

*Como abordan la
gestión de los equipos...*

Software Project Management

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Fifth Edition

Managing People in Software Environments

Chapter Eleven

Main Topics

- What is organizational behaviour?
- Staff selection and induction
- Models of motivation – focus on the individual
- The dark side of motivation - stress
- The broader issues of health and safety
- Some ethical and professional concerns

Software Project Management - 11.01 Introduction



Comportamiento organizacional ...

Como se comporta la gente en las empresas etc... objeto de estudio...

Before Organizational Behaviour

- Frederick Taylor (1856-1915) '*the father of scientific management*'
 - Se le considera el "padre" de la gestión científica de las personas.
 - Estableció una metodología basada en 3 pasos.
- Focus:
 - Seleccionar la mejor persona para hacer cada uno de los trabajos.
 - To select the best people for the job
 - Encontrar la mejor forma de hacer ese trabajo e instaurarla.
 - To instruct them in the best methods
 - enseñamos al personal a hacer las tareas de ese modo y...
las recompensamos por unidad. Cada vez que haces esto... te pagamos.
 - Paso por productividad.
 - To give financial incentives in the form of piece work
 - Replicar la mejor forma de hacer una cosa...
- One problem: group norms
 - No innovación...
 - Pueden acordar entre trabajadores que no se produzca problema incentivos... más de X p/sino les meten la pena.
 - o si sales más tarde de la hora siempre... el día que salgas a la hora malo.

experimento...
 otros estudios... en una planta de trabajo... querian ver como los trabajadores querian
 aprender mas en su trabajo... hicieron dos grupos... para hacer comparativas...
Hawthorne Effect
 • grupo de cambio
 • grupo No de cambio
 por ejemplo cambian las sillas la luminaria etc...
 ambos mejoraban... Aunque uno era Placebo... quizas es pq les estaban observando.

- 1920's – series of experiments at the Hawthorne Plant of Western Electric, Chicago

- Found that simply showing an interest in a group increased productivity *dos formas de ver a los trabajadores:*

→ Todos son unos parásitos y si no están encima de ellos no hacen nada...

- **Theory X:** there is a need for coercion, direction, and control of people at work

- **Theory Y:** work is as natural as rest or play

→ El hecho de trabajar es natural.

El tío responsable...

→ En que entorno nos encontramos?

→ Entonces ver si está el jefe... entonces se ve el comportamiento.

Tenemos que formar un equipo...
proceso selección de personal.

Selecting the Best People

diferencia entre elegible (gente que cumple con las expectativas) (tiene menos de 40 años, tiene la cámara... tiene coche...)

- imagínate que después de cumplir todo eso, no sabe programar en C# por ejemplo. Entonces no es Suitable.*
- Belbin distinguishes between **eligible** (having the right qualifications) and **suitable** candidates (can do the job)
que es lo que le pedimos
cualequiera que estudie informática, le damos el sello de elegible
 - The danger is employ someone who is eligible but not suitable *lo peligroso...*
 - The best situation is to employ someone who is suitable but not eligible!
 - For example, these are likely to be cheaper and to stay in the job

Do Good Software Developers Have Innate Characteristics?

Buscan buen perfil.

- 1968 study – difference of 1:25 in time taken by different programmers to code program
- Other research found experience better than maths skills as a guide to software skills *Alguien experimentado le añade mucho valor.
Encontrar el mejor perfil.*
- Some research suggested software developers less sociable than other workers *Somos gente asocial.
→ ahora el informático interactúa con los clientes / puede diversos perfiles...*
- Later surveys have found no significant social differences between IT workers and others – this could be result of broader role of IT in organizations

Proceso de selección:

A Selection Process

*lo primero es especificar las
Tareas del trabajo. ¿Para qué quiero esta persona? / que función*

1. Create a job specification

- Content includes types of task to be carried out

2. Create a job holder profile *Necesitamos a un doctor, a un licenciado... a quien para desempeñar la función descrita arriba...*

- Describes the characteristics of the person who could do the job

3. Obtain applicants *↗ Pon donde le busco... linkedin.*

- Identify the media that potential job holders are likely to consult. Elicit CVs

A Selection Process (ii)

a hora tienes que analizar todos los CV que te hayan llegado... | capacidad de filtrado.

4. Select potential candidates from CVs *↳ solo necesitas de gente que te interesa.*
 - Do not waste everybody's time interviewing people whose CV clearly indicates are unsuitable

5. Further selection, including interview *Entrevista... lo mejor son hacerlo entre dos personas... así tienen puntos que contrastar.*
 - Selection processes could include aptitude tests, examination of work portfolios. Make sure selection processes map to the job holder profile

6. Other procedures *↗ Te pueden hacer análisis médicos etc.*
 - E.g. taking up references, medicals etc

Instruction in the Best Methods

que haya un proceso de introducción de los trabajadores al proyecto. ya está contemplado... ahora que...

