



GROWING IT WITH NATURE'S LESSONS

DESIGN INSPIRED BY HORTICULTURE

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HOW DOES YOUR IT GROW?

As I have spare time I decided to look through some of my historical writings and musing on technology topics and how we can take thinking and lessons from non-traditional viewpoints. These insights are about challenging traditional views and opinions on how we see Digital and Technology projects by drawing parallels from everyday life. This article is a view on how the practices within horticulture can offer insights into good practices when designing, delivering and operating IT systems.

In today's technology driven landscape, organisations both public and private strive for better IT or in today's parlance Digital Services. But as we look to smarter technologies to help solve business challenges are we in danger of forgetting good principles and practices?

We often talk about organic growth in IT systems and by this we mean systems that have been adapted, built upon, and extended over time to meet the needs of the business. This can result in complicated and expensive legacy systems with a high probability of legacy

debt. But the term organic growth is interesting as we can learn a lot from non-technical pastimes about how good principles and practices can deliver extraordinary results.

In the world of horticulture, gardening to most of us, there is more synergy with Business and IT systems than you may first think. Years ago I knew very little about gardening and when we moved into a new house I had this wasteland, so I set about learning what I needed.

Over time my garden has gone from just a nice lawn to a fully landscaped garden of many different features. So what? What has this to do with business and technology? My experience has found that there are a number of principles, processes, procedures and ways of working that when understood offer practical lessons. Not least in the fact that horticulture is one of the best examples of sustainability and circular economy principles put into practice.

Planning is vital to ensuring your garden works, this starts with a design (an Architecture) of what you want to achieve (Outcomes), what kind of

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structural components are needed (base systems), what infrastructure changes must be done (Hosting/Cloud/Network), where things should be positioned (Channels), what type of plants (Services, Features, Products) and materials needed (Tools). The most important lesson though is to have a very clear purpose and outcome for your garden. Once you have the plan (Strategy) you can start procuring, comparing products to select the most appropriate, selecting the right plants for the right conditions – starting to Architect and Build your solution.

When you have all the bits needed you can start the build and it's not a simple matter of just digging a hole for a plant. You need to understand what goes where, combinations which work, how will they interact with the environment, what soil conditions are needed, and a whole set of other variables (User / Human Centred Design). Get these right and the solution will come together and pay dividends.

Once you've dug, created, planted, sown and landscaped your garden you have a solution, but it doesn't stop there as there are constant maintenance tasks needed, tidying up, spotting when there is a problem and dealing with it, cyclic planning and operational running activities to ensure your garden doesn't die.

How is this relevant? For example, if you check plants every day for signs of disease you can spot and treat it – so active monitoring of systems can identify issues before they become

major problems. When treating a problem, you need to understand whether it can be treated or whether it is terminal and needs to be replaced (root cause analysis) – gardeners are not afraid to rip something out and start again. Continuity planning is vital, if you only plant vegetables at one time you will end up with only one crop, just planting annuals will result in one display a year, doing things at the wrong time will result in problems and so on. As with IT systems you have to plan ahead for continual change to keep the business running effectively (BizDevSecOps).

I am what can be called an experimental gardener as I will try things to see what works, if it works it stays, if it doesn't it goes or I figure out why and try again – in IT terms I'm an Agile practitioner. Businesses should not be afraid to experiment with new features, products, tools, techniques and ways of doing things. Knowledge, technology and simple ways of doing things lead to improvement and always doing things the same way will eventually require some major overhaul. As in gardening if you plant the same crop, in the same way, in the same place every year eventually your crop can fail.

So why don't we become Digital gardeners? Organisations should embrace lessons which can be learnt from outside the norm, don't be afraid to change and challenge, but ultimately if you put strong foundations and roots in place through practicing System Engineering principles your IT garden will flourish and grow beyond expectations.

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Neil Catton is an experienced strategist and recognised thought leader on the ethical and structural implications of emerging technologies. Through his *Next Evolution* series, Neil explores how legacy institutions must adapt to remain relevant in an era shaped by AI, spatial computing, quantum systems, and digital transformation.

He is a trusted voice on responsible innovation, with a distinctive narrative style that blends systems thinking, moral foresight, and practical governance insight. Neil's work spans public service redesign, cyber resilience, digital ethics, and ambient technology — always grounded in purpose, people, and long-term value.

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