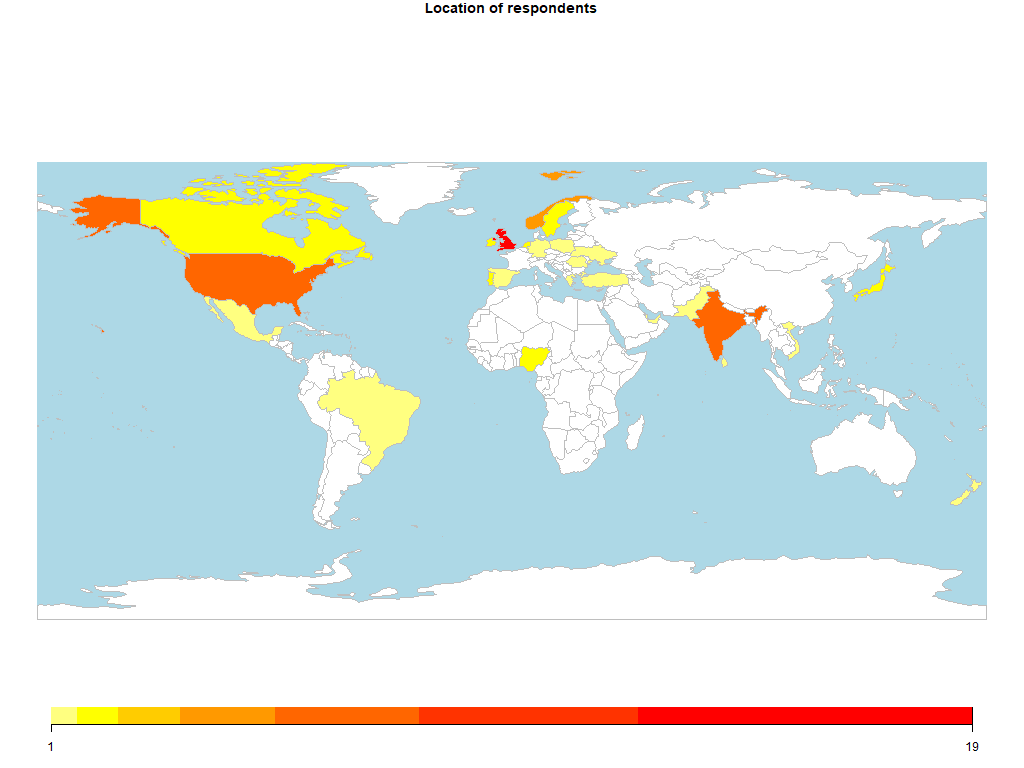
What is the make up of the organisations that the respondents are working in?

|  |  |  |
| --- | --- | --- |
|  | org.industry | org.employees |
|  | Software / IT :38 | < 10 :13 |
|  | Banking / Finance :12 | 10-49 :19 |
|  | Private / Consumer : 6 | 50-249 :13 |
|  | Retail / Wholesale : 3 | 250-4499:16 |
|  | Medical / Health Care: 2 | >= 4500 :10 |
|  | aquamarine : 1 |  |
|  | (Other) : 9 |  |

|  |  |  |  |
| --- | --- | --- | --- |
|  | org.TTM | org.releases | org.prodteamsize |
|  | Less than 4.5 months :28 | More than 12 releases a year :28 | < 4 :25 |
|  | 4.5 months to < 9 months :18 | 5-12 releases a year :19 | 4-9 :21 |
|  | 9 Months to < 18 months :12 | 3-4 releases a year :11 | 10-19 :14 |
|  | More than 18 months : 5 | About 2 releases per year : 5 | 20-49 : 5 |
|  | Don’t know and cannot estimate: 8 | About 1 release per year : 3 | 50-249: 3 |
|  |  | Less than one release per year: 0 | > 250 : 3 |
|  |  | No release so far : 5 |  |

## 1.2 Demographics - Respondents

And where are they located?

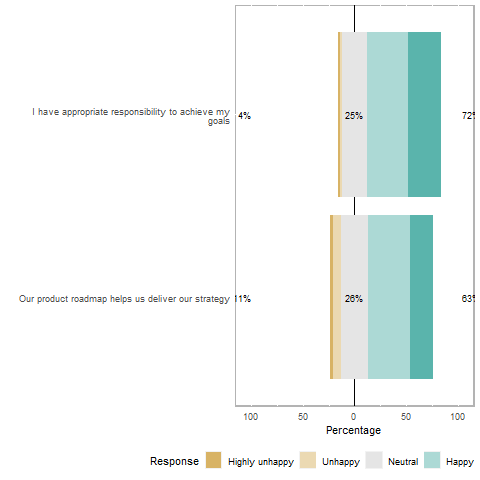


Location of respondents to the survey

## 1.3 Perceptions of role and roadmap

How happy were the respondents with their roadmap process and level of responsibility in the role?

|  |  |  |  |
| --- | --- | --- | --- |
| Job.title | n | roadmap.happiness | role.happiness |
| Associate/Junior Product Manager | 5 | 3.6 |  |
| CEO | 6 | 3.5 | 4.5 |
| Continuous improvement specialist | 1 | 2.0 | 3.0 |
| CTO | 5 | 4.8 | 5.0 |
| Director of Product Design | 1 | 5.0 | 4.0 |
| Engineering Manager | 2 | 4.0 | 5.0 |
| FP&A | 1 | 4.0 | 5.0 |
| Freelancer ( Products & Growth ) | 1 | 4.0 | 4.0 |
| Head of Product/VP/Director/CPO | 11 | 3.5 | 4.2 |
| Lead Product Manager | 6 | 4.3 | 4.3 |
| Operational Manager | 2 | 5.0 | 4.0 |
| Product Consultant | 1 | 4.0 | 4.0 |
| Product Manager | 15 | 3.5 | 3.8 |
| Product Marketing Manager | 1 | 3.0 | 5.0 |
| Senior Product Manager | 12 | 3.7 | 3.8 |
| Senior Product Marketing Manager | 1 | 5.0 | 5.0 |



Likert responses

## 1.4 Role - Responsibilities ISPMA model

## 1.5 Information Sources

Where do people go to get their information?

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Job.title | Events and conferences | Blogs | Books | Online Communities | Professional Bodies | Professional Certification | Professional Training | Tool Vendor material | Google |
| Associate/Junior Product Manager | 40 | 60 | 20 | 40 | 0.0 | 40.0 | 20 | 0.0 | 0 |
| CEO | 50 | 33 | 17 | 50 | 16.7 | 0.0 | 17 | 16.7 | 0 |
| Continuous improvement specialist | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 100 |
| CTO | 60 | 60 | 60 | 60 | 20.0 | 20.0 | 20 | 40.0 | 0 |
| Director of Product Design | 0 | 0 | 0 | 100 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| Engineering Manager | 50 | 50 | 0 | 50 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| FP&A | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0 | 100.0 | 0 |
| Freelancer ( Products & Growth ) | 0 | 100 | 100 | 100 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| Head of Product/VP/Director/CPO | 18 | 82 | 45 | 82 | 0.0 | 0.0 | 0 | 9.1 | 0 |
| Lead Product Manager | 67 | 83 | 67 | 50 | 0.0 | 0.0 | 0 | 33.3 | 0 |
| Operational Manager | 100 | 0 | 0 | 100 | 0.0 | 100.0 | 0 | 0.0 | 0 |
| Product Consultant | 0 | 100 | 100 | 100 | 0.0 | 0.0 | 0 | 100.0 | 0 |
| Product Manager | 40 | 87 | 67 | 80 | 6.7 | 6.7 | 27 | 33.3 | 0 |
| Product Marketing Manager | 0 | 100 | 0 | 0 | 0.0 | 0.0 | 0 | 0.0 | 0 |
| Senior Product Manager | 58 | 67 | 83 | 75 | 8.3 | 8.3 | 0 | 41.7 | 0 |
| Senior Product Marketing Manager | 0 | 100 | 100 | 100 | 0.0 | 0.0 | 0 | 100.0 | 0 |