- The induction of new staff should be carefully planned
 - Worst case where new recruit is simply ignored and not given any tasks
- Good induction *hay que hacer un seguimiento cercano.* leads to new recruit becoming productive more quickly
- Need to review staff progress frequently and provide feedback
- Need to identify training that could enhance staff effectiveness

Motivation

¿Que van a ser de ti en X años?
motivacion imprescindible.
↳ manera de superar limitaciones
↑ quizás paso por productividad...

- Motivation and application can often make up for shortfalls in innate skills
- Taylor's approach - financial incentives
- Abraham Maslow (1908-1970)
 - Motivations vary from individual to individual
 - Hierarchy of needs – as lower ones fulfilled, higher ones emerge
 - Lowest level – food, shelter
 - Highest level – self-actualization

Herzberg

*Un man que estudio
la satisfaccion en el trabajo...*

2 factores:

Herzberg suggested two sets of factors affected job satisfaction

1. **Hygiene or maintenance factors** - make you dissatisfied if they are not right
 - e.g. pay, working conditions
2. **Motivators** - make you feel the job is worthwhile
 - e.g. a sense of achievement

Vroom

Otro modo
de medir motivación

Si alguno de estos elementos cae a 0, la motivación es 0.

Vroom and colleagues identified three influences on motivation

1. Expectancy

- The belief that working harder leads to better performance

2. Instrumentality

lo que hacemos si a veces algo?
se va a usar?

- The belief that better performance will be rewarded

3. Perceived value of the reward

¿vuelen recibir de la
recompensa.
Todo lo que he hecho lo van a usar / apreciar alguien?

Oldham-Hackman Job Characteristics

Trabajos mas significativos.

Cual es lo que puede hacer que un trabajo sea más significativo que otro... más importante.

Identified the following characteristics of a job which make it more *meaningful*

- Skill variety *variedad de las habilidades...*
- Task identity *identidad con lo que hago*
- Task significance *significancia. (que signifique algo para el resto).*

Two other factors contributed to satisfaction

- Autonomy *Se autonomo*
- Feedback *lo has hecho bien...*

Methods to Improve Job Satisfaction

- Set specific goals *tiene que tener claro lo que tenga que hacer.*
- Provide feedback on the progress towards meeting those goals *Un que tal lo haces...*
- Consider job redesign *Rediseño quizás*
 - Job enlargement *hazlo más grande...
en el sentido de más funciones*
 - Job enrichment *o haciendolo más rico.
con más capacidad de proponer
Toman decisiones etc...*

Stress

*El estrés es su
justa medida de
estar bien.*

- Edward Yourdon quotes a project manager: *'Once a project gets rolling, you should be expecting members to be putting in at least 60 hours a week.... The project manager must expect to put in as many hours as possible'*
- 1960 study in US: people under 45 who worked more than 48 hours a week twice the risk of death from coronary heart disease
- XP practice – maximum 40 hour working week

Stress Can Be Reduced by Good Project Management

que podemos hacer como jefe de proyecto para reducir el stress.

Good project management should lead to:

- Reasonable estimates of effort
- Good project control leading fewer unexpected crises
- Making clear what is expected of each team member – reduces **role ambiguity**
- Reduced **role conflict** where a person is torn between conflicting responsibilities
- Bullying tactics are a symptom of incompetent project management

Health and Safety

- Apart from stress, health and safety less likely to be an issue compared to other engineering projects
- ... but sometimes IT infrastructure may be set up as other building work is going on
- UK law lays down that organizations employing over 5 staff should have a **written safety policy**
- Management of safety should be embedded in project management

Health and Safety (ii)

- Top management must be committed to health and safety (H&S) policy
- Delegation of responsibilities relating to H&S should be clear
- Job descriptions should include H&S related responsibilities
- Need to ensure those given H&S responsibilities should understand and accept them

Health and Safety (iii)

- There should be a designated safety officer
- Staff, particularly knowledgeable technical specialists, should be consulted about safety
- There should be an adequate H&S budget

Ethical and Professional Concerns

- Ethics relates to the moral obligation to respect the rights and interests of others – goes beyond strictly legal responsibilities
- Three groups of responsibilities
 - Responsibilities that everyone has
 - Responsibilities that people in organizations have
 - Responsibilities relating to your profession or calling
- *Facebook Employees Stage Virtual Walkout to Protest Trump Posts*

