

# ACMA Excellence Awards

## Excellence in New Product Design and Development

### Definitions and formulas

$$x^2 + \frac{b}{a}x + \left(\frac{b}{2a}\right)^2 = -\frac{c}{a} + \left(\frac{b}{2a}\right)^2$$

$$\left(x + \frac{b}{2a}\right)^2 = -\frac{c}{a} + \frac{b^2}{4a^2}$$

$$\left(x + \frac{b}{2a}\right)^2 = \frac{b^2 - 4ac}{4a^2}.$$

**ACMA**

2020

## Definitions / formulas for New Product Design & Development Category

1. % RFQ converted into business ( UOM = % )

$$= \frac{\text{RFQ converted into business in that year}}{\text{Total RFQ received in that year}} \times 100$$

2. % Sales Turnover from new products ( UOM= % )

$$= \frac{\text{Sales turnover from new products in that year}}{\text{Total sales in that year}} \times 100$$

3. Total Number of new products developed (UOM = Nos.)

**Total number of new products developed in that year**

4. Number of new products self designed & developed ( UOM = Nos ) **Total new products self designed & developed in that year**

5. Investment in R & D as a % of sales ( UOM = % )

$$= \frac{\text{Investment in R \& D in that year}}{\text{Total sales in that year}} \times 100$$

6. % of new products helped in increasing market share ( UOM = % )

$$= \frac{\text{No. of new products helped in increasing market share in that year}}{\text{Total new products developed in that year}} \times 100$$

7. No of design stations in your organization ( UOM= Nos)

**Total no. of design stations available in that year**

## Definitions / formulas for New Product Design & Development Category , contd....

8. Average lead time in days from RFQ to sample submission  
( UOM = Days )

**Average lead time for new product development from RFQ to Sample submission in that year**

9. No of design competent people ( UOM= Nos.) **Total number of design competent people in that year**

10. Average no of failure modes captured / new product  
( UOM= Nos.)

**Total no of failure modes captured in that year**

= -----

**Total new products developed in that year**

11. Average no of design guidelines prepared/ new product  
( UOM = Nos. )

**Total no of design guidelines prepared in that year**

= -----

**Total new products developed in that year**

12. Total Sales Turnover ( UOM= Rs. Cr. )

**Total sales in that year**

13. Number of patents applied for product innovation  
( UOM = Nos. ) **Total number of patents applied for**

**product innovation in that year**

14. Product Innovation awards/ recognition received from customers / others ( UOM = Nos.)

**Total Innovation awards / recognitions received from customers and other agencies in that year**

## Definitions / formulas for New Product Design & Development Category , contd....

15. % new products with cost over run ( UOM = % )

**Total no. of new products with cost over run (against planned cost) in that year**

$$= \frac{\text{Total no. of new products with cost over run (against planned cost) in that year}}{\text{Total new products developed in that year}} \times 100$$

16. % new products tested in house ( UOM = % )

**Number of new products tested inhouse in that year**

$$= \frac{\text{Number of new products tested inhouse in that year}}{\text{Total new products developed in that year}} \times 100$$

17. Average new product quality levels in first three months of series production ( UOM = PPM )

**Total new products rejected quantity in first 3 months**

$$= \frac{\text{Total new products rejected quantity in first 3 months}}{\text{Total qty new products produced in first three months in that year}} \times 10^6$$

18. No of times customer project timelines could not be met ( UOM= Nos )

**No of times customer project timelines could not be met due to your side issues in that year**

19. Number of patents awarded for product innovation ( UOM = Nos. ) **No of patents you have received for product innovation in that year**

## Definitions / formulas for New Product Design & Development Category , contd....

20. Royalty Payments ( if Applicable ) as % sales ( UOM = % )

$$\text{Royalty payments paid in that year} \\ = \frac{\text{Royalty payments paid in that year}}{\text{Total sales in that year}} \times 100$$

21. New customers added by product innovation  
( UOM= Nos.)

**New customers added by product innovation in that year**

22. Number of accidents per year ( UOM= Nos. )

**Total Number of accidents in that year**

23. Employee absenteeism ( Total ) ( UOM= % )

**Total absent man-hours for that year ( Authorized + Unauthorized )**

$$= \frac{\text{Total absent man-hours for that year ( Authorized + Unauthorized )}}{\text{Total man hours for that year}} \times 100$$

24. Employee satisfaction ( UOM= % ) **Employee Satisfaction score for that year out of 100%**

25. 5 S Score ( UOM = % ) **Average 5 S score for entire plant for that year**