

Human Capital and the Living Standards Framework

Speech delivered by Gabriel Makhlouf,
Secretary to the Treasury

Chartered Accountants Australia and New Zealand (CAANZ)
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Introduction

Good afternoon everyone. Thank you for the opportunity to talk about the Treasury's Living Standards Framework (LSF), in particular the importance of human capital. I'm pleased to be able to talk to members of CAANZ on this subject because accountancy and public policy share a lot of common ground, both figuratively and – around the floors of the Treasury – literally. Our professions are associated with financial capital but depend heavily on their human capital; the range of capabilities, skills and knowledge our people bring to work every day. And both professions are operating in an environment of disruption. New technologies, higher public expectations and rapid changes to the nature of work mean we must adapt. We must develop and draw on our human capital in better ways if we are to respond effectively to the present and prepare for the future.

Living Standards Framework

The LSF is central to how the Treasury will keep making a positive difference for New Zealand today and the years to come.

At the Treasury, we are motivated by our vision of working towards higher living standards for all New Zealanders. Many people think that means we just focus on gross domestic product and the government accounts. Well, we absolutely do focus on that but not only that. The growth of GDP and the Crown's books will always be at the core of our work, and CAANZ will know better than just about anyone how important that work is. But if they were the only things we focused on then we wouldn't be doing our job.

Our ambition is to integrate a broader conception of economics and value into the everyday work of public policy. We are taking this forward by developing what we call our Living Standards Framework. Traditionally, economists have focused their thinking about the factors of production, like land and labour, and how they are combined to create goods and services. The LSF is an adaptation of this notion: the four capitals – natural, human, social and financial/physical, which collectively I like to describe as our economic capital – are the stocks that combine to generate flows of wellbeing.

In my view, our development of the LSF is simply part-and-parcel of our role in advising Government. Democratic governments have always had broader objectives than just growth, productivity, and fiscal discipline. What we are trying to do is help to bring greater rigour to the way we provide advice on how well government rule-making and public investment decisions meet these wider objectives in a consistent way. The Treasury's focus is unapologetically pragmatic: our aim is to have a practical set of meaningful indicators of living standards that can improve the quality of policy advice and, ultimately, the decisions made by governments starting with next year's Budget.

The Treasury isn't going it alone on this, nor could we or should we. Instead we are inviting everyone, whether they are specialists, researchers or interested members of the public, to support and contribute to this challenging and exciting work. I'll come back to this later, but first I want to focus on human capital, what it means and how we can assess it to inform policy advice.

Defining human capital

The Treasury defines human capital as the skills, knowledge, mental and physical health that enables an individual to participate fully in work, study, recreation and in society more broadly. The definition is similar to the OECD's.

As human capital is focused on the productive wealth embodied in people, its measurement is generally focused on the education and skill level of the population, particularly since numerous studies have shown that qualifications and labour market earnings are highly correlated. Because it is embodied in people – and more particularly in individuals – the usefulness of a person's human capital is affected by the health of the individual and by other circumstances that may reduce their ability to use their skills to their best advantage.

Human capital should not be viewed in isolation from the other capitals, as the four capitals all intersect and affect each other. As an example, consider the interaction of human and social capital. The ability of people to work in groups, their values and attitudes towards others and towards work, and other social norms that may limit their ability to express their skills and knowledge, all impact on the value of the human capital in a society. The social environment matters in terms of mental health, as social isolation has a negative impact on individuals.

The value of human capital is also affected by the level of physical and financial capital in society. For a worker to be able to use her skills to the maximum value and to further develop her knowledge and skills, she needs the tools, the organisational support and labour market openings that make the most of her human capital.

And our venue today, the Dunedin Public Art Gallery, could also be viewed as an intersection point of capitals. It's where the creative expression of people's human capital, often depicted through images of natural capital, is seen in a setting that enhances social capital, without making a dent in your personal financial capital. At least until you hit the gift shop.

Health indicators

Our definition of human capital makes it clear that health is one of its fundamental components. So when we are assessing the state of New Zealand's human capital there are a lot of different health indicators we could use.

The OECD included life expectancy at birth and perceived health status as indicators in its *How's Life? 2017*¹ report. New Zealand's average life expectancy of 81 years is one year above the OECD average. Perceived health status in New Zealand was very high, with 90 percent reporting being in good health, compared to the OECD average of 69 percent.

Our Ministry of Health identified several other key indicators in its *New Zealand Health Survey*². These included physical and mental health factors such as smoking, alcohol, obesity and psychological distress. But importantly the indicators also included socially focused factors, for example free GP access for children, child physical punishment, unmet primary healthcare needs, socio-economic deprivation, and Māori, Pacific and Asian health outcomes.

While most people rated their health as good or better, the *New Zealand Health Survey* also showed up health disparities; people who are less financially well off and Māori and Pacific Island people rate their health lower and have more unmet need for healthcare. There are also some negative trends, including more people having difficulty accessing primary care, and the percentage of people experiencing psychological distress.

To stay on this latter point for a moment, I recognise that some of the people here will be business owners, directors, or hold other positions of responsibility. Your jobs can involve long hours and a lot of pressure. So some of you are likely to know first-hand the impact that stress can have, or understand how debilitating anxiety and depression can be. I want to commend CAANZ President Jane Stanton for speaking in this month's *Acuity* magazine³ about her own battles with mental health. Of course, mental health is an important issue at all levels of an organisation, and it's important that leaders are aware of – and understand the significance of – an issue that can remain hidden among their people and teams.

Education and skills indicators

Another fundamental component of human capital – indeed what's typically considered the major component – is education and skills. As with health, there are a number of ways to measure this. Commonly used wellbeing indicators for educational outcomes include years in education, educational attainment, and student skills.

¹ OECD 2017

² Ministry of Health (2017)

³ Acuity Magazine June/July 2018

One of the traditional measures is the expected lifetime earnings of an individual based on their education level. The incomes-based approach takes the population aged 18 to 64, divides it into cohorts based on their gender, educational level and employment status, and then estimates the future income trajectories of each cohort based on the current pattern. These are then capitalised using a discount rate to find the capital stock that would generate this income stream.

As the income trajectory is based on actual earnings it effectively includes the increased value from experience. However, the approach has its limitations. It ignores the value of skills when they are not used to generate an income (in this it is similar to Gross Domestic Product) and there is also an assumption that wage rates are a reasonable measure of the value of the work of the individual. The incomes-based approach also assumes that qualifications are a reasonable proxy for overall skill levels.

When we compare New Zealand to other OECD countries we get some good insights into just how significant our own human capital is. New Zealand is slightly above average in its ratio of human capital to GDP but is significantly above average in the ratio of human capital to physical capital. This suggests that our economy has a greater dependence on human capital for its economic output, and may also suggest that having high levels of human capital is especially important for New Zealand's economic growth. The relatively high ratio of human capital to physical capital also raises the question whether we would get an even higher return to our human capital with a more typical capital-to-labour ratio.

The changing nature of work

Given the importance of human capital for New Zealand's economic performance, the ongoing development and sustainability of human capital is vital for raising our living standards. And that has never been truer than now, when technology and international connectedness are changing the nature of work.

In some countries around the world, the rapid growth in global trade, the creation of new value chains and the emergence of new markets and huge pools of relatively inexpensive labour have undoubtedly led to large-scale and relatively rapid economic dislocation. Moreover, the people most affected are sometimes those with the least capacity to adjust on their own.

We're not just dealing with the consequences of free trade and greater international connectedness but with the challenge of adapting to change. As Paul Krugman said, over twenty years ago now, "technological change, not global competition, is the really important story"⁴. And as Andrew Haldane points out in a recent speech, it has always been the important story and is likely to remain the important story.⁵

Advances in communication and technology have significantly reduced the costs of supply chain management among global suppliers of goods and services. Digitalisation in particular is creating new opportunities but it's also clear that technological change, as much as free trade, or tariff liberalisation, opens all countries to greater international competition and industries to greater change.

⁴ Krugman (1997)

⁵ Haldane (2018)

Technological change almost always generates a degree of unease. We've heard it for more than a century: "Factory workers replaced by automation", and we're hearing it again now. Though fears of massive unemployment caused by automation tend to be exaggerated, it's true that significant changes are likely and jobs will be lost in some areas and industries. The extent of possible change in the labour market is as yet unclear, but OECD evidence using the Survey of Adult Skills (PIAAC) suggests that on average (across 21 OECD countries), 9% of jobs are at high risk of automation, and another 25% will likely experience significant retooling because of automation.⁶ Other figures maintain that 47 to 81% of jobs as we understand them could be under threat from technology within 20 years⁷.

Before you get too worried that the robots are taking over, these kinds of figures have to be taken with a grain of salt. As the reports assessing job impacts themselves recognise, they are likely to provide overestimates for a few reasons. The reports are based on what jobs or task it is possible to automate, not what will actually be automated. Cost and other factors will play a role, for example, the take-up of new labour saving technology in New Zealand will be influenced by the cost of the technology and the cost of capital and labour. Moreover, the reports do not take job creation into account: new technologies will also generate new jobs. In fact an Asian Development Bank study published in April this year looked at 12 Asian economies and concluded that, between 2005 and 2015, new technologies displaced 101 million jobs but created 134 million new ones.⁸

Building the resilience of our human capital

The scale of the impacts of technological change and globalisation has also been smaller in New Zealand than many other countries. From available data – which admittedly is not always very extensive – it seems the New Zealand workforce is not experiencing an increase in displacement rates and does not appear to exhibit any significant increase in the proportion of non-standard working arrangements.

In fact, what the data indicates is that our system supports resilience in a number of ways. Relative to other OECD countries, New Zealand's displaced workers have high rates of re-employment;⁹ we have a skilled workforce¹⁰ with a strong trend towards higher skills;¹¹ and high rates of on-the-job training.¹²

⁶ OECD (2016)

⁷ Colbin (2016)

⁸ Asian Development Bank (2018)

⁹ OECD (2017) *Back to Work: New Zealand – Improving the Re-employment prospects of displaced workers*
https://read.oecd-ilibrary.org/employment/back-to-work-new-zealand_9789264264434-en#page39

¹⁰ OECD (2017) Economic Surveys: New Zealand (based on analysis of *Programme for the International Assessment of Adult Competencies* (PIAAC) data)
https://read.oecd-ilibrary.org/economics/oecd-economic-surveys-new-zealand-2017_eco_surveys-nzl-2017-en#page129

¹¹ OECD (2017) Economic Surveys: New Zealand (based on analysis of HLFS data)
https://read.oecd-ilibrary.org/economics/oecd-economic-surveys-new-zealand-2017_eco_surveys-nzl-2017-en#page129

¹² MBIE/MoE (2016) *Skills at Work Survey of Adult Skills* (analysis of PIAAC data)
https://www.educationcounts.govt.nz/data/assets/pdf_file/0007/173572/Skills-at-Work.pdf

Does this mean that New Zealand will continue to be “sweet-as” while the nature of work changes? That we can say “yeah, nah” to responding in ways that will protect the sustainability of our human capital? Absolutely not. If we’re not adapting to change then we risk being overwhelmed, undermined and overtaken by it.

That applies as much for the public sector as it does to the private sector. The New Zealand Treasury has been in existence for 178 years, and I’d venture that the pace of change affecting our work has never been greater than it has been over the last decade. The pace and pervasiveness of technology mean the public increasingly expects to have immediate connection, instant responses and personally-tailored services from the public sector. Moreover, we are serving a population that has grown rich in diversity. New Zealand has a wonderful mix of cultures, languages, faiths, generations, ideas, connections and skills that were either unknown or unseen here in the past. And we have access to an ocean of information, so the skills that policy analysts need include not just the ability to crunch ‘Big Data’ but to find actionable insights from the right data. Our analysts need to know how to work across government and beyond government to address issues that stretch much wider than the silos of individual departments.

I welcome all this. I see these changes as positive, but they are also complex and challenging.

I’m aware that the accounting profession will be affected by change more than most. In a 2013 paper by Oxford University academics Carl Frey and Michael Osborne¹³, it was suggested that bookkeeping and accounting jobs are at 98 percent risk of becoming automated in the near future. I’d say that figure is based on a very narrow assumption of what accountants do and the value of the human capital they have. Nevertheless, it reinforces the importance for the profession to be resilient and responsive to change.

I’d like to acknowledge the leadership shown by CAANZ. Your organisation’s stated strategy is to preserve the prestige of the Chartered Accountants designation and ensure the profession stays ahead in a world of constant change. And developing human capital is a crucial part of this strategy. On top of gaining a four-year degree followed by two years of post-graduate study to become a qualified Chartered Accountant, your members undertake at least 60 hours over three years of certified training. This focus on lifelong learning is why accounting will continue to be a relevant, respected and rewarding career.

The Treasury is committed to showing leadership in this area too. Our Office of the Government Accountant runs a Finance Development Programme to strengthen strategic financial management across the state sector. The Programme provides tailored development opportunities to state sector finance professionals. Designed and led by the finance sector, this is a truly collaborative programme aimed at building people’s skills and knowledge and helping them prepare for what’s ahead. People get to develop their skills through professional development forums, targeted training courses, mentoring, shadowing experiences and secondments. Development also occurs through getting involved with the development of the programme itself, with people from within the sector leading various projects and developing skill sets outside of their traditional finance comfort zone.

¹³ Frey and Osborne (2013)

It's not just companies and sectors that need to be prepared for change; so do countries. Global institutions such as the International Monetary Fund, World Trade Organisation and World Bank point to the importance of domestic policies on training, income support, education and other areas to ease the transition for affected people. This applies to New Zealand too, though we already have relevant policy in each of these areas and probably more substantial support than in most impacted countries. However, in the face of uncertainty about the pace and scope of change, it's important that we ensure our policy settings encourage adaptability and resilience. We need to monitor change, continue to focus on building a skilled and resilient workforce, and expect and enable the economy to adapt to change as it happens.

Policy should aim to enable small but frequent adjustments to changes caused by economic forces.

It's important that New Zealanders have skills that are adaptable and transferable. People need to be able to move from industries that may be affected by technology and competition to those that are growing, taking up new opportunities that technology and greater international connectedness actually creates.

To help achieve this there should be an emphasis on attainment of cognitive and non-cognitive foundational skills that are transferable and support life-long learning, as well as greater rates of progression to higher tertiary qualifications.

In a lot of respects we are doing very well. New Zealand tops the world in providing future-skills education, according to the 2017 Worldwide Educating for the Future Index. However, in the Programme for International Student Assessment, or PISA test, New Zealand's scores in maths and science have been slipping. PISA test results also reinforce that our academic achievement rates vary by ethnicity and socioeconomic status. On average, Māori, Pasifika, and students from low-income families scored lower than other groups of New Zealand students. Part of "future proofing" the education and skills system will mean we need to address these challenges, especially given demographic and technological changes.

A question we might ask ourselves is whether our education system – and particularly our tertiary system – helps people with ongoing learning, a theme raised by the Productivity Commission in its tertiary education report last year¹⁴. We might also consider whether our social welfare system, which was initially set up to help people make transitions from one job to another in what was expected to be a similar trade, is optimal for the changing world ahead of us.

The diversity of our human capital

We also need to think about how New Zealand can continue to develop and benefit from all of its human capital by removing the barriers that prevent some of it being utilised and by preparing ourselves for the changing composition of that capital in the future.

¹⁴ Productivity Commission (2017)

Let's start with barriers and I'll use gender disparities as an example. Women's return on, and further development of, human capital through paid employment is lower than men's. And one of the reasons for this is that significantly greater numbers of women than men are in part-time paid employment in New Zealand. Recent figures from the OECD¹⁵ indicate that, on average, men in New Zealand spend 5.6 hours in paid employment per day, and women spend 3.41 hours. This compares to the OECD average of 5.47 hours for men and 3.58 for women. So we have more women than men in part-time employment, and women in New Zealand are employed for fewer hours than many of their OECD counterparts.

There's also the matter of unpaid work such as domestic chores, caring for family members, or volunteering. The Time Use Survey, undertaken by Stats NZ¹⁶, provides data on the amount of time spent on paid and unpaid work. Although men and women spend a similar amount of time on all paid and unpaid work activities combined, there are significant differences regarding payment. In the last survey (2009/10) 63 percent of work undertaken by men was paid but 65 percent of work undertaken by women was unpaid. This issue is covered expertly by New Zealand academic and former Member of Parliament, Professor Marilyn Waring, most notably in her groundbreaking book *Counting for Nothing: What Men Value and What Women Are Worth*.¹⁷ That book was published 30 years ago. So this is not a new issue but it's probably time we did something about it.

When we look at what women get paid for their work, they are earning 9.4 percent less than men in New Zealand. Our gender pay gap may be relatively small by international comparison but it's a gap nonetheless. Occupational segregation is understood to be responsible for around 30 percent of the gender pay gap in New Zealand. Around half of all women and men working in New Zealand are in occupations where at least 70 percent of workers are of the same gender, and occupations with a high representation of women tend to be lower-paid.

The result is a limiting of women's human capital: it's harder to acquire it, it's harder to earn from it, and it's harder to keep developing it.

And limiting women's capital also limits the nation's capital. As just one example, a Goldman Sachs report¹⁸ in 2011 suggested that a 10% increase in New Zealand's GDP could be achieved by closing the male and female employment rates. And as employers we miss out on this human capital too. It means there's an incredible pool of skills, knowledge and potential that we're not drawing from.

Preparing for the changing composition of our future human capital

The composition of people that provide that pool of natural capital is evolving. As I said earlier, New Zealand society has grown rich in diversity, and I'd like to talk about three demographic trends in particular.

The first trend is the ageing of our population.

¹⁵ OECD (2018)

¹⁶ Stats NZ (2010)

¹⁷ Waring (1988)

¹⁸ Goldman Sachs (2011)

Partly this is due to rising life expectancy. Those born today are expected to live around 20 years longer than their ancestors born a century ago, with males and females born in 2016 expected to live to around 80 and 84 years respectively.

Another factor is the ageing of the baby boomers, people born between 1946 and 1965. The baby boomers represent a large cohort of the population. Over the next 15 years this cohort will continue to move past 65 years of age.¹⁹

Older New Zealanders are staying in the workforce at a much higher rate than they were just a couple of decades ago. This shift has been particularly prominent for those aged over 60. The labour force participation rate over the past 25 years has risen from around 26 percent to around 73 percent for those aged between 60 and 64, and from around six percent to around 22 percent for those aged over 65.²⁰ New Zealand now has one of the highest participation rates for over 65s among OECD countries.²¹

To assist the economy through this transition, labour market settings should ensure older workers are not discouraged from working. As healthy ageing is projected to increase, it is anticipated the participation of older workers will also continue to rise. Participation rates for those over 65 are projected to increase from around 22 percent to almost 26 percent by 2060.²² Given the proportion of New Zealanders aged above 65 is projected to increase from around 15 percent to around 27 percent over this period, both supportive employers and supportive policy settings will play important roles in our future economic prosperity.

The second trend is the growth of our Pacific population. Pacific peoples make up 7.4 percent of our population at the moment, and this is expected to rise to 10 percent by 2026. In New Zealand today, one out of four new-born babies are of Pacific descent. And Pacific New Zealanders are a young part of our society. They have a median age of 22 years compared with 35 years for the general population.²³ As this age profile suggests, Pacific New Zealanders are becoming a bigger proportion of our workforce and are vital for sustaining and improving New Zealand's social, economic and cultural success.

Growing human capital will be a big part of that success. When I've met with Pacific community leaders, some of the human capital-related issues we talk about are the inequities Pacific New Zealanders experience in health, education and housing outcomes. So the Treasury and the Pacific Business Trust are working together on a project to get qualitative and quantitative data on the economic contribution that Pacific New Zealanders make to the economy. This will give us for the first time benchmarks to track the effectiveness of government investments to raise Pacific living standards and wellbeing.

The third trend I want to cover is the growth of our Asian population. According to Stats NZ projections, there will be more people from Asian ethnic groups in New Zealand than Māori by 2023, and by 2038, 22 percent of our population will be Asian New Zealanders.

¹⁹ Stats NZ, New Zealand population age structure: 1972 - 2060

²⁰ Stats NZ, Labour force participation rate

²¹ OECD <https://data.oecd.org/emp/labour-force-participation-rate.htm>

²² The Treasury's Long-Term Fiscal Model

²³ Ministry for Pacific Peoples

One impact of this change will be an increased understanding of Asia which should, in turn, have a positive effect on our relationships with the fastest growing region in the world. We need to be thinking now about the implications of that, perhaps by looking at how our organisations make best use of the skills of our current Asian employees to develop stronger connections with the region.

Both the public and private sectors need to be thinking more systematically and holistically about becoming more Asia-capable. This raises questions about how the education sector, among others, supports and enables our young people to have a greater understanding of Asian languages and cultures. We estimate that around 45 percent of our young people heading overseas for their OE go to Australia and 20 percent go to the UK. Contrast this with 5 percent heading to China, and around 2 percent to each of Japan and Korea.²⁴ The recent survey of New Zealanders' perceptions of Asia published by the Asia New Zealand Foundation²⁵ made for worrying reading. When asked six general knowledge questions about Asia, only 13 per cent achieved a pass mark. Even more worryingly, 52 per cent of people under the age of 30 did not provide any correct answers at all. To be clear, this was a survey about our understanding of the fastest growing region in the world.

Drawing on the full value of our human capital

The Treasury itself is absolutely focused on ensuring we are attracting, retaining and making best use of human capital from New Zealand society in all its diversity. We embrace diversity and inclusion as they strengthen us, as individuals and as an organisation. And there are compelling reasons for why we believe that diversity and inclusion is indispensable for our human capital.

Doing our job well requires knowledge, analytical skills, an understanding of context, and the ability to explain clearly. It depends on the minds – and the hearts – of the people that make up our organisation. And that's why I believe that to become a world-leading organisation, our advice and services need to be informed by a range of perspectives to enable the fresh thinking and ideas needed to manage the challenges and opportunities facing New Zealand. So I put a premium on diversity of thought.

Being a diverse and inclusive organisation makes us stronger, more resilient and insightful. It helps us to understand the present, better anticipate the challenges and opportunities that may arise in the future and better manage the pace, complexity and cross-cutting nature of change. Inclusive diversity is at the core of our continued success as an organisation.

Some of the actions we are taking to attract and support a diverse workforce include tackling unconscious bias through using blind applications in our graduate recruitment process and providing unconscious bias training for our managers. We're also committed to providing a workplace that offers flexible working options for all our roles.

²⁴ Stats NZ, based on 20-29 year olds leaving New Zealand for more than a year

²⁵ Asia New Zealand Foundation (2017)

I understand workplace flexibility is just as important in the accountancy profession when it comes to accessing valuable human capital. In the 2017 CAANZ remuneration survey²⁶, 57 percent of respondents said that aside from remuneration, flexibility in the workplace is important to them. Among women surveyed, the figure was 75 percent. Overall, flexibility was cited three times more often than the second-ranked desirable work place attribute, culture and atmosphere.

We cannot declare victory yet but we are on the way to make sure we are drawing on the full value of our human capital.

Conclusion

In conclusion, it's encouraging to see that the accountancy profession has a strong understanding of the value of human capital, especially in an environment where the nature of work is undergoing profound transformation. Your focus on areas like ongoing professional training, mental health and flexible working demonstrates a commitment to developing and sustaining human capital, one of the foundation stones of New Zealand's living standards.

I also want to express my appreciation for CAANZ's broader work on living standards. You may be familiar with the report that CAANZ produced last year called *The Quest for Prosperity: How can New Zealand keep living standards rising for all?*²⁷

The Quest for Prosperity makes three main points. First, it says that "inequality, particularly in education, threatens future prosperity in low income, Māori and Pasifika communities, especially as technology changes the nature of work." Second that "falling house affordability threatens to erode New Zealand's strong social capital. This could affect the country's ability to secure rising prosperity for an ageing society." And third that "globalisation means that New Zealand must continually improve its competitiveness if it is to see prosperity grow. In particular this includes increased protection of the environment, which is critical to New Zealand's brand overseas."

I very much welcome this contribution to the discussion on New Zealand's living standards.

Finally, I want to ask you for another contribution. Two weeks ago we released an independent report – [Treasury Living Standards Dashboard: Monitoring Intergenerational Wellbeing](#) – which, as the name suggests, includes a proposed 'dashboard' of indicators of living standards and intergenerational wellbeing in New Zealand.

The report is out for public consultation until 31 July and we want to get people's views on the report and its proposals as it will help ensure the Treasury's own Dashboard – which we are releasing at the end of this year – is expert, evidence-based, and reflects the perspectives of a wide range of New Zealanders. I invite you to go to our website for more information, complete our online survey or email a submission to us, and encourage other people to do the same.

²⁶ CAANZ remuneration survey, referred to in Acuity Magazine June/July 2018

²⁷ CAANZ (2017)

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