Organizational Ethics

- There are some who argue that organizational ethics are limited
- **Stockholder theory** (e.g. Milton Friedman)
 - An employee's duty is to the owners of the business (which often means the stakeholders) above all others – although legal requirements must be met
- **Competitive relationships between businesses**
 - Competition may cause you to do things that could have a negative impact on the owners or employees of competitive businesses

Professional Ethics

- Professionals have knowledge about the technical domain that the general public does not
- Ethical duty of the expert to warn lay people of the risks involved in a particular course of action
- Many professions, or would be professions, have codes of conduct for their members e.g.
 - <http://www.bcs.org/upload/pdf/cop.pdf>
 - <http://www.ieee.org/web/aboutus/ethics>
 - http://www.acm.org/about/se_code

Conclusion

- People may be motivated by money, but they are motivated by other things as well
- Both staff selection and the identification of training need should be done in an orderly, structured, way where requirements are clearly defined first
- Thoughtful job design can increase staff motivation
- Undue pressure on staff can have short-term gains, but is harmful to both productivity and personal health in the longer term
- Project objectives should include, where appropriate, those relating health and safety

Annex: Software Teams Organization

Based on Pablo Santos Conference

Professional Career

- Two paths
 - Individual Contributors, IC
 - Technical focused
 - Managers
 - Managerial focused
- Same career development options
- Jumps are possible

↗ como ingeniero
desarrollo cosas...

↗ No hago cosas técnicas
cosas de gestión...

The Dual Ladder

IC	Manager
	Vicepresident (VP)
Distinguished Engineer	
Principal Engineer	Director
Staff Engineer	Senior Manager
	Manager / Technical Lead
Senior Engineer	
Engineer	

Engineering Coordination

- Senior Manager (Engineering)
 - Team Lead 1
 - ICs
 - Team Lead 2
 - ICs
- No more than 7 or 8 direct reports

Other Roles

- Technical Program Manager
 - Project Manager
- Product Managers
- Designers
- QA
- Support

Key Roles

- Engineers (software developers)
- Product Managers (PMs)
- Designers
- Technical Project Managers (TPM)
- Product Marketing Managers (PMM)

Product Manager (PM)

- The person who identifies the customer need and the larger business objectives that a product or feature will fulfill
 - Articulates what success looks like for a product
 - Rallies a team to turn that vision into a reality

Technical Project Manager (TPM)

- In small companies it is usually the **Technical Leader**
- In large companies there is a figure to coordinate different teams rather than the traditional vision of project management that we usually have
 - More a facilitator/coach than a boss who orders

Product Designers

- They are in charge of designing the product, but beyond the visual
 - Seeking to define how it should behave, in a usable (UX) and understandable way
 - Defining the overall experience: from the moment you register or download it, to the way you use it

Product Marketing Manager (PMM)

Only the PMM focuses on:

- The positioning of a product
- And the specific messaging created for delivering a USP (Unique Selling Proposition)
- By defining the product in the market and separating itself from the competition
- As it drives both prospect and customer engagement

Product Marketing Manager (ii)

Also, the PMM:

- Works with PM and developers
- Plans and executes product releases and launches
- Converts tech product info into marketing and sales messages

Other Marketing Roles

- Content marketers
 - Create blogs, videos, social media to attract interest, generate leads, increase brand awareness and engage with online audience
- Digital/online marketers, growth hackers and demand generation teams
 - Grow the business and reach audience using SEO, email marketing, ad campaigns, hosting webinars
- Business intelligence
 - Collects, stores and analyzes data to help strategic and operational changes

Other Marketing Roles (ii)

- Event coordinators/planners
 - Organize trade shows, conferences, events in general
- Copywriters
 - Write contents in various forms: blogs, paid ads, ebooks
- Graphics designers
 - Put together all the materials and create designs
- Field marketers
 - Run marketing ops in their local markets and languages, including building customer success stories

Top Management

- CEO
- CTO
- CIO

Chief Executive Officer (CEO)

- Highest authority of management and administrative direction
- Typically reports to the board of directors and is charged with maximizing the value of the business
 - In the non-profit and government sector, aims at achieving outcomes related to the organization's mission

Director ejecutivo, director general, director gerente, jefe ejecutivo, principal oficial ejecutivo, primer ejecutivo, ejecutivo delegado o consejero delegado

Chief Technical Officer (CTO)

- Executive-level position in a company whose occupation is focused on the scientific and technological issues within an organization
 - An evolution of the Research and Development manager (R&D)
- Also known as chief technology officer or chief technologist

Director de Tecnología

Chief Information Officer (CIO)

- The most senior executive in an enterprise who works with information technology and computer systems, in order to support enterprise goals
 - Aligns information systems with company plans, prepares and manages budgets and coordinates technical teams
- Also known as chief digital information officer (CDIO) or information technology (IT) director

Director de Sistemas de Información