

At home with IT

how governments make the
information society happen



A report from the Economist Intelligence Unit
Sponsored by Intel and Microsoft



Preface

At home with IT: how governments make the information society happen is an Economist Intelligence Unit white paper, sponsored by Intel and Microsoft.

The aim of this report is to clarify what governments around Europe hope to achieve and what they have achieved through schemes to boost computer penetration at home. It analyses what kinds of programmes bring the best results and whether the whole concept of subsidising computer penetration is a great idea—or a waste of taxpayers' money.

The Economist Intelligence Unit bears sole responsibility for the content of this report. The Economist Intelligence Unit's editorial team conducted the interviews and wrote the report. The findings and views expressed do not necessarily reflect the views of the sponsors.

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Executive summary

Government programmes, designed to encourage people to use computers at home, are thriving across Europe. Far from dying out soon after they were introduced in the late 1990s, as some predicted, they have continued to flourish and evolve. They are widely seen as an important policy instrument to speed a country's shift towards becoming an information society.

The first subsidised computer initiative began in Sweden and the trend quickly spread across northern Europe. But much of the new focus of activity is in southern Europe—France, Spain and Italy—where IT skills are still relatively low. Governments here, learning from the experience of their EU peers, have become more creative in building programmes to target a variety of specific groups. Now initiatives are also starting to emerge in the new EU member states and accession countries, which rank towards the bottom of EU information society league tables

But are these initiatives really effective in improving computing and internet skills in the population? And why have some schemes proved to be so successful, while others have fallen flat? Based on interviews with key figures from government and industry from across Europe, this white paper examines the schemes available today, assesses what progress they are making, and weighs up the factors that contribute to their success or failure.

We argue that the big question for governments is not whether the benefits outweigh the costs—best practice experience from around Europe bears that out. The big issue is how to implement programmes to ensure they work effectively.

Key findings of this report include:

- **Successful programmes depend on clear objectives and target groups.** Most existing computer purchase schemes focus on employees and university students, both relatively privileged groups, with a higher chance of actively using the equipment and contributing to economic development. But these programmes do not narrow the digital divide within a country—and may even make it wider. Now governments are starting to focus on non-traditional IT users too, but these need separate “digital divide” programmes with different approaches, appropriate to the needs of each group. Mixing objectives in a single programme compromises the results.
- **Programmes need to evolve with changing realities.** Since the first programme started in the late 1990s, computer prices have fallen steeply, the internet has become ubiquitous, e-government has emerged as an alternative (and increasingly) standard form of public service and digital multimedia products have expanded the capacities of home computers. Changes of this kind need to be reflected quickly in government programmes to keep them relevant.
- **Communication is vital to success.** Even the best initiatives need a very strong marketing campaign to generate awareness, ensure strong take-up and build a broad political consensus behind the initiative. A good campaign, backed by IT suppliers, can turn a non-runner into a success. Communication also extends to measuring results, both in terms of numbers and impact.



- **Close partnership with the private sector is crucial.** One thing successful schemes have in common is a strong partnership between IT suppliers and the government. This provides considerable additional financial resources, know-how and momentum. On the other hand, governments must handle industry firmly to avoid schemes turning into merely a commercial, rather than a national, success.
- **Programmes must focus closely on the needs of beneficiaries to be effective.** Governments need to ensure that all participants can use the scheme easily and understand its benefit. For programmes targeting non-traditional users, this can mean reshaping the package to focus on training rather than just on equipment.
- **Tax benefits are not necessary for success.** While the best-known initiatives are based on tax exemptions, these can generate strong opposition from tax authorities and are often inappropriate for flat-tax countries. Schemes such as the €1-per-day student programmes in southern Europe show the potential of alternative private-sector financing models.



Making the information society happen

No government is happy to be seen lagging behind in developing an information society. So it's not surprising that countries watch international IT rankings closely and are anxious to find ways to broaden and deepen IT literacy. Key elements like computer penetration, IT skills and e-readiness create a supply of people able to take up secure well-paid jobs—the alternative is to be stuck competing for low-cost manufacturing.

One of the easiest and most effective ways to accelerate IT skills is by learning on a computer at home. Workplace training is too limited and public terminals are too inconvenient. That's why a remarkable variety of government programmes is emerging around Europe to encourage IT literacy and usage by enabling people to have computers—and increasingly internet access—at home. These programmes reflect an increasingly wide span of environments and objectives. They range from Sweden's pioneering work aimed mainly at company employees, to Spain's recent policy of targeting many specific groups, from teenagers and old people to prisoners. Some base their whole scheme on tax incentives, whereas others use public subsidies and private-sector financing.

This report will explore the variety of government programmes, analyse their motivations and methods, and assess the successes and failures of the various projects. It will argue that the experience around Europe shows that the benefits of these schemes can clearly outweigh the costs. The big question for governments is how to shape and implement programmes to ensure they work effectively.

Programme portfolios

Governments are getting more inventive about how they approach programmes to encourage IT usage, building on the experience of other countries and responding to changing technological realities and needs. Having tried out one, many countries are now adding new schemes, targeted at different groups of people (see table). But despite the wide range of options, the schemes fall

broadly into three categories:

- Employee programmes where employees buy or lease computer equipment from their employers tax free, as in Sweden and the UK. Companies get an attractive, tax-free perk to pass on to their employees, while improving their workforce's IT skills.
- University/school programmes in which students or pupils' parents buy computers and technology, at a discount, through their schools, colleges or universities (for example in France, Italy, Portugal and Romania). In some cases, the government invests in wireless infrastructure and online content as part of the programme.
- Digital divide programmes which offer discounts and tax breaks to groups of people—retired people, teenagers, poor families—who are lagging behind in the use of IT, due to lack of money and/or unfamiliarity with technology. Spain, Italy and Belgium have recently launched innovative programmes along these lines.

Employee programmes

Employee programmes were the birthplace of government schemes to promote home computer use. Sweden was the pioneer, introducing its scheme in 1998. But the idea didn't come from the government—it was initiated by labour unions at Sweden's Volvo car-maker which argued that blue-collar workers were being deprived of the benefits of personal computing, compared with their white-collar colleagues. The government responded by allowing the purchase price of a PC to be deducted from employees' salaries as monthly repayments, spread over a period of three years. In addition, the computers are tax-free—a big benefit, with VAT at 25%. Technically, the PCs are leased to employees, who can buy the computer at the end of the leasing period at a favourable price.

In the first year, 600,000 units were sold under the scheme, causing near-panic amongst the tax authorities.



This year, the forecast is for sale of almost 300,000 computers, with some employees refreshing their equipment for the third time. That boosts the impact on PC penetration, since people pass on their old computers to other household members. The results have been very clear. In 1997, before the programme began, home PC penetration was 40%. By 2001, it had risen to 80% and is now estimated at some 90%— the highest in the EU.

With the model set up by Volvo, the company in effect underwrites around half of the cost, which includes help-desk support. A condition is that employees train at home on their own time and take an IT knowledge test. Things have of course evolved over time. For a start, the price of PCs has dropped to one-fifth of the price in 1998. So Sweden has capped the tax break at a

still generous €1,100 per year to stop employees buying, say, a wildly extravagant 42" flat screen and still using the tax discount. Employees now also have the option of including internet access in their package.

UK: getting it right

Following Sweden's example, the UK government introduced a similar tax incentive programme in 1999, enabling businesses to loan computers and computer equipment to their employees as a tax-free benefit worth over €700 a year. But after the initial announcements, the scheme fell flat—the government had failed to work on follow-up and communication and, four years on, only 20 companies had signed up. The programme only began to take off in 2004, when the government relaunched the scheme as the Home Computing Initiative (HCI) in close partnership with the

Royal Mail delivers PCs to its workforce

Faced with mounting pressure to increase IT skills across its workforce, the UK's Royal Mail Group, which delivers more than 80 million items each day, joined the Home Computing Initiative, Britain's employee purchase programme, in 2003. Today 90% of new jobs at Royal Mail require basic knowledge of how to operate a computer. IT training at on-site learning centres was one option for increasing employee skills, but it was impractical for such a large dispersed workforce which did not have day-to-day access to a computer. "By giving employees the chance to use a computer in the home, we hope that they will bring their new knowledge to bear in the workplace," says Tony McCarthy, Group Human Resources Director, Royal Mail.

Research showed that only 13% of Royal Mail employees had a computer at home—way below the national average of 65%. The main barriers were lack of confidence with technology and also the perceived cost of a computer compared with other consumer electronics. In addition to the computer purchase

programme, Royal Mail signed up with a third party to provide software and training.

Employees pay an average of around €9 a week over three years. In the first three weeks of the scheme, 16,500 employees signed up—almost 10% of the overall workforce. Royal Mail used brochures, magazine articles and other ways to publicise the scheme but the most effective communication channel was word of mouth. "Once people see the benefits of an HCI scheme and the minimal impact on their salaries, they spread the news very quickly," says Mr McCarthy.

Unlike some of its more focused benefits, such as childcare vouchers, an HCI scheme appeals to nearly everyone. "It also helps in our drive to become a single status organisation, where everyone enjoys the same privileges and opportunities, and where the only differentiator is salary."



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IT industry. Over 2,000 companies and organisations now participate.

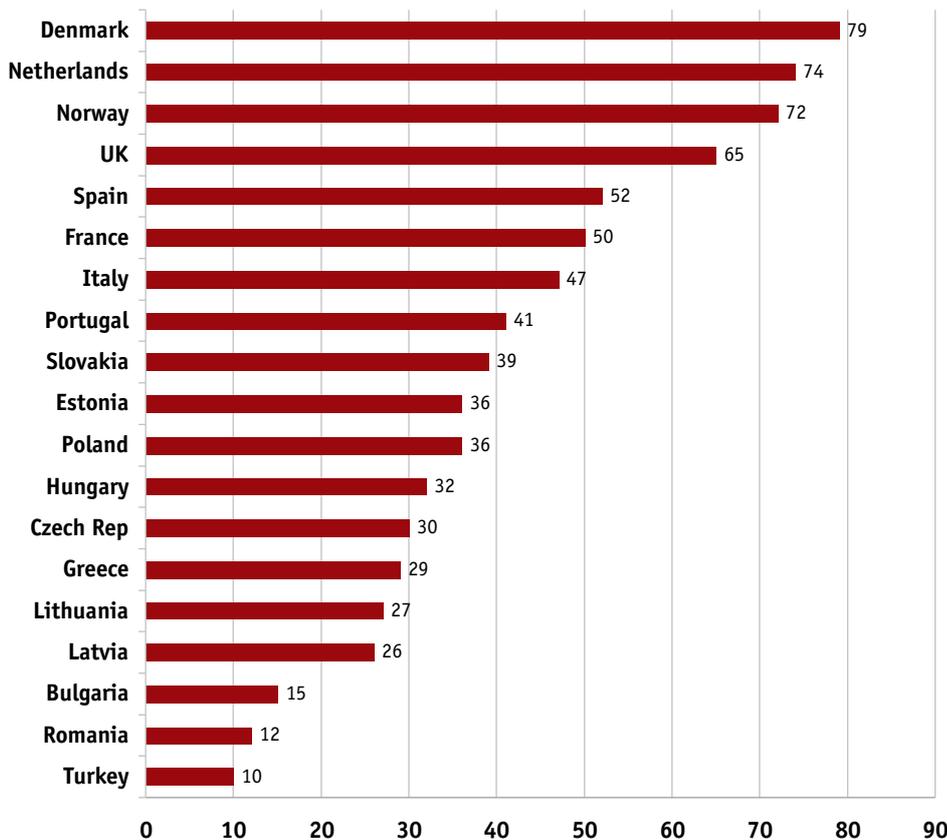
British companies can effectively offer their employees PC packages with a discount of up to 60% on the normal retail price. The scheme involves a salary sacrifice-based payment over 18-36 months, with full income-tax protection and exemption from VAT. The government is hoping to include broadband internet access in the package soon.

Within the past two years, 500,000 employees have acquired home computing equipment through HCI schemes. Many of the larger businesses led the way in

implementing HCI schemes, but recent findings suggest that growing numbers of small- and medium-sized businesses are now following suit. Indeed, the number of participating companies more than tripled in 2005 (and 75% of employees taking up HCI computers are lower-rate tax payers, helping the government's political message).

Despite their success in boosting home computer use, these tax-free employee schemes are not so popular with finance ministers, who focus on the lost tax revenue, which is impossible to calculate in advance. Even in Sweden, various governments—pushed by the tax authorities—have made unsuccessful attempts to stop the employee scheme.

Personal computer at home, %, 2004



Source: Eurostat survey on ICT usage in households and by individuals, 2005 (does not cover Belgium and Sweden)



In the Netherlands, they succeeded. The long-running PC-Privé scheme was withdrawn in 2004 as part of a series of government cut-backs. Although the scheme was considered very successful in boosting household PC penetration to 74%—among the highest in Europe—it had also allowed for abuse. The sales agreements were so loose that they allowed people to buy a PC in a store tax-free then trade it in for a refrigerator the next day! Nevertheless, the impact of stopping the scheme was immediate: the PC market ground to a halt and the Dutch voters were not happy.

University/school programmes

Some governments have opted for a more strategic approach to boosting home computer use and diffusing IT skills throughout the economy. Instead of encompassing all employees, they focus on purchase programmes for students or school pupils. The aim is to improve home access to computers for the more IT-active young generation, thus spreading IT skills to family, friends and later into the workplace. “It’s a viral approach,” says Joao Nuno Castro, who helped develop such a scheme for Portugal’s government IT department UMIC. “Each student tell his friends and family; later, he’ll put these ideas to work in companies and at home. It’s a gateway to reach everybody.”

Portugal: innovative approach

Portugal’s Virtual Campus scheme was launched in 2003 and the impact has been substantial. EU statistics for 2004 show Portugal’s overall home computer penetration rate still to be low at 41%, but student internet usage is over 90% (higher than in the Netherlands), compared to 29% for the population as a whole.

The scheme worked on both supply and demand. Universities tapped EU funds to co-finance online content and wireless networks at 64 universities on 200 campuses throughout the country. And students could get cheap loans from participating banks to buy state-of-the-art notebook computers provided at a good price by participating IT firms. Loan repayments were just €1

a day. UMIC worked very closely with banks and industry players to ensure the programme had maximum effect. “We knew the project would have a huge impact on their market by connecting 400,000 people,” says Joao Oliveira, information officer of UMIC. “So we thought they could help us to make the impact even bigger.”

France: best product, best price

Portugal’s novel approach has encouraged other governments to adopt similar schemes. France was not only battling a weak overall IT record, but also a higher education sector that was lagging globally. In addition, in terms of computer equipment and IT usage in education, universities compared poorly to the country’s high schools.

France’s Micro-portable Etudiant programme for university students was launched in 2004. As in Portugal, the government invests in wireless infrastructure and online content in the universities, and encourages students to buy laptops, using a special low-rate loan (set up by the government with financial institutions), repaying €1 per day over three years.

PC vendors have to supply special systems for students, representing a reduction of around 20% from the normal price. But low price is not the key criterion. “The aim is the best product you can get for the price,” says Benoît Sillard, director of the French government body Délégation aux usages d’internet, aimed at encouraging internet take-up in the country. Requirements include three hours of battery life and no more than three kilos in weight. For their part, students have to undergo training for a certificate in IT, which carries points for their overall exam results.

The scheme has been a great success in its first year. Almost every university has now deployed wireless networks, installing more than 5,000 wi-fi hotspots. Close to 400,000 students have bought notebooks and industry statistics show that the average selling price is rising slightly from quarter to quarter—reaching €1,365 in the final quarter of 2005. The programme is being continuously improved, with progress tracked by the independent research firm GfK on a monthly basis. “We can see where



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results were good or not so good and can address problems,” says Denis Haehnsen, head of strategy at Intel France, which is participating in marketing the programme.

Italy: cappuccino computers

Italy has also adopted its own version of the student scheme, dubbed A c@ppuccino for a PC. Starting in February 2006, university students can obtain a bank loan of up to €1,200, guaranteed by the state, to buy a notebook computer with internet connection and wi-fi capability. To pay back the loan, as in France and Portugal, the student pays the equivalent of €1 per day—the price of a cappuccino. In addition, the government has put aside a fund of €10 million to provide poorer students (those exempt from fees) with a €200 bonus off the total price of the computer. Students have 1-3 years to pay back the loan. Universities can also obtain government co-financing for a wireless internet connection on university premises.

For governments in the new EU member states and candidate countries, the student loan model is very

attractive. Like Portugal, they are in dire need of boosting computer penetration from low levels. They are also cash-strapped and using tax exemptions is often difficult since many countries have adopted flat taxes that wipe out exemptions and privileges. So persuading banks and IT companies to help organise, finance and market high-quality programmes is a good option.

Bulgaria: overcoming hurdles

That was Bulgaria’s thinking when it adopted a French-style student programme in 2005. The government agreed to invest in wireless infrastructure in the universities, while five local companies agreed to sell high-quality notebook computers at good rates. So far, so good, but the programme then ran into trouble. First, the government failed to communicate what the programme was about. Students frequently heard from their professors that the wireless network was reserved for faculty use. Worse, the whole programme got forgotten as a new government came to power in elections.

The new government, seeing that the wi-fi investment

Wings beneath their feet: Italy homes in on 16-year-olds

Government PC programmes can be used effectively to target closely defined demographic groups. Vola con Internet (Fly with the Internet) was the Italian Ministry for Innovation’s first programme for promoting PC ownership and use. Started in 2003 and now in its fourth year, this programme offers all Italian 16-year olds a €175 grant towards purchasing a computer.

Each year, those who will turn 16 during the year receive a letter from Minister Lucio Stanca with a PIN number, which they can take to a qualified re-seller (listed on the ministry’s website) to receive the discount off the price of a computer. In addition to the financial incentive, the programme offers the teenagers a contribution of €100 towards getting a certificate for basic computer skills. The

ministry’s website lists qualified test centres where the bonus can be used.

In its first year of operation, Vola con Internet wasn’t particularly successful. But with advertising campaigns on all public TV channels, sales are now growing strongly. The ads appear in May-June, just before school’s end, aiming at parents who want to reward kids with a PC for doing well in school, and in November-December, in time for Christmas.

The results have improved each year. In 2003-04 just over 40,000 16-year olds took advantage of the bonus. In 2004-5 the number jumped to nearly 55,000 (about 10% of those eligible). Results in 2005-6 are expected to be even better, as word spreads about how the programme works.



Internet usage by individuals*, 2004, %

	Students	Employees	Unemployed	Retired	TOTAL
Sweden	96	86	86	45	82
Netherlands	90	82	76	54	69
UK	94	74	51	24	63
Germany	94	74	57	23	61
Spain	90	52	37	6	40
Italy	74	42	29	6	31
Portugal	91	37	15	3	29
Lithuania	87	33	8	1	29
Poland	81	36	17	6	29
Hungary	87	33	17	3	28
EU 25	85	60	40	13	47

Source: Eurostat

*internet usage refers to using the internet at least once in the three months prior to the survey

is already in place, is now working to get the programme back on track. But the scheme still faces one key obstacle: the banks have no interest in giving low-interest loans to students. With easy money still to be had with other target groups and products, banks see students as risk rather than opportunity. As a result, the catchy cappuccino-a-day mentality is replaced by piles of documents and high-interest loans to students' parents.

Romania: social versus IT goals

Romania has taken a different approach to targeting the young generation—issuing vouchers for computers through schools. Driven by Varujan Pambuccian, president of the parliamentary IT commission, Romania has seen something of a renaissance of its IT industry over the past few years, but the country is poor and home PC penetration rates are only 12%, among the very lowest in Europe. In 2004, Mr Pambuccian organised industry players and persuaded the government to pass a law, launching a targeted initiative for the education sector.

“Our motivation was clear: we have already had a successful programme to get computers into schools. But people didn't have them at home,” says Mr Pambuccian. The Euro200 scheme, known for the value of the subsidy voucher handed out to eligible participants, is run jointly by the ministries

of IT and education. But Mr Pambuccian didn't get his way on how the programme would be targeted. He wanted the vouchers to be available to all pupils in the first year of high school, boosting IT skills for the young generation. But political pressure resulted in a scheme whereby all young people under 25 could apply for the subsidy through schools, if their family incomes were below a certain threshold.

The results were promising but mixed. Over 500 local systems integrators and assemblers were involved in implementing the scheme. International IT companies provided additional elements: Intel produced a CD called PC Basic for all participants in the programme, while in 2004 Microsoft provided free operating systems. As in Bulgaria, banks were not willing to get involved, but some systems integrators stepped in with special financing deals. In the first year, there were some 80,000 requests for vouchers, but financing was only available for 25,000. The income level for eligibility was reduced for 2005 and 27,000 vouchers were issued. That boosted computer sales in Romania by an additional 5% or so a year.

But Mr Pambuccian is now trying to push the programme back to its original intentions: limiting the eligibility to first-year pupils but with a higher income cut-off. “Most of the vouchers didn't reach the target. They went to those



Why do governments subsidise home computers?

When governments launch home computer programmes, they generally talk in broad terms about driving forward the information society and narrowing the digital divide. But at a more concrete level, it is one or more of the following objectives that have persuaded governments to take action—and to develop schemes further once they have begun:

- Improve overall economic competitiveness and productivity by upgrading the IT skills of employees and small businesses.
- Ensure that the young generation not only has IT skills but can use computers and the internet to access better learning and improve the impact of formal education.
- Enable e-government—and ultimately cut the costs of public services. If only half the population is doing their taxes online, there will be no net gain.
- Equalise the competitive advantages of different parts of society, by allowing those otherwise excluded from the benefits of IT to participate.
- Internal balancing up—for example, bringing universities up to the internet penetration level of high schools.
- Introduce and maintain initiatives that are popular with voters and stakeholders (employees, unions, companies, students, etc).
- Get more employees working at home for some of the week, to cut traffic congestion and pollution and improve citizens' quality of life.
- Equip the next generation of senior citizens with the skills and opportunities needed to cope with rising retirement ages and declining pensions.
- Raising the populations' IT skills level is also vital to counter the shifting of higher-value services offshore and to drive innovation through R&D.
- Or simply to bring household penetration and internet usage in line with other countries.

who didn't really need them or use them—many of those getting computers will never graduate from high school," he says. "If just 20% of first class pupils got computers that would make a big difference."

Hungary: missing the target

The Hungarian government has also focused its IT efforts on schools, through a broad programme known as Sulinet (School Net). In addition to successful schemes bringing broadband access and computers to all schools, one part of the programme, Sulinet Express, focuses on home computers. Introduced in 2003, it allows teachers, students and parents of pupils to claim a tax allowance of up to €290 on home computers and other electronic equipment.

In its first year, participating retailers sold well over €100 million worth of equipment—50% higher than planned. But by including everything from digital cameras to gaming devices in the package, the scheme was merely a commercial success, not a political, social or economic one. Indeed, instead of the expected 100,000 new PCs that Sulinet Express was meant to have sold, it managed only 35,000. One press report damningly described the project as "state-funded digital cameras for middle-class teens".

As a result of the distortions, the rules have been changed—most products have disappeared from the list and eligibility rules have been tightened to restrict the programme to poorer families. But the damage was done to the programme's credibility. Now the restrictions have become so tight that critics say that it only applies to tax cheats or those who would never buy a computer in the first place. Moreover, fewer and fewer PCs have been sold under the scheme each year. Instead of the home computer penetration levels of 50-60% that Hungary had wanted to achieve, it is still hovering just over 30%.

Digital divide programmes

Employee and student schemes have been the most prevalent across Europe to date, but both focus on groups that are already relatively privileged. The logic from the



IT perspective is clear: it makes sense to target people with a higher chance of actively using the equipment and contributing to economic development. But that does not always match political logic, where governments have as much interest in tackling the digital divide within their countries as with their European neighbours. Now many governments are adding additional targets to their portfolio of programmes—non-traditional users.

Spain: a socialist approach

A prime example is Spain, where the socialist government is taking an unusually wide-ranging approach to its PC initiatives. It is committed to promoting digital inclusion, it says both to boost the country's

competitiveness and to improve quality of life. It has identified six segments of the population that will receive subsidised access to IT, each in its own way: the excluded (unemployed or disabled), older people, teenagers, students, small business and employees in large companies. The scheme is being run in parallel with a government project to bring wireless broadband to the entire country, including rural schools, libraries and internet access centres.

“This programme is focused on trying to get people all around the country to see that using the new technologies is not as difficult as most of them believe,” says Cristina Trijueque Alosete from the department of

Selected countries	Main programmes*	Type of programme	Date of launch
Belgium	Internet for All	Digital divide	2006
Bulgaria	Student programme	University/school	2005
France	Micro-portable Etudiant	University/school	2004
	Employee Purchase Programme	Employee	2001
	Internet Accompagné	Digital divide	2005
Hungary	Sulinet Express	University/school	2003
	Employee Purchase Programme	Employee	2004
Italy	Vola con Internet	Digital divide	2003
	A c@ppuccino for a PC	University/school	2006
	Go with internet/PC for Families	Digital divide	2002
	Employee Purchase Programme	Employee	2006
Netherlands	PC Privé	Employee	1999-2004
Portugal	Virtual Campus	University/school	2003
Romania	Euro200	University/school	2004
Spain	Todo.es	Digital divide	2005
Sweden	Employee Purchase Programme	Employee	1998
UK	Home Computing Initiative	Employee	1999

*some countries have other small programmes that are not discussed in this report



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strategic development at Red.es, a government agency promoting the information society. “We are at the bottom of the list in Europe in using the Internet and we want to improve this position.”

Belgium: IT phobics online

Belgium is also just about to launch a scheme to introduce non-users to computers and the internet. The government had tried to get an employee purchase programme off the ground, but it had had little political support. Nevertheless, it felt it was lagging the neighbouring Netherlands and decided to target the large group of individuals in the country either scared of technology or not getting access to it—in large part, because they threatened Belgium’s attempt

to make e-government the norm for public services.

As a result, the new Internet For All scheme has an interesting twist. The basic package consists of a VAT-free, low-priced PC package bundled with broadband and a card reader for e-government purposes. The government’s aim is to supply the whole population with electronic ID cards by the end of 2006, from 20% at the start of the year. That would make Belgium a world leader. As a pre-cursor to the programme, the IT industry association heading the scheme ran a zany campaign based on a character called Jeannette, a housewife from the 1950s with IT phobia. The aim is to get the population confident about IT usage. Even well-known actresses have appeared on TV dressed up

Policy guidelines

Set clear objectives and targets. This may seem obvious, but sometimes the schemes are not thought through in terms of what needs are to be addressed and what targets are meant to be achieved. Do not start by attempting to help every citizen at once!

Form strong partnerships with the IT industry. It is not necessary to offer tax breaks to achieve success, but programmes usually require strong backing from the IT industry, in particular for promotion, sponsorship and logistics. But don’t let companies determine the objectives and content: firm guidance within government is crucial.

Communicate benefits clearly. Several projects have fallen flat, and remained the government’s best-kept secret, due to a lack of marketing and communications push at the outset. Again, the IT industry’s support is vital to get this going, and sustain it.

Make programmes simple to implement. A common mistake has been for governments to make the process of taking on a PC scheme bureaucratic and slow to implement for users, companies and IT suppliers.

Set clear limits on purchases. Projects are open to abuse by users and suppliers. Set a limit of what can be spent on equipment tax-free, and on what sort of equipment can be bought. But don’t set the level too low—it’s important to have minimum technical specifications to ensure equipment is up-to-date.

Consumer protection. Depending on local laws, protection may need to extend to the consumer, who may have a problem with the supplier, for example on support. Users need to have confidence they’ve got the right deal.

Do not ignore training. Consider tax breaks or allowances for tuition at home to ensure widespread take-up. France has made this central to its household programme, including training for salespeople in retail stores.

It is a long-term commitment. When giving tax breaks, governments have to be prepared to take the hits: the Swedish government is likely to spend €200 million in 2006. Tax authorities are often hostile to these schemes, but withdrawing a popular programme can be difficult.



as Jeannette, effectively raising awareness of the PC as a positive thing and encouraging people to get online.

France and Italy: portfolio approach

France, too, is about to add a programme targeting those who think computers and the internet are not for them. Dubbed Internet Accompagné, the French programme focuses its attentions on combating the fear surrounding new technologies. Instead of only offering people benefits to buy computers, it allows participants to spend up to €1,830 on IT equipment and training tax-free each year and provides at least four training sessions for new PC-owners at home. In addition, salespeople involved in the scheme are coached in how to approach IT beginners: “They don’t talk about bits & bytes,” says Denis Haehnsen, head of strategy at Intel France. “Just usage.” Around 200,000 units are expected to be sold in 2006. The target is to get 500,000 households equipped per year, reaching penetration of 61% in 2008.

Italy’s approach is to develop a portfolio of schemes, mostly with a limited budget and time-span. Its PCs for Families scheme, which ran over the last few years, gave €200 discounts on computers to families with a net income of below €15,000. In 2005, the €100 million budget was used within three months. This year, projects are focusing on public-sector employees, students and teenagers (see box, Wings beneath their feet).

Success and failure: what works?

Look at the experiences of European governments’ computer promotion initiatives and four lessons emerge from the various approaches:

- Don’t forget to market the programme properly, both to ensure its success and its long-term political viability
- Make it easy for beneficiaries to use
- Work closely with the IT industry and other private sector players to get the most out of PC programmes, but don’t let them set the goals
- Measure the impact not just with numbers of computers but also in terms of information society objectives

Do good and talk about it

When the UK first launched its employee purchase programme in 1999, nothing much happened. The French faced the same problem a few years later, when they tried to launch an employee scheme, as did the Bulgarians and Lithuanians more recently. The main mistake they all made was to devise a clever programme, but forget to sell it well. The challenge is not only to communicate to the potential beneficiaries (in this case, both companies and employees) using the right messages and channels—but also to communicate to tax-payers at large that this is a worthwhile use of their money. Without the former, the programme will not achieve its aims because of low take-up; without the latter, it can be marginalised or withdrawn by new governments or hostile finance ministers.

A review of the UK programme in 2003 concluded that most companies were unaware of the available tax relief for their employees. The solution for the UK was to relaunch the initiative, tapping into the marketing know-how and resources of IT companies, who would in turn benefit from the programme’s success in the form of higher sales. Other governments have developed their own successful campaigns. In Italy, key IT ministry officials were old hands from international IT companies, and that showed in their marketing. For the C@ppuccino student project alone, for example, they had:

- a campaign in the mass media
- 1.8 million tall “totem” figures in cardboard at all 800 university faculties, explaining the details of the programme and carrying brochures to take away,
- a university website with all details
- dedicated pages on the websites of the IT and education ministries’ websites
- 1 million brochures, published in collaboration with Intel

The French government also successfully developed clearly targeted promotional campaigns for its programmes, using the IT industry where it could add value. With its student programme, for example, the French education ministry’s PR campaign generated more than 1,000 press articles



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in a year, as well as radio and TV coverage. In a survey, well over two-thirds of students knew about the scheme. Compare that to Bulgaria where students believed the same type of scheme was just for professors.

But while the French government was in charge of the marketing and communications, participating industry players developed advertisements and roadshows on campuses across the country—and paid for them. “Industry pays, but we’re in charge of marketing,” says Benoît Sillard, director of the government’s Delegation aux usages d’internet. The IT industry was happy too. “That’s where the government has been instrumental,” says Denis Haehnsen, head of strategy at Intel France, which worked with the government on the campaign. “It’s been a very strong communication medium.”

Easy to use

One reason that computer initiatives fail to take off is that potential participants—whether users, employers, retailers or IT providers—perceive the programmes to be too complicated to be worth their while getting involved. Sometimes that is purely a matter of communicating how easy to use the programmes are.

This has been the approach of the Spanish and French governments with their new digital divide campaigns. Spain spent €16 million on a 16-month campaign ending in February 2006 called Todos.es, focusing on the message that the internet is not as difficult to use as people believe, offering on-the-spot courses where people get to use PCs to browse the Internet—some of them for the first time.

France even went a step further in its Internet Accompagné programme, building the benefits of the scheme around training, rather than the provision of equipment. It found that the main barrier to internet use was fear and a feeling of being uncomfortable with technology—studies showed people regard it as very complex. “You’re alone at home when you have bought a PC,” says Mr Sillard. The scheme offers a minimum of four hours training at home, spread over separate sessions. Participants can buy additional lessons to learn specific

skills, like managing photographs on the PC. (One newspaper estimated this would create 30,000 jobs for trainers).

But it is not always just a matter of changing perceptions—often, first-effort initiatives are cumbersome and unappealing. This is also what the UK government found in 2003 when it looked into the lack of interest in its employee schemes. The tax authorities had been quick to draw the conclusion that the failure was due to a lack of demand. But research showed that the original scheme had made many blunders.

- It had failed to explain to companies why they should participate. The guidelines outlining the system to companies were “hastily written and confusing”, according to Adrian Goodall, the UK government’s senior e-policy advisor.
- The few companies who were aware of the tax benefits for their employees were discouraged from participating by the perceived complexity of the tax regulations and the bureaucracy they faced to get scheme approval.
- IT providers were discouraged from offering the scheme to employers by an overly long and complex sales cycle.

Relaunched as the Home Computing Initiative in 2004, the scheme clarified the regulatory position, produced an easy-to-use implementation guide for employers, and got the IT industry to communicate the benefits of the initiative. Indeed, 45 IT companies employ sales staff to contact potential companies directly and promote the government scheme. As a result, over 2,000 organisations in the UK have now joined the scheme, compared to just 20 in 2003.

Build a strong partnership with the private sector

There are two reasons why governments should work closely with the private sector when developing PC support programmes. The first is that, since corporate participants will benefit from growing sales, they will be happy to pay for the privilege of getting the programmes to work. UK advisor



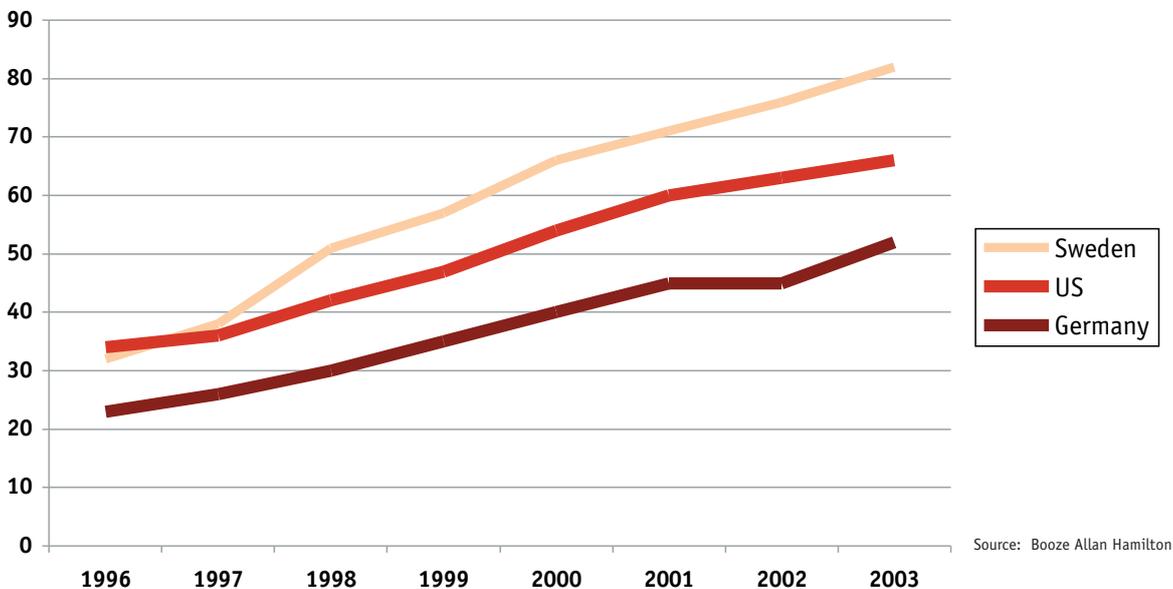
Mr Goodall has hard figures to make the point: “So far the project has received £380,000 of government funding, but industry has put in at least £61 million.”

The second reason is that it is the job of the private sector to develop products, market them and handle the whole supply operation, without crippling bureaucracy. If the government tries to reinvent the wheel—selecting technologies, developing software programmes, building lending and lease schemes and so on—it is likely to fail in such a fast-moving sector.

This drove the success of the pioneering Swedish employee purchase model, where the IT industry played a strong role from the start. The government arranges the tax concessions, and IT companies do the rest: insurance, logistics and everything needed to make it easy for companies to buy PCs for their employees. “The IT industry has to deliver the goods,” says Stefan Holm project leader

at the IT and telecom industry group, IT-Företagen. In Sweden, the government partnered with an existing IT group, but often the interests of these groups are too broad for such specific schemes, diluting the focus. In the UK, an industry group was formed to handle the employee purchase scheme—the HCI Alliance, consisting of Microsoft, Intel and British Telecom. The Spanish government also set up an industry body including companies such as Microsoft, Intel, El Corte Inglés and Panda. “The government is combining strength with computer stores, PC manufacturers, telecom firms and others—it’s not an isolated effort,” says Intel Iberia’s Mr Beirute. Governments also need to be careful not to favour specific products and brands. That is one reason they frequently work with companies whose products are embedded in the majority of computers. The Italian innovation ministry selected four industry participants for its marketing programmes by competition, with the choice settling on Intel, IBM, OSE and the Italian post.

Impact of Sweden’s computer purchase programme 1997-2003, PC penetration, % of households





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But while it is vital to get companies on board, it is also important to define carefully what the role of industry should and should not be. The IT industry and governments have differing aims, and skill is required to get them to work in unison. While governments want to increase IT literacy and upskill the workforce, IT companies want to make money by selling more products. To avoid these goals clashing, governments need to set clear goals and parameters and reach an understanding with industry leaders that both sides can serve each other's ends, and their own.

Even the best programmes have failed to get this right all of the time. For instance in the UK, the instinct of the IT industry was to target the top 500 companies where they could most easily make the biggest impact. But the government wanted to create new users, addressing SMEs and areas where there were lower levels of IT knowledge. By pushing this aspect, the UK government has now seen a rise in computer use of 4-5% in these areas.

Hungary's Sulinet Express programme is a good example of what can go wrong when governments fail to set clear goals and let IT companies shape a programme in their own interests. The government had set up a Council with industry players to decide on eligible products to be involved in a tax-credit scheme for parents of school pupils. But instead of limiting the list to high-specification computers, corporate lobbyists pushed for the inclusion of everything from digital cameras and gaming devices to low-spec computers with floppy disk drives and analogue modems. The net result was a massive run on digital cameras, lots of disappointed retailers who were unable to shift unattractive computer stock—and ever declining interest in the programme. As one observer says: "The government doesn't have much expertise, so they just believe what industry is saying and listen. They don't really have an independent view."

Measuring the impact

Ask some government officials what impact their purchase schemes are having on computer penetration or IT skills, and you get a blank look. Frequently,

schemes are measured just in terms of numbers, without reference to the goals the government has set. But both the government and the IT industry need to focus on measuring and monitoring the impact to build widespread support across political lines, check programmes are going in the right direction, and to make changes if necessary.

The first step is to make sure that all participants collect numbers of sales and participants diligently—but most schemes have no problem with that. The more difficult (and sometimes expensive) part is to find a way of translating those numbers into an accurate estimate of impact.

The British government opted to conduct research into the impact. In 2004, as the relaunched HCI scheme took off with a flourish, a survey found that, of employees with a home computer purchased through the government assisted scheme, 61% had improved IT skills, 65% were more familiar with the internet, 51% had learned additional work skills and 77% balanced work and family-life better. That added to the credibility of the initiative and ensured continued momentum and financing.

The Spanish government uses indicators such as household computer penetration and broadband coverage to support policies, setting up a government body, the Observatory, to pull together information. But it's important not to expect immediate results with indicators like these: "Several programmes don't get results for two years," says Intel Iberia's Mr Beirute.

In Sweden though, which has around eight years of experience, there is ample evidence at the level of information society indicators to show the impact. Even compared to other Nordic countries, household computer penetration and internet usage is by far the highest in the EU, helping Sweden move from a traditional industry-based economy to one based on knowledge industries. That's not all the result of one small scheme, but it doubtless helped make the shift to the information society happen more quickly.



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