

Sector map sets careers and learning tracks into perspective*

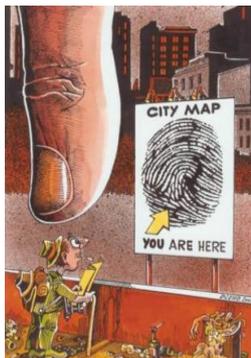
In the wholesale trade of building materials and in the installation technology in the Netherlands, a simple matrix provides in a clear view on staffing and development. This matrix can be compared with a city plan. Like a city plan guides people through the streets of a town and helps them find their position and destination, a “sector map” shows the careers and learning paths of a sector and helps workers to assess their position and helps them set their goals and ambitions, including the ways to get there.

Where am I?

Modern times challenge the “career competencies” of the employees (Meijers 2001). They are supposed to reflect on themselves, on their job, on their future and on the context they work in. The concepts of employability and lifelong learning presume that workers and businesses, (but also policymakers in sector and government) are well aware of their own domain. This is however rarely the case: *“The last thing a goldfish discovers is his own water”*.

The work in a sector has this same kind of *obviousness* for a worker and a similar *unconsciousness* of this vital context as the water has for the goldfish. This lack of consciousness makes it hard or impossible to get the lifelong-learning-message across. That however can rapidly change into a sobering awakening when circumstances change; for instance by getting sacked.

The first question of an unconscious at his awakening is *“where am I? Why should that be different in matters of work and craftsmanship? You have to know where you are to be able to reflect on your position and plot a route into the future. What answers do we have workers who wonder where they are?”*



A public city plan or a GPS answers this question with an arrow and the text “You are here”. If we project this idea of a city map onto the ‘landscape’ of work and education, we are able to draw a map for locating jobs and VET programs.

Level and content

A map normally has two dimensions. To be able to plot jobs as well as VET programs we need two distinguishing dimensions for both items. Level and content seem to do the job. VET programs are dominantly classified by their level. The European Qualification Framework (EQF) for instance distinguishes 8 of those levels. In the given Dutch examples of this article this 8-point scale is simplified to the 5 relevant levels for *vocational* education and training from a basic (1) to a university level (5). We often see that job levels are expressed in similar levels. Salary scales for instance are based on complexity, authority of the jobs. The higher the level of knowledge and skills to be to perform follow this same level orientated structure with a focus on complexity and autonomy of the job.

The level of a program or a job however is just one dimension for its location and doesn’t tell anything about the content, which is essential to get a meaningful classification of craftsmanship.

This is where the sector (as a coherent community of practise) appears as a convenient domain to map out. The content of the work in a sector is usually structured according to the logic of the work itself, to the different work processes and professional disciplines which can be distinguished within the internal organization of firms. VET programs roughly comply to such a classification of work processes. Level and content are powerful structuring principles to achieve a simple and effective classification of both occupations and VET programs. Thus the combination of the two dimensions in a matrix, provides a mutual context, a well recognised background and a frame of reference for workers and students, for

companies and schools, for policy makers in labour and Vocational training; for instance in the Dutch wholesale trade in building materials as shown in table 1.

Tabel 1: Sector map for Dutch builders merchants

| Level | Logistics | Sales office | Field & showroom |
|-------|--------------------|------------------------------|----------------------|
| 5 | Logistic manager | Product manager | Marketing manager |
| 4 | Chef expedition | Technical specialist | Account/area manager |
| 3 | Storekeeper | Back office / sales employee | Field worker |
| 2 | Warehouse employee | Desk clerk | Receptionist |
| 1 | Order picker | - | - |

The jobs in red are the key jobs of the sector.

Here you are!

Unlike finding their position as a visitor on a foreign city plan, employees don't need an arrow to point out their position as a worker on a sector map. They are like a fish in their justly discovered water and their location is evident on the coordinates of level and content.

As soon as they found their place on the map, workers can (and do) reflect on their current and professional future (Beilisma 2002).

The awareness of one's position immediately tempts for an opinion on that position in terms of development. If you are here: what would you like to do next?

The different directions of professional development can be set out from each position in the map and can be shown by tabel 2.

Tabel 2: directions of professional development.

| | | |
|-------------------------------|---|-------------------------------|
| Widen and deepen | Deepen my knowledge and skills | Widen and deepen |
| Widen my knowledge and skills | <p>Here I am and I'd like to ...</p> <p>keep up with the innovations in my work</p> | Widen my knowledge and skills |
| Refresh and widen | Refresh my knowledge and skills | Refresh and widen |

Keeping up with new developments in your work is a matter of doing the new programs on new subjects within the cell of the matrix of your job. Refreshing means you also have to look at knowledge and skills you acquired in the past: do you still have at the level required in your

current and future tasks? Widening implies to do the VET programs of the cells at the same level to the left or the right. Deepening of your knowledge and skills is a matter of doing the programs in the cell above you in the matrix to be able to perform on that higher level of jobs.

Labour in motion

The dominant career development for builders' merchants follows the diagonal line of the in red marked key jobs in table 1.

The job mobility takes place in small steps as shown in table 3; transitions from one job to another, in line with the professional growth of the individual employee and the opportunities for such steps in the organisation.

Tabel 3: job transitions for builders' merchants

| Level | Logistics | Sales office | Field & showroom |
|-------|--------------------|----------------------|-------------------|
| 5 | Logistic manager | Product manager | Marketing manager |
| 4 | Chef expedition | Technical specialist | Account manager |
| 3 | Storekeeper | Sales employee | Field worker |
| 2 | Warehouse employee | Desk clerk | Receptionist |
| 1 | Order picker | - | - |

These transitions can be specified to content (What is the difference in job requirements?) and number (How many employees make such a step each year?).

The sector map provides a background for qualification and quantification of labour and labour dynamics. Each cell of the matrix can be filled with job descriptions, amount of workers, replacement and growth statistics, inflow, throughput and outflow of personnel, shortage or surplus figures.

Statistics presented in a sector map become evident and easy to read. The often latent demand for development and VET programs becomes articulated. With such an articulate demand and understanding of labour market dynamics, the sector presents itself as a serious interlocutor for VET providers and governments.

A common frame of reference

As mentioned above, it's not just careers that are easily projected on the sector map. Learning paths can be plotted along the same coordi-

nates of level and content and thus be compared with the associated jobs. In table 4 and 5 we compare the sector map of installation technology filled with jobs (4) and with VET programs (5)

Tabel 4: *sectormap of the installation technology*

| Level | Cooling | Heating | Service and maintenance |
|-------|------------------|------------------|-------------------------|
| 5 | Project manager | Project manager | Projectmanager |
| 4 | Senior mechanic | Senior mechanic | Service engineer |
| 3 | Medior mechanic | Medior mechanic | Service man |
| 2 | Juinior mechanic | Juinior mechanic | Assistent |
| 1 | Assistant | Assistant | - |

The jobs in red have vacancies that are hard to fulfil.

Tabel 5: *Qualifying VET Programs in installation technology*

| Level | Cooling | Heating | Service and maintenance |
|-------|-----------------------|-----------------------|-------------------------|
| 5 | Graduate program | No programs available | No program available |
| 4 | Intermediate programs | Intermediate programs | Intermediate programs |
| 3 | | | |
| 2 | | | |
| 1 | General basic program | | Irrelevant |

When we project the VET programs available on the jobs of the sector, we see several blind spots in the sector map. It will be no surprise to find out that these blind spots (senior mechanics and project managers) are similar to the vacancies that are very hard to fulfil. (Sprengers, 2000) The shortage of those specific professionals can be easily explained by the lack of relevant VET programs. From an individual point of view: How to become a project manager cooling or heating if there is no accommodating curriculum?

The gap between (vocational) education and business is narrowing as soon as people can see at a glance if and how the match is made between jobs and VET programs.

Mandatory asset

This simple example shows the potential of the sector map for establishing matches and mismatches in staffing and educational infrastructures. The sector map provides a strong and clear background to the discussion of mobility, allocation of labour, craftsmanship, innovation and professional growth.

Like any self-respecting town has a city map on every access route and on all key locations of the town, so should any self-respecting sector develop a sector map. In our opinion it is an essential asset, a bare necessity for strategies, research and communications on labour and education, for school leavers, students, workers, businesses and VET providers.

Literature

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