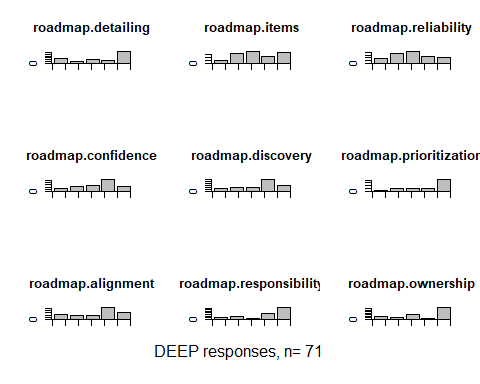
Which professional bodies are they members of?

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Job.title | ACM | AIPMM | BCS | ISPMA | PDMA | MTP | WiP | None |
| Associate/Junior Product Manager | 0 | 0.0 | 0.0 | 0 | 0 | 60 | 0.0 | 40 |
| CEO | 0 | 0.0 | 0.0 | 17 | 17 | 17 | 0.0 | 67 |
| Continuous improvement specialist | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0.0 | 100 |
| CTO | 0 | 0.0 | 20.0 | 0 | 0 | 0 | 0.0 | 80 |
| Director of Product Design | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0.0 | 100 |
| Engineering Manager | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0.0 | 100 |
| FP&A | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0.0 | 100 |
| Freelancer ( Products & Growth ) | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0.0 | 100 |
| Head of Product/VP/Director/CPO | 0 | 9.1 | 0.0 | 0 | 0 | 0 | 0.0 | 91 |
| Lead Product Manager | 0 | 0.0 | 16.7 | 0 | 0 | 0 | 0.0 | 83 |
| Operational Manager | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0.0 | 100 |
| Product Consultant | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0.0 | 100 |
| Product Manager | 0 | 0.0 | 6.7 | 0 | 0 | 20 | 6.7 | 73 |
| Product Marketing Manager | 100 | 0.0 | 0.0 | 0 | 0 | 0 | 0.0 | 0 |
| Senior Product Manager | 0 | 0.0 | 0.0 | 0 | 0 | 17 | 16.7 | 75 |
| Senior Product Marketing Manager | 0 | 0.0 | 0.0 | 0 | 0 | 0 | 0.0 | 100 |

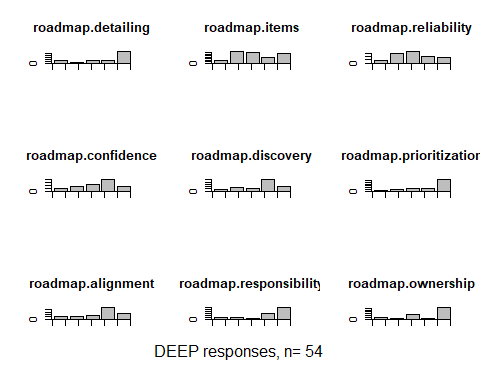
## 1.6 DEEP Roadmap Maturity

There were a spread of responses, but generally skewing to the right. In the charts below the least “mature” practices are to the left and the highest scoring, mature processes to the right. (According to [DEEP Product Maturity Model](https://www.researchgate.net/publication/336070112_The_Product_Roadmap_Maturity_Model_DEEP_Validation_of_a_Method_for_Assessing_the_Product_Roadmap_Capabilities_of_Organizations) V1.1 By Munch, Trieflinger and Lang.)

### 1.6.1 All responses



### 1.6.2 Product responses



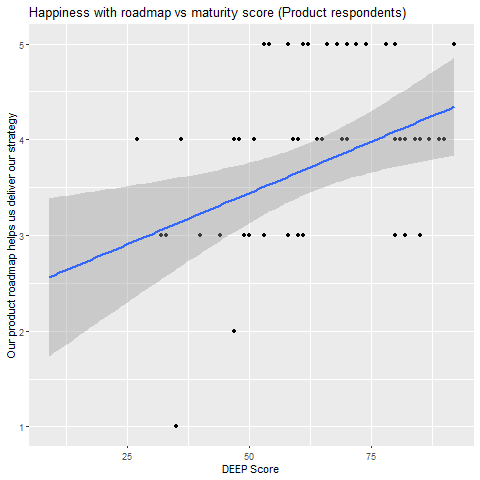
### 1.6.3 by job title

How mature were the roadmap processes by job title of respondent?

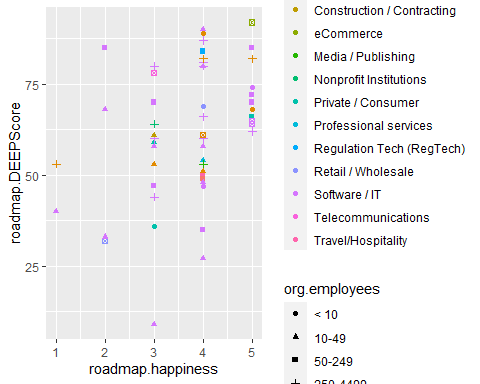
|  |  |  |  |
| --- | --- | --- | --- |
| Job.title | n | roadmap.DEEPScore | roadmap.mat\_level |
| Associate/Junior Product Manager | 5 | 47 | 3.0 |
| CEO | 6 | 50 | 3.2 |
| Continuous improvement specialist | 1 | 62 | 4.0 |
| CTO | 5 | 60 | 3.6 |
| Director of Product Design | 1 | 64 | 4.0 |
| Engineering Manager | 2 | 65 | 4.0 |
| FP&A | 1 | 43 | 3.0 |
| Freelancer ( Products & Growth ) | 1 | 69 | 4.0 |
| Head of Product/VP/Director/CPO | 11 | 66 | 3.8 |
| Lead Product Manager | 6 | 78 | 4.3 |
| Operational Manager | 2 | 32 | 3.0 |
| Product Consultant | 1 | 80 | 4.0 |
| Product Manager | 15 | 61 | 3.8 |
| Product Marketing Manager | 1 | 61 | 4.0 |
| Senior Product Manager | 12 | 56 | 3.5 |
| Senior Product Marketing Manager | 1 | 68 | 4.0 |

# 2 Inferential Statistics

did happiness with the roadmap process correlate to a higher maturity score?



Happiness of roadmap vs DEEP score for product people

 Call: lm(formula = roadmap.happiness ~ roadmap.DEEPScore, data = prod\_responses)

Residuals: Min 1Q Median 3Q Max -2.5075 -0.6308 0.0314 0.6473 1.2995

Coefficients: Estimate Std. Error t value Pr(>|t|)  
(Intercept) 2.37066 0.47436 5.00 6.9e-06 \* **roadmap.DEEPScore 0.02145 0.00734 2.92 0.0051**  — Signif. codes: 0 ‘***’ 0.001 ’****’ 0.01 ’*’ 0.05 ‘.’ 0.1 ’ ’ 1

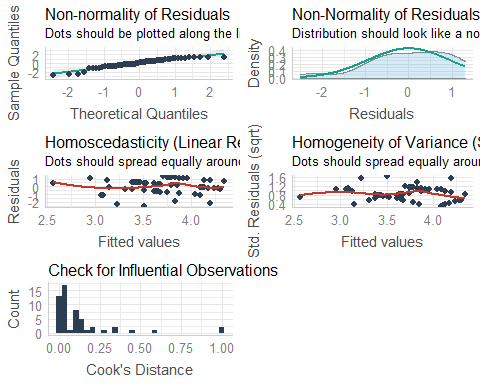
Residual standard error: 0.95 on 52 degrees of freedom Multiple R-squared: 0.141, Adjusted R-squared: 0.125 F-statistic: 8.54 on 1 and 52 DF, p-value: 0.00513

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Df | Sum Sq | Mean Sq | F value | Pr(>F) |
| roadmap.DEEPScore | 1 | 7.8 | 7.79 | 8.5 | 0.01 |
| Residuals | 52 | 47.5 | 0.91 |  |  |

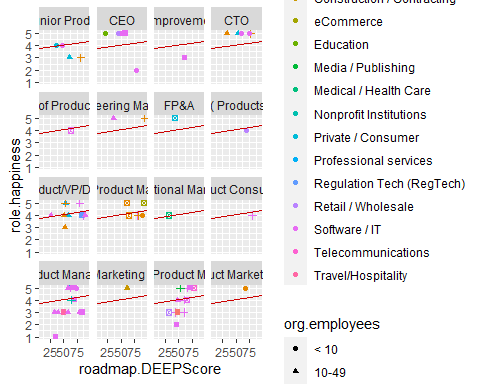
> `geom\_smooth()` using formula 'y ~ x'  
> `geom\_smooth()` using formula 'y ~ x'

> `stat\_bin()` using `bins = 30`. Pick better value with `binwidth`.

> Warning: Removed 54 rows containing missing values (geom\_text).



> Warning: Removed 1 rows containing missing values (geom\_point).



## 2.1 References

* A. Almeida, A. Loy, and H. Hofmann, qqplotr: Quantile-Quantile Plot Extensions for ‘ggplot2’, R package version 0.0.2 initially funded by Google Summer of Code 2017, <https://github.com/aloy/qqplotr>, 2017.
* Baptiste Auguie (2017). gridExtra: Miscellaneous Functions for “Grid” Graphics. R package version 2.3. <https://CRAN.R-project.org/package=gridExtra>
* David B. Dahl, David Scott, Charles Roosen, Arni Magnusson and Jonathan Swinton (2019). xtable: Export Tables to LaTeX or HTML. R package version 1.8-4. <https://CRAN.R-project.org/package=xtable>
* Enzo Martoglio (2018). rpivotTable: Build Powerful Pivot Tables and Dynamically Slice & Dice your Data. R package version 0.3.0. <https://CRAN.R-project.org/package=rpivotTable>
* H. Wickham. ggplot2: Elegant Graphics for Data Analysis. Springer-Verlag New York, 2016.
* Hadley Wickham (2020). tidyr: Tidy Messy Data. R package version 1.1.2. <https://CRAN.R-project.org/package=tidyr>
* Hadley Wickham, Romain François, Lionel Henry and Kirill Müller (2020). dplyr: A Grammar of Data Manipulation. R package version 0.8.5. <https://CRAN.R-project.org/package=dplyr>
* Jason Bryer and Kimberly Speerschneider (2016). likert: Analysis and Visualization Likert Items. R package version 1.3.5. <https://CRAN.R-project.org/package=likert>
* JJ Allaire and Yihui Xie and Jonathan McPherson and Javier Luraschi and Kevin Ushey and Aron Atkins and Hadley Wickham and Joe Cheng and Winston Chang and Richard Iannone (2020). rmarkdown: Dynamic Documents for R. R package version 2.6. URL <https://rmarkdown.rstudio.com>.
* Pebesma, E.J., R.S. Bivand, 2005. Classes and methods for spatial data in R. R News 5 (2), <https://cran.r-project.org/doc/Rnews/>.
* R Core Team (2020). R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. URL <https://www.R-project.org/>.
* South, Andy 2011 rworldmap: A New R package for Mapping Global Data. The R Journal Vol. 3/1 : 35-43.
* Yihui Xie (2020). knitr: A General-Purpose Package for Dynamic Report Generation in R. R package version 1.28.