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ARTICLE

Imperial Companies and Mobility Routes between Angola and Belgian Congo, 1910-1930

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Abstract

This paper focuses on the mining networks between Angola and the Belgian Congo during European colonialism, examining the broader and enduring socio-spatial impacts of the construction of mobility routes and considering the multiple agents and agendas involved. It explores the roles played by Union Minière du Haut Katanga, Forminière, and Diamang in the planning, construction, and the use of railways and roads between the two territories. These complex connections involved the layout of the railway routes – ranging from *decauville* lines for local transport to the trans-imperial connections provided by the Benguela Railway between Katanga and Lobito, – the displacement and mobility of workers, the employment of new technologies and construction materials, the strong entanglements between mobility systems, and adaptation by local populations living near the lines and routes.

Keywords: Mining Companies; Africa; Colonial Railways; Cross-Border Mobility

Introduction

In the late 1920s, the board of directors of *Companhia dos Diamantes de Angola* (Diamond Company of Angola, hereafter Diamang) discussed the possibility of building a railway line between its headquarters in Dundo and the Benguela Railway.[1] This branch line would enable wagons from the Lunda diamond fields, located on Angola's northeastern border, to reach both the port of Lobito and the Katanga mining region. By connecting with the main line across Angola, the company would have a faster link to Central Africa, particularly the Copperbelt region, between the Belgian Congo (now the Democratic Republic of Congo, DRC) and Northern Rhodesia (now Zambia), as well as to a major seaport on the western coast of the continent. Both locations were crucial: on the one hand, the Copperbelt was the centre of mining activities in Africa and a crossroads for the north-south railways; on the other hand, the port of Lobito allowed diamonds to be quickly exported to Europe (and later the Americas).

Companhia dos Caminhos de Ferro de Benguela (Benguela Railway Company, hereafter CCFB), the owner of the Katanga-Lobito line, also considered a similar plan at that time. Maps in the CCFB's booklet from 1929 revealed two potential branch lines "under deliberation": one extending from Munhango station in Bié, Angola's central plateau, in a northerly

[1] University of Coimbra, Departamento de Ciências da Vida / Diamang Archives [hereafter DCV-UC/AD], "Notes on the construction of a railway between Lobito and Dundo. Possible agricultural colonisation of the region crossed by this railway, 1929."

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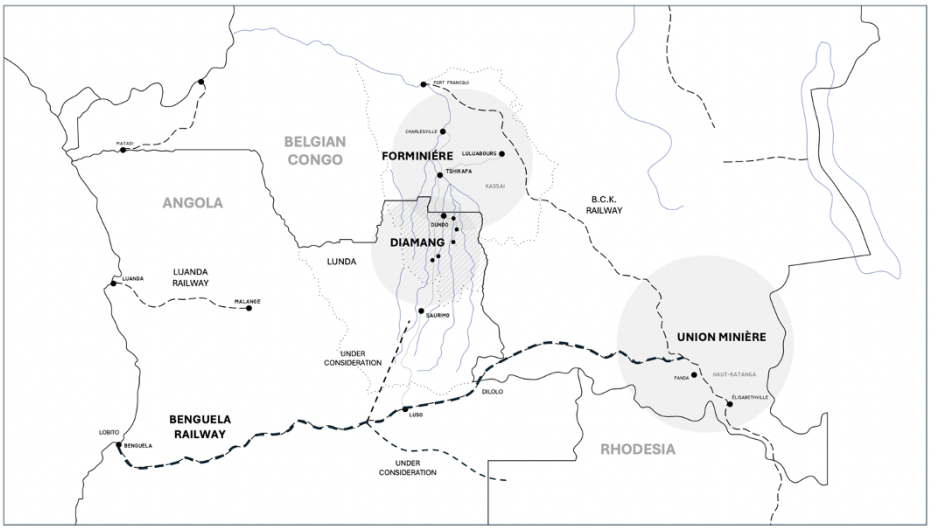


Figure 1. Map showing the Benguela Railway, its prospective branch lines and the concession areas of mining companies in Angola and the Belgian Congo. Source: Author's drawing based on *Caminho de Ferro de Benguela Lobito: A Mais Curta Estrada Para África Central* (Companhia do Caminho de Ferro de Benguela, 1929).

direction towards Saurimo in the Lunda district, and another one towards Northern Rhodesia (Fig. 1).[2] While the booklet provided a comprehensive view of the conception and construction of the Benguela Railway, it made no mention of these extension projects. The plans were not agreed upon by the various parties involved and were soon abandoned due to a combination of economic and political factors, as discussed later in this article.

The conflicting views on the potential extensions of the Benguela Railway in the late 1920s illuminate the complex relationships between corporations, colonial states, and transport infrastructure. Within this context, this article explores the interplay between the activities of mining companies in Central Africa and the development of major mobility routes in the early twentieth century during European colonial rule. The plans of Diamang, *Union Minière du Haut Katanga*, and *Société Internationale Forestière et Minière du Congo* (hereafter Forminière) are examined as case studies, from the construction of local *decauville* lines and road networks to their relationship with the cross-border route of the Benguela Railway. Despite the significant contact between Angola and the Belgian Congo during the colonial period, the full extent of these connections and entanglements remains to be fully elucidated.

Focusing on movement rather than fixed entities or sites makes mobility a crucial lens through which to question transcolonial and inter-imperial dimensions, as it sheds light on the highly dynamic and complex interactions and networks between subjects, objects and landscapes. Within this scope, Colin Divall and George Revill have argued that "transport technologies are much more than just hardware: that they are fully meaningful processes, entities and institutions – indeed, elements of material culture."[3] Divall also emphasised that these technologies have been "actively shaped" by users and play "an essential role in constituting individuals, communities and societies in ways that go beyond the functional

[2] *Caminho de Ferro de Benguela Lobito: A Mais Curta Estrada Para África Central* [Benguela Lobito Railway: The Shortest Road to Central Africa] (Companhia do Caminho de Ferro de Benguela, 1929).

[3] Colin Divall and George Revill, "Cultures of Transport: Representation, Practice and Technology," *The Journal of Transport History* 26, no. 1 (2005): 99–111.

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movement of goods and people."[4] Taking this approach, mining areas located in border regions can be included in the group of hotspots for analysing the interplay between "globalising" and "exclusivist agendas," [5] as well as the collaborative and competitive dynamics between colonies and empires.

The significant association between mining and mobility has been explicitly articulated and extensively examined in a variety of geographical contexts and societies, both past and present. The introduction to the recently published volume on *Mining, Mobility, and Social Change in the Global South* encapsulates this interconnection succinctly: "Mining is movement."[6] This relationship has multiple dimensions. Firstly, from a historical perspective, mining activities have been a significant driving force behind territorial expansion. Numerous mining settlements and infrastructure projects have frequently been established in remote areas across the globe. Their geographical isolation – though not economic or technological – often resulted in "model" company towns, offering alleged social and material benefits to "attract" workers.[7] Similarly, railway towns were part of a significant intertwinement between urban planning and resource extraction.[8] Secondly, the mobility of raw materials, labour, technology and expertise has been paramount in enabling mining activities and facilitating their integration into global flows and international markets. In this context, Johannes Knierzinger's conceptualisation of mining towns in Guinea and Cameroon as "portals of globalization" offers valuable insights to explore Central Africa's diamond and cooper settlements in their different cultural, political, and technological dimensions and exchanges, at regional and international levels. As Knierzinger notes, "the corporate decision space almost completely replaces the formal political space," enabling companies to establish their own systems of rule and knowledge, in society, economics, and infrastructure.[9] Thirdly, a strong and multifaceted "culture of mobility" has been fundamental to societies rooted in or engaged with mining areas. The case of Mwinilunga District in Zambia, fruitfully explored by Iva Peša, illuminates how the multiple and evolving patterns of mobility, crossing local, regional, and international contexts, enabled complex socio-economic and political strategies at the individual and community levels. Peša also observed significant ambiguity in the discourses and practices of mobility during colonial rule, when mobility was viewed as both a threat to social order and a gateway to "modernity."[10] Today, high mobility patterns continue to shape mining sites and communities.[11]

[4] Colin Divall, "Mobilities and transport history," in *The Routledge Handbook of Mobilities*, ed. Peter Adey *et al.* (London: Routledge, 2014), 36–44.

[5] Jordi Tejel and Ramazan Hakkı Öztan, "Introduction: Regimes of Mobility in Middle Eastern Borderlands, 1918-46," *Regimes of Mobility: Borders and State Formation in the Middle East, 1918-1946* (Edinburgh: Edinburgh University Press, 2022): 5.

[6] Matthew Himley, David Brereton and Gerardo Castillo Guzmán, "An introduction to mining, mobility, and social change," in *Mining, Mobility, and Social Change in the Global South* (London/NY: Routledge, 2024), 1.

[7] Marcelo Borges and Susana Torres, *Company Towns: Labor, Space, and Power Relations across Time and Continents* (New York: Palgrave Macmillan, 2012); Ambe Njoh, *Planning Power. Town Planning and Social Control in Colonial Africa* (New York: UCL Press, 2007); Beatriz Serrazina, "Colonial enterprises and urban design: Transnational knowledge, local agency, and the Diamond Company of Angola (1917–1975)," in *Architectures of Colonialism*, ed. Vera Egbers *et al.* (Birkhäuser, 2024), 129–46.

[8] Doming Cuéllar, "Railway Towns: a Long-term Global Perspective," *HoST* 12, no.1 (2018): 132–54.

[9] Johannes Knierzinger, "Mining Towns as Portals of Globalization: The Arrival of the Global Aluminium Industry in West Africa," *Comparativ* 27, no. 3–4 (2017): 94–109. For a reflection on railways as "portals" see Hugo Silveira Pereira, "Railways as Portals of Globalisation: The Case of the Portuguese Mainland and Colonial Rail Networks (1850–1915)," *Comparativ* 28, no. 5 (2018): 121–38.

[10] Iva Peša, *Roads through Mwinilunga: a history of social change in Northwest Zambia* (Leiden: Brill, 2019), 165–72.

[11] Deborah Fahy Bryceson, Jesper Bosse Jønsson and Mike Clarke Shand, "Mining mobility and settlement during an East African gold boom: Seeking fortune and accommodating fate," *Mobilities* 15, no. 3 (2020): 446–63.

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The article also draws on previous scholarship concerning railways and roads in Central Africa. The work of Jon Lunn on the Rhodesian railway system has highlighted the persuasive "railway imperialism" promoted by mineral companies during colonial rule.[12] The concept in Lunn's title was first questioned in a book edited by David, Wilburn, and Robinson, who emphasised the "informal empires" created by and in support of railways, and the diversity of actors involved in their construction.[13] In the Portuguese context, Hugo Silveira Pereira has produced significant research on colonial railways, shedding light on diplomatic struggles, "nationality" concerns, their imperial facets, and difficulties in joining globalising flows.[14] Bruno Navarro has also done impressive work on railways in Angola and Mozambique, including the Benguela Railway.[15] Navarro offered a comprehensive view of the construction of the railway and emphasised how the roles played by colonial engineers were often supported, shaped and constrained by African workers' empirical knowledge.

Although most studies recognise companies as a chief reason for the existence of the colonial railways, they have paid little attention to the specific agendas of mining interests in the conception, construction, and use of rail routes in Africa. Significantly, and perhaps because of this still narrow approach, colonial states and national geographies remain the dominant perspectives of analysis. In light of this pitfall, Divall noticed that the study of colonial railways offers an "opportunity to explore how one kind of large-scale technological system mediated the relationship between countries engaged in a particular kind of 'internationality' – imperialism – and its aftermath," particularly since they challenge the nation-state as the "natural unit" of transport development.[16] A similar idea has been applied to examine mining corporations and their role in shaping (inter-)imperial perspectives and practices, suggesting an overlap between two branches of a wide global and "supranational" network of industrial players.[17] Mining and railway enterprises thus not only played a pivotal role in formulating the territorial, economic and socio-spatial dimensions of the "civilising mission" of European colonialism, but also most certainly contributed to, and engaged with, the various forms and manifestations of imperialism and internationalism throughout the twentieth century.[18]

The construction of roads in Africa during the early twentieth century has also been examined from the perspectives of territorial expansion, technological advances, and

[12] Jon Lunn, *Capital and Labour on the Rhodesian Railway System, 1888–1947* (London: Palgrave Macmillan, 1997).

[13] Clarence B. Davis, Kenneth E. Wilburn, and Ronald E. Robinson, eds., *Railway Imperialism* (Westport: Greenwood Press, 1991).

[14] Hugo Silveira Pereira, "Ferrovia como infraestrutura crítica: estudo de caso dos caminhos de ferro coloniais de Angola, c. 1870-1930," *Ler História* 83 (2023): 69–93; Hugo Silveira Pereira, "Colonial Railways of Mozambique: Critical and Vulnerable Infrastructure, 1880s-1930s," *HoST* 16 (2022): 7–28. Hugo Silveira Pereira, "Portuguese Colonial Railways: Agents and Subjects of Railway Imperialism (1880-1915)," in *Railway Transportation in South Asia*, ed. Saptarshi Mitra, *et al.* (Cham: Springer, 2021), 23–42.

[15] Bruno Navarro Marçal, *Um império projectado pelo "silvo da locomotiva": O papel da engenharia portuguesa na apropriação do espaço colonial africano. Angola e Moçambique (1869-1930)* (PhD diss., Universidade Nova de Lisboa, 2016).

[16] Colin Divall, "Railway Imperialisms, Railway Nationalisms," in *Die Internationalität der Eisenbahn 1850-1970*, ed. Monika Burri, Killian T. Elsasser, and David Gugerli (Zürich: Chronos, 2003), 196–197.

[17] For an overview of mining corporations' significant impact in business, engineering, and decolonization see Alvin Wolfe, "The Team Rules Mining in Southern Africa," *Toward Freedom* 11, no. 1 (1962); Matthew Hughes, "Fighting for White Rule in Africa: The Central African Federation, Katanga, and the Congo Crisis, 1958-1965," *The International History Review* 25, no. 3 (2003): 595; Timo Särkkä, *Mining and Financial Imperialism: The Central African Copper Bonanza, c. 1890*–1970 (Oxford: Routledge, 2025).

[18] Miguel Bandeira Jerónimo, *The 'Civilising Mission' of Portuguese Colonialism, 1870–1930* (London: Palgrave Macmillan, 2015); Miguel Bandeira Jerónimo and José Pedro Monteiro, org., *Internationalism, imperialism and the formation of the contemporary world* (London/New York: Palgrave Macmillan, 2018).

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labour practices.[19] Due to their economic and territorial flexibility, roads were considered by many colonial apparatuses as an "ideal colonial technology" and a "tool of empire," yet their construction posed multiple challenges.[20] The demand for large numbers of labourers meant that road construction sites became places of negotiation and contestation, illuminating the complex objectives and socio-economic interests of a wide range of parties. In the context of the Belgian Congo, Laurence Heindryckx demonstrated that roads were part of an "*armature économique*" built by the colonial government and private interests, with a particular focus on the hinterland regions.[21] Similarly, mining companies were also highly interested in building roads to improve access to and circulation within their remote concession areas.

In considering the agendas of Diamang, Forminière, and Union Minière, this article aims to contribute to a more long-term and nuanced view of railway lines, roads and mobility in (post-)colonial Africa. The result is twofold: on the one hand, examining the companies' perspectives sheds new light on the history and the present of mobility in Africa, as well as on urban planning and infrastructure studies. On the other hand, transportation systems offer a valuable perspective through which to examine the broader territorial impacts of mining companies across space and time. Recently, Patience Mususa and Iva Pêsa have challenged the idea that mining areas were "enclaves," instead proposing these locations to be considered as "mining hubs." The authors show that mining areas were shaped by rich and complex mobility patterns, to and from mines, not only dictated by extractive activities but also by livelihood opportunities.[22]

This survey is based on broader research[23] and it mainly uses written sources and graphic materials produced by the mining companies, namely their archival documentation in Portugal and Belgium.[24] It also considers previous scholarship, historical accounts, and recent news. The article is divided into three sections. The first section outlines the role of railways in the early stages of mining operations in Angola and the Belgian Congo. Following this, the second section assesses the impact of railways on cross-border mobility, as well as their crucial interplay with the road system. At a more local level, it explores the roles played by African workers in the construction of these infrastructures. The concluding section is set as a reflection on the overlooked connections between the Lobito Corridor project, currently under discussion, and the historical context of the Benguela Railway.

[19] See, among others, Libbie Freed, "Networks of (Colonial) Power: Roads in French Central Africa after World War I," *History and Technology* 26 (2010): 203–23; Jan-Bart Gewald, Sabine Luning, and Klaas van Walraven, eds., *The Speed of Change: Motor Vehicles and People in Africa, 1890–2000* (Leiden: Brill, 2009); Philip J. Havik, "Estradas sem fim: o trabalho forçado e a 'política indígena' na Guiné (1915–1945)," in *Trabalho Forçado Africano*, coord. CEAUP (Porto: Campo das Letras, 2006), 229–247. María José Pont Cháfer, "From Forced to Voluntary Labour in Rural Africa: The Transition to Paid Voluntary Labour on the Roads of the Northern Territories of the Gold Coast," *International Review of Social History* 68 (2023): 205–31.

[20] Daniel Headrick, *The tools of empire: technology and European imperialism in the nineteenth century* (New York: Oxford University Press, 1981); Andreas Greiner, "Colonial Schemes and African Realities: Vernacular Infrastructure and the Limits of Road Building in German East Africa," *The Journal of African History* 63 (2022): 328–47; Andrew Denning, *Automotive Empire: How Cars and Roads Fueled European Colonialism in Africa* (NY: Cornell University Press, 2024).

[21] Laurence Heindryckx, "Governing economic interests: Interwar road construction in Belgian Congo," *Belgeo* 1 (2020), https://doi.org/10.4000/belgeo.43202.

[22] Patience Mususa and Iva Peša, "Making mining localities: Trajectories and stories of mining and mobility in Zambia," in *Mining, Mobility, and Social Change in the Global South*, ed. Gerardo Castillo Guzmán, Matthew Himley, and David Brereton (London, New York: Routledge, 2024), 101–22.

[23] Beatriz Serrazina, "A construção de um império: território, conexões e arquitectura na Companhia de Diamantes de Angola" ["Building an empire: space, connections and architecture in Diamang, Angola"] (Unpublished PhD diss., University of Coimbra, 2024).

[24] DCV-UC/AD; Union Minière du Haut Katanga and Forminière Archives, Koninklijke Bibliotheek van België (KBR), Archives Générales du Royaume (AGR) and the AfricaMuseum (MRAC).

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Mining corporations have been and continue to be involved in both situations, yet their intertwined roles remain largely unacknowledged.

Mining on Rails across Belgian Congo and Angola

In 1906, Union Minière, Forminière and *Compagnie du Chemin de Fer du Bas-Congo au Katanga* (hereafter B.C.K.) were established as "three major companies, (...) to become the most important businesses in [the Belgian Congo]."[25] In the following decade, Forminière engineers discovered diamonds in the Lunda rivers in Angola, a few kilometres from the Belgian Congo border, resulting in the creation of Diamang. Maps from this period show that the Kasai Basin was considered a single extractive region. Diamang and Forminière were regarded as "sister companies"[26] and, together with Union Minière, under the rule of the *Société Générale de Belgique* (hereafter S.G.B.), they fostered a transnational network of expertise. This cross-border structure included shared technicians, financial reports, and built components, such as material for *decauville* lines and projects for extensive railways connecting interior mining areas to Africa's main coastal ports.

This joint venture exemplified the interdependence of mining and railways, with the arrival of the railway in Elisabethville (now Lubumbashi), the main town in the Copperbelt, in 1910 being described as a "magic wand" for industrial activities.[27] The mining industry was said to be "handicapped by the enormous distance over which the products must travel," therefore depending "entirely upon low transportation costs."[28] Railways across Central Africa, including the Benguela Railway, B.C.K., and the Rhodesia Railway, were soon identified as the "principal arteries" of the region's economy (Fig. 2).[29] According to Union Minière, the route of these railways "would depend on the mineral resources of the regions north of the Zambezi." The company quoted Cecil Rhodes (1853–1902), the prominent British colonialist and founder of the British South Africa Company and the De Beers Mining Company, who "often said that the ballast for African railways should be made from the waste and materials produced by mining operations."[30]

The pivotal role given by the European powers to rail lines in expanding colonial interests and mining in Africa was made evident even before the formal establishment of the companies, with the extraction of raw materials already under consideration. In the early 1900s, a group of Portuguese colonial investors – who would subsequently constitute the inaugural board of directors of Diamang – had devised a business plan for a commercial enterprise in Lunda. The primary goal of this company was to facilitate the construction of a rail line in the region that would extend the existing Luanda railway.[31] Similarly, the Union Minière was named after the idea of "creating a sort of *rail-mining pool*," combining Belgian, Portuguese, and British interests. Although this group never formally formed, subsequent notes stated that "this *union* would have gathered the interests and merged the profits of the Benguela Railway, the B.C.K., the joint venture with the Rhodesia Railway and the mining company that was being established [Union Minière]."[32] According to Jean Jadot

[25] Union Minière du Haut-Katanga, *Cinquantenaire 1906-1956* (Elisabethville: Éditions d'Art du Congo; Brussels: imp. Ern. Thill), 95.

[26] Paul Beetz, "Preliminary and Final Report on the Angola and Belgian Congo Diamond Fields, 1929." AGR 2, Depot Joseph Cuvelier, Sibéka Archives [BE-A0545.189], 4201.

[27] Union Minière, *Cinquantenaire*, 95.

[28] Union Minière du Haut Katanga, *Monograph* (Belgium: G. Thone, 1950).

[29] Union Minière, *Monograph.*

[30] Union Minière, *Cinquantenaire*, 43.

[31] DCV-UC/AD, "How the government planned to promote the development of Lunda, in 1902," *A Província de Angola* (August 7, 1952).

[32] Union Minière du Haut-Katanga, *Cinquantenaire*, 95.

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Figure 2. "The two Harrison and Mc Gregar locomotives arriving in Elizabethville in May 1910." Source: Union Minière du Haut Katanga, *Cinquentenaire, 1906-1956* (Bruxelles: Éditions L. Cuypers, 1956).

(1862–1932), director of S.G.B., the goal of the Belgian King, Leopold II (1835–1909), was to transform the Belgian Congo into a "junction point" for Central Africa by gathering "as many railway lines as possible" to support extractive activities.[33]

Henry Frank Varian (1876–1961?), an American engineer who worked on various African railways in the early twentieth century, provided a detailed account of the political, social, material and technological aspects involved in constructing the lines, as well as their significant relationship with mining activities.[34] He noted that mining companies initially employed various transport methods, but none could match the capacity of the railway: "Active progress in the development of a number of mines had been carried on since the original granting of the concession, and ox-wagons had been in use, where practicable in districts clear of tsetse fly, for the transport of the more essential parts of light machinery. Even traction-engines had been tried but found unsuitable, so there was delay in production until the advent of heavy plant by rail."[35] Varian also emphasised the major influence of mining companies on railway route planning, by quoting Paul Sorel, the managing director of B.C.K:

[33] The strategy was said to be "inspired by the example of Belgium" as a crossroads in Europe. Union Minière, *Cinquantenaire*, 61.

[34] Henry Francis [Frank] Varian arrived in Angola in 1907 as Chief Assistant Engineer of the Benguela Railway works. He was also involved in the construction of the Beira Railway in Mozambique, and the railways in South Africa, Uganda, and Kenya, among others.

[35] H. F. Varian, *Some African Milestones* (Oxford: George Ronald), 205.

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> It is not possible to write an historical account of the Katanga Railway without previously examining its history at the beginning of the century, the progress of prospecting for minerals in Katanga, and the development of communications in the neighbouring countries, for the establishment of a railway line in Katanga, which would have permitted the working of the mineral wealth discovered, and its transport to a sea-port (...). During that time important events happened in Belgium, which made a change in the general direction of the alignment of the Katanga Railway line. On the 28th and 31st October, 1906, there was formed the Union Miniére of Upper-Katanga and the Railway Company of Lower-Katanga in Katanga. (...) The first question put forward was the choice of the alignment.[36]

At different times, Union Minière, Diamang, and Forminière relied on one or more of the aforementioned railway companies, depending on the regions crossed by their tracks. Despite the inter-imperial nature of most of the corporations involved, colonial governments constantly stressed the need to ensure transportation via "national" routes due to economic and geopolitical concerns, particularly during the interwar period.[37] Nevertheless, the companies asserted their preferences and continued to use a combination of systems, thereby reinforcing their supranational power and authority. For example, in 1931, Diamang guaranteed 85% of its transport via the Benguela railway, yet argued that the diamonds had to be transported across the Belgian Congo via Forminière's network due to the centralisation of market sales.[38]

Of the railways serving mining areas in Central Africa, the Benguela Railway stood out for its transimperial route. While B.C.K. and the Rhodesia Railway operated within a single colony – the former using the Matadi port in the Belgian Congo and being known as the "the political railway" of Leopold II,[39] and the latter stopping in Bulawayo, where trