

## INTEGRATING THE INFORMAL SECTOR INTO THE SOUTH AFRICAN WASTE AND RECYCLING ECONOMY IN THE CONTEXT OF EXTENDED PRODUCER RESPONSIBILITY

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### KEY FINDINGS:

The informal sector is active in recovering valuable post-consumer recyclables from the service chain in South Africa. An estimated 80-90% (by weight) of paper and packaging is recovered by informal waste pickers. However, the South African waste and recycling sector is on the brink of change, with planned mandatory Extended Producer Responsibility (EPR). If not appropriately designed and implemented, adopting traditional EPR models has the potential to negatively impact on the livelihoods of waste pickers by creating competition between the informal and formal sectors in the collection and sorting of recyclables. Informal pickers are estimated to have saved municipalities between R309.2 – R748.8 million in landfill airspace (in 2014), at little to no cost, by diverting recyclables away from landfill, at ± 16-24 tonnes/picker/annum. Workshops highlighted the many conceptual tensions that exist regarding the informal waste sector. These tensions make the issue a particularly sensitive one, with the result that the informal sector has not yet been appropriately considered in the design and implementation of EPR, or in the development of a recycling economy in South Africa. In terms of integration models, four scenarios emerged: (i) the informal sector is utilised in its current format, as a largely marginalized and unregulated community, recovering value at little to no cost to the value chain; (ii) the informal sector is *integrated* into recycling programmes, with some level of control (regulation) and monitoring, and with increased support from business and industry (iii) government and business drive to *formalise* the informal sector through the establishment of co-operatives and SMEs; (iv) the formal waste and recycling sector drive a labour intensive process, based on an employment model of *absorbing* the informal sector.

### INTRODUCTION

The Department of Environmental Affairs (DEA) has gazetted its intent to call for EPR in paper and packaging; waste electrical and electronic equipment (WEEE); and lighting – it already has EPR in place for waste tyres – through the development and implementation of Industry Waste Management Plans (IndWMP). EPR is an advanced policy instrument, implemented widely in developed countries, aimed at shifting the responsibility (financial and operational) (partially or fully) for the management of certain waste streams from government, typically municipalities, to producers. A crucial aspect that government, business and academia must consider in designing and implementing these EPR schemes for South Africa, is the existing informal sector, a very active, but still largely marginalised community of waste pickers. This Briefing Note presents the findings from two regional workshops held during September and October 2015, on integrating the informal sector and SMEs into Municipal Solid Waste (MSW) management in South Africa.

### CONTEXT

The DEA made legal provision for the implementation of EPR in South Africa through the National Environmental Management: Waste Act (No. 59 of 2008). Mandatory EPR has been implemented, to date, intentionally or unintentionally, through the “Industry Waste Management Plan” (IndWMP), for example the Integrated Industry Waste Tyre Management Plan (RSA, 2012). Voluntary EPR has been operating in South Africa for a number of years, with most of the Material Organisations for paper, plastic, glass, and cans at least 5-10 years old, but with some as old as 22 years, e.g. Collect-a-can.

EPR is defined by the Organisation for Economic Co-operation and Development (OECD, 2001) as “an environmental policy approach in which a producer’s responsibility for a product is

*extended to the post-consumer stage of a product’s life cycle.”* It addresses what many regard as the “weakest link” in the product value chain – the final disposal of products after their use by consumers. This is particularly relevant for South Africa, where an estimated 90% of all general waste produced is still sent to landfill (DEA, 2012), in spite of a strong policy approach towards establishing a regional secondary resources economy centred around the recovery and reprocessing of recyclable waste. The ongoing disposal of waste to landfill, is largely due to the fact that waste prevention, reuse, recycling and recovery are more expensive relative to disposal to landfill, which is constraining the growth of the recycling sector to only those waste streams which are economically viable, e.g. ferrous metals, PET, paper. While a clear message is evident in national policy, the private sector has been slow to respond to the opportunities, due to the economic viability of recycling.

Constitutionally, municipalities are responsible for the safe disposal of end-of-life products once they appear in the municipal waste stream, including paper and packaging. However, municipalities face many challenges with respect to basic city cleansing, waste collection and disposal. In spite of these constraints, South Africa realised an estimated 52.6% recycling rate for paper and packaging waste in 2014. This is mainly due to a large, and active, informal sector, with an estimated 80-90% (by weight) of packaging waste recovered by the informal sector (Packaging SA, 2015). South Africa has yet to implement a national separation at source programme, and so informal pickers are forced to recover valuable recyclables from landfill, or by picking through municipal bins and bags at kerbside. While no official data exists, an estimated 60,000 – 90,000 pickers earn a livelihood from the recovery of recyclables from municipal waste in South Africa (DST, 2013).

According to South Africa’s first National Waste Management Strategy (DEAT, 1999) “Salvaging on landfills will be formalised and controlled by 2003 and will be phased out completely in the longer-term” and “Uncontrolled salvaging on general landfill sites will be phased out as soon as possible and formal recycling centres following separation at source will be promoted.” Left unchecked and unregulated, the number of waste pickers working on landfills and at kerbside has grown significantly over the past decade.

Therefore, in the absence of a formal collection and sorting system for recyclables, “waste pickers” have provided a valuable, and low cost, solution for moving resources from the “service chain” to the “value chain” (Figure 1). As noted in the Waste Sector Survey (DST, 2013) the “waste flows between the informal and formal sectors result in these two sub-sectors being bound to, and dependent upon, each other.”

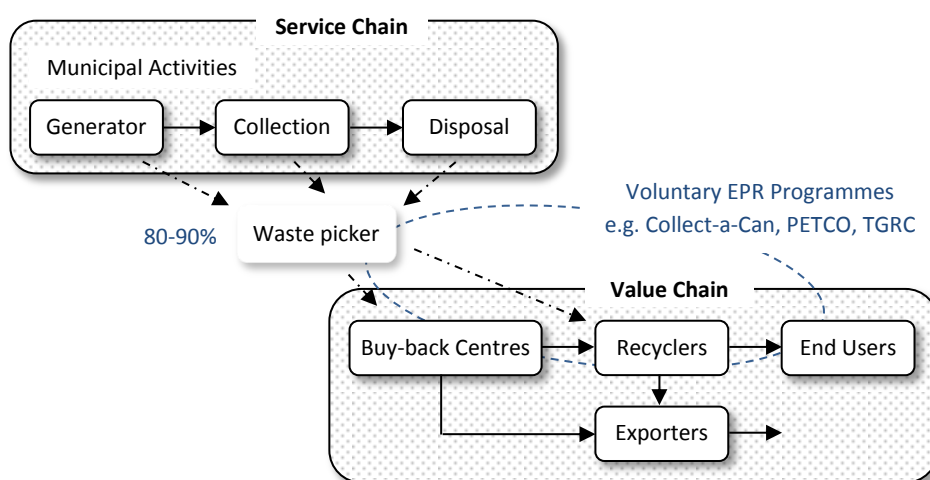


Fig 1. Role of the informal waste picker in bridging the service- and value- chains in South Africa (with a focus on paper and packaging) (adapted from OECD, 2015)

Implementing EPR, particularly a traditional EPR model where the Producer Responsibility Organisation (PRO) takes responsibility (financially or operationally) for collection and reprocessing, has the potential to compromise the role that the informal sector plays, thereby also compromising the livelihoods of thousands of pickers. The intention with the implementation of EPR in South Africa, is therefore to move from separate service- and value- chains to a more integrated service-value chain in order to increase the recovery of recyclables, but this runs the risk of further marginalising the informal sector.

However, we are not the only, nor the first, country to deal with an informal waste sector. There is much that can be learnt from other countries on how to approach integration. But, as noted by the OECD, the world has changed significantly since OECD countries absorbed or integrated their informal sectors in the 1980s and 1990s, and South Africa faces a number of unique socio-economic and political circumstances that may complicate the integration of the informal sector into a formal secondary resources economy.

This Briefing Note explores current views on the integration of the informal sector into the waste and recycling economy in South Africa.

## METHODOLOGY

This Briefing Note is based on information collected from delegates who participated in one of two regional workshops held in Johannesburg (29 September 2015) (organised by ABI) and Cape Town (8 October 2015) (organised by GreenCape). Participants were requested to complete a short questionnaire which contained five questions. A total of 88 completed questionnaires were received. The questionnaires were transcribed, providing a large body of qualitative data. Data analysis involved an interpretive approach, adopting ‘explanation building’, a particular type of pattern matching aimed at finding emerging patterns or themes, thereby building an understanding of the case.

## RESEARCH QUESTIONS

The following research questions were posed to delegates –

1. Does the informal sector have a role to play in municipal solid waste (MSW) management?
2. Should we proactively integrate the informal sector into MSW management (e.g. involvement in collection and sorting of recyclables, city cleansing)?
3. Do co-operatives have a role to play in MSW management?
4. Do SMEs have a role to play in MSW management?
5. Should we proactively integrate co-operatives and SMEs into MSW management (e.g. involvement in collection and sorting of recyclables, city cleansing)?

Following completion of the questionnaire, participants also explored the following concept –

6. Two opposing schools of thought, regarding integration of the informal sector into MSW Management in South Africa, have emerged:
  - a. **Option 1:** South Africa continues to support the integration of the informal sector and their formalisation through the establishment of co-operatives and SMEs
  - b. **Option 2:** South Africa drives a formal sector integration approach, by placing the responsibility for integration and employment (labour intensive collection and sorting) on waste and recycling companies contracted to undertake formal kerbside collection programmes.

## RESULTS AND DISCUSSION

The results show strong support for, and recognition of, the informal sector in MSW management and the recovery of recyclables (Question 1) (Figure 2).

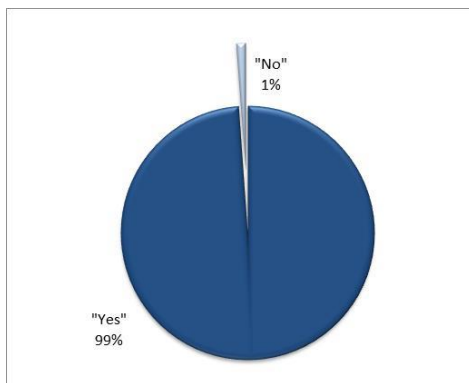


Fig 2. Does the informal sector have a role to play in MSW?

There is also strong support that the informal sector be proactively integrated into the waste and recycling economy in South Africa (Question 2) (Figure 3).

However, while there is a clear sense that the informal sector is currently playing a valuable role in South Africa's recycling economy and should be integrated, the question remains "How". What model of social inclusion of waste pickers would be most appropriate for South Africa, given the country's set of social, economic and environmental conditions, that ensure increased recovery of recyclables, compliance with policy and

planned EPR, while ensuring protection of livelihoods for informal pickers?

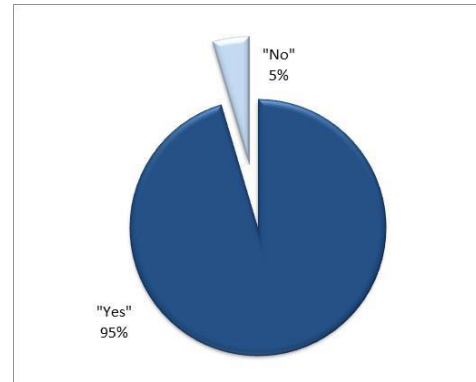


Fig 3. Should we proactively integrate the informal sector?

The results show that the issue of the informal waste sector is a highly sensitive one. Participants have strong opinions on issues, resulting in strongly opposing views and conceptual "tensions". This makes finding a single, widely agreed upon and accepted solution difficult. While there is little doubt by participants that the informal sector must be **recognised** for the role that they play, and must be **integrated**, noticeable tensions in approach include –

<b>Model:</b>	Integration	Formalisation
<b>Driven by:</b>	Municipality	Private sector
<b>Regulation:</b>	Regulate, control	No or self-regulate
<b>Financial support:</b>	Give support	Rent, incentivise
<b>Recognition:</b>	Ignore	Recognised role
<b>Where:</b>	Landfill	Source separation
<b>Collection systems:</b>	Competing	Complementary
<b>Public perception:</b>	Nuisance	Valuable role-player
<b>Role:</b>	Exploitation of poor	Low cost solution

These tensions are briefly discussed below –

### Integration or Formalisation:

With regards to the two options presented at the workshop (Question 6), the results show that there is no single clear, preferred approach. While the majority of participants support the continued integration of the informal sector through their formalisation as co-operatives or SMEs (Option 1) (44%), there remains strong support for a private sector "employment" model (Option 2) (33%) (Figure 4).

However, recent research (Godfrey et al., 2015) suggests that formalisation of pickers into co-operatives and SMEs is not currently creating sustainable jobs in South Africa, with an estimated 91.8% failure rate of waste and recycling co-operatives, the fourth highest rate amongst the 18 identified economic sectors (the dti, 2011). Co-operatives face numerous challenges, including lack of infrastructure, weak capability, and limited access to recyclables and markets, often resulting in co-operative members returning to informal picking.

While a third option was not provided in the questionnaire, 23% of delegates pushed for a combined model, as an

alternative. While this may reflect the limitations of Options 1 and 2, this does run the risk of the sector remaining “on-the-fence” with regards to a practical way forward.

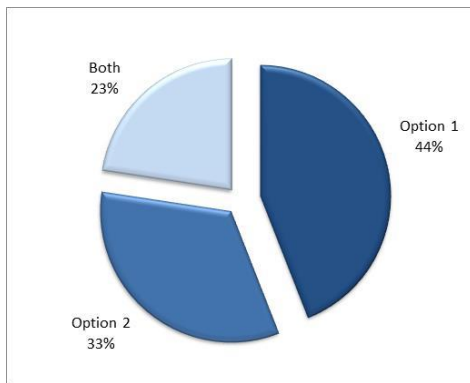


Fig 4. Driving an informal or formal sector approach

#### Municipality or Private Sector:

There is a strong push by participants that municipalities take on the responsibility of supporting the informal sector, through e.g. provision of premises to store and separate recyclables, trolleys, balers, protective equipment; direct financial assistance; contracting to render services; registration and monitoring of pickers; education and training; and pairing them with suppliers and buyers. It was also suggested that municipalities take on the responsibility (or burden) of source separation. However, the intention of EPR is to shift responsibility for certain waste streams from municipalities to producers (represented by the PRO), including the collection of recyclables – the area where pickers are most active. EPR, if successfully implemented, should therefore alleviate municipalities of this burden of collecting recyclables, allowing them to concentrate on the residual waste and the problematic waste streams (e.g. construction and demolition waste, organic waste).

Participants from municipalities indicated that they do not have the resources to take on the responsibility of the informal sector; that the bureaucracy and procurement requirements of local government make it difficult to contract informal pickers or small businesses; that contracting pickers creates expectations of formal employment in municipalities; and that integrating the informal sector into municipal collection or sorting processes creates a high risk to service delivery due to the uncertainty of their performance.

*“[Municipalities] cannot work well with [the informal] sector because of its highly structured and formalised environment... too much focus on process, documentation, etc. that places a very high barrier to entry. There has to be a bridging agency such as an NPO that has the flexibility to do this engagement [with the informal sector].”*

*“By integrating [waste pickers], I will be making my own job harder because I am condoning their behaviour”*

#### Regulation:

Many participants indicated that the informal sector must be “regulated” whether through government legislation or self-regulation. That pickers must be registered, provided with identification cards or “licences to operate”, and monitored in

terms of performance (productivity). At the very least, pickers must adhere to a Code of Conduct that guide their operations. But, it was also felt, that as a largely “invisible” community, it would be near impossible to regulate informal pickers, particularly through legislation.

*“Government has been reluctant to regulate, as the informal sector is a politically sensitive topic – social victims of a failing state that has not provided adequate opportunities for formal employment.”*

*“[Informal pickers] should never have been possible were decent safety nets in place for people who lost employment, suffered ill-health, lost their parents, or could not afford education.”*

The intention from participants, was that municipalities should undertake this registration and monitoring of informal pickers, but the availability of resources in municipalities and the shift in responsibility to producers (PRO) must be considered.

#### Financial support:

There are strong opinions on whether informal pickers and small businesses should be given resources through public or private grants (e.g. free premises, equipment, transport, etc.), or whether they should be expected to lease, rent, or pay-back low interest loans, thereby sending a clear message that these are business opportunities. Payments may be based on productivity, where e.g. interest on a loan is linked to the tonnage of recyclables collected or the quality of recyclables. Such an approach may create incentives for people to voluntarily organise themselves into co-operatives or small businesses to respond to business opportunities and to increase the tonnages of recyclables collected.

#### Recognition:

There are many, not only in the waste sector, but in the broader society, that would prefer to ignore the existence of the informal sector, or to pretend that they don’t exist, given the perception that they are a “public nuisance”, leaving litter behind after sorting, blocking roads with their trolleys and introducing crime into neighbourhoods. However, the reality is that the informal sector currently plays a crucial role in both the service- and value- chains.

*“Local government should recognise the value of the informal sector and be willing to pay for the ‘service’ they provide. Savings on expenses, e.g. landfill airspace, should be recognised and municipalities should be willing to divert such savings to pay the informal sector.”*

If we assume that 52.6% of the 3.39 million tonnes of packaging consumed in South Africa in 2014 was recycled, and that 82.2% of packaging waste (weighted average) was collected by the informal sector (Packaging SA, 2015), then the informal sector was responsible for diverting (either at kerbside or reclaimed from landfill) 1.47 million tonnes of packaging waste (43.2%) from landfill in 2014. At an estimated 60 000 – 90 000 informal pickers, this relates to ± 16-24 tonnes/picker/annum.

Municipal landfill gate fees have typically been in the region of R100-R150 per tonne for municipal solid waste, in South Africa

(DST, 2013). For many municipalities that sit with “surplus” airspace, e.g. 50+ years of landfill lifespan, airspace value remains low at ±R100 per tonne. However, many municipalities face airspace “shortages”, with landfill lifespans of <5-10 years. This has resulted in a significant increase in airspace value, as the municipality must consider the replacement value of either building a new landfill, or investing in alternative waste treatment technology, at significant cost to the municipality. In these cases, recent evidence suggests that the actual value of landfill airspace is closer to R400-R500 per tonne (e.g. Stellenbosch, City of Cape Town). In addition to airspace value, municipalities must also consider the avoided social and environmental externalities of landfilling, valued at R111 per tonne (DST, 2014), landfill.

At an assumed landfill airspace value of R211 per tonne (R100+R111), the diversion of packaging waste from landfill by waste pickers, in 2014, would have saved South African municipalities an estimated R309.2 million per annum, or 2.94% of the allocated MTREF municipal waste management budgets (Treasury, 2015). At a landfill airspace value of R511 per tonne (R400+R111), the diversion of packaging waste from landfill by waste pickers would have saved municipalities an estimated R748.8 million, or 7.1% of allocated municipal budgets. The economic benefits realised through the informal diversion of packaging waste from landfill, are likely to be conservative, as they exclude further downstream benefits achieved by introducing recyclables back into the value chain (i.e. recycling and manufacturing).

Avoided costs		Avoided cost % municipal budget	
@R211/T	@R511/T	@R211/T	@R511/T
R 309 204 246	R 748 831 136	2.94%	7.12%

Note:

1. Where “Avoided costs” includes both the cost of landfilling and the avoided social and environmental externalities of landfilling
2. MTREF Municipal revenue budget for 2014/2015 of R10.51 billion

At unrealistically low landfill gate fees of e.g. R100/tonne, the economic impact of informal diversion appears negligible. However, adjusting to the true cost of landfilling, the savings to government becomes significant (close to 10% of municipal budgets). Highlighting another important reason for addressing the current under-pricing of landfilling in South Africa.

There is a strong likelihood that Government will set diversion from landfill targets in the IndWMP, as a means of driving the secondary resources economy agenda. The question that the sector must consider is, “Can waste pickers deliver on these targets (efficiency and productivity), without encouraging more people to enter the informal sector, and without exploiting the sector?” If data for South Africa is accurate, and the informal sector collects ± 16-24 tonnes/picker/annum, there appears to be scope to further increase the productivity of the sector. This is evident from Cairo (Egypt) and Lima (Peru), where informal workers collect 54 and 48 tonnes/picker/annum respectively, nearly 2-3 times the recovery rate per picker in South Africa (OECD, 2015).

#### At landfill or source separation:

An overwhelming message was sent by participants that separation at source is key to increasing the diversion of waste away from landfill, thereby supporting both the service- and value- chains. The implementation of EPR provides the mechanism to achieve this, with the PRO taking operational and/or financial responsibility for national source separation programmes. However, it is likely to take time to achieve full coverage, and for a period, some recyclables will continue to flow to landfill, where picking is active. There were requests from participants to “accommodate waste pickers in the landfill management process” and to “write into landfill management tender documents an evaluable criteria as to how informal waste collectors will be accommodated / integrated into the MSW processes”, since it “is easier to support/self-organise as a community [on landfill], as a single site context.” However, to ensure the maximum diversion of clean recyclables into the recycling economy, separation at source must be the short- to medium-term goal of EPR schemes in South Africa, thereby also supporting the phasing-out of picking on landfill.

#### Complementary or competing collection:

“Can informal and formal collection programmes exist in parallel?” and “Should South Africa drive a formal kerbside collection programme, supplemented by the informal sector?”, recognising that the informal sector is likely to cherry-pick high value material from the bins before the formal sector arrives, thereby requiring greater EPR subsidy to formal collectors.

*“Informal pickers disrupt formal wet/dry separation projects with respect to household collection. Informal’s can play a role in areas without such tenders.”*

But is it realistic to think that the informal sector won’t venture into suburbs contracted by formal collectors, especially if these middle- to high-income areas are rich in recyclables?

## WAY FORWARD

As to “how” the informal sector is integrated into a national EPR scheme for waste streams such as paper and packaging – four scenarios emerged from the workshop participants –

1. The informal sector is utilised in its current format, as a largely marginalized and unregulated community, recovering value at little to no cost to the value chain (and hence producers) (*status quo*).
2. The informal sector is recognised, but is left largely to operate in its current form, with some level of increased control and monitoring (e.g. registration, PPE) and with increased support (e.g. access to recyclables through source separation programmes, and industry-provided buy-back centres (static or mobile) to increase the tonnages collected) (*PRO supports end-use recyclers thereby creating demand (pull) for recyclables*).
3. Government and business push to formalise the informal sector through the establishment of co-operatives and SMEs, taking on the responsibility for business development support (BDS) – incubation, mentoring and training. These emerging businesses are assigned geographic areas to “service” (*PRO provides financial and*

operational support for BDS, potentially increasing supply (push) of recyclables).

4. The formal waste and recycling sector drive a labour intensive collection, sorting and recycling process, based on an employment model of absorbing the informal sector into businesses, as employees. In so doing, the sector also takes on the responsibility for training and capacity building (PRO sets clear contracting conditions to participate in formal EPR collection, sorting and recycling programmes that require labour intensive approaches).

In reality it is likely to be a combination of these models, at least in the short- to medium- term. As noted by the OECD (2015:33), “The best-functioning systems are those which embrace an open strategy that includes both informal recycling and the existing value chain enterprises in the system.”

Evidence shows that the informal sector must be included in the process of designing the EPR scheme. Exclusion can result in later conflict between the informal and formal sectors and possible “sabotage” of formal collection and sorting systems. However, engaging can often be problematic, as the informal sector by its very nature is often an “invisible” and disorganised sector, making formal engagement with “sector representatives” difficult. Lengthy engagements also result in loss of revenue for pickers (no work – no income), which makes participation unattractive to them.

A number of principles emerged from these workshops, which must be considered in designing the future EPR schemes for South Africa, many of which align with the 10 principles identified by the OECD (2015). These include –

- Recognition
- Participation
- Source separation
- Safe and dignified working conditions
- Maintain inclusivity

## CONCLUSIONS / POLICY IMPLICATIONS

EPR, if not appropriately designed and implemented in South Africa, has the potential to negatively impact upon the livelihoods of thousands of informal waste pickers in South Africa. It is clear that the informal sector is currently playing an important role in the recovery of recyclables at little to no cost, to the direct benefit of government and industry. The informal sector still provides an opportunity to further increase recycling rates, however, one must be cautious not to exploit pickers in this process, or in light of the drive for “decent jobs”, encourage the further growth of the informal sector. While

numerous academic studies have investigated the informal waste sector in South Africa, there is no clear way forward (yet) on a model for implementation. It is therefore imperative that the three new IndWMPs, to be called for by Government, carefully consider this topic.

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**Disclaimer:** The contents and views included in this Briefing Note are based on independent analysis and do not necessarily reflect the position of the CSIR, DEA, DST, ABI, IWMSA or GreenCape.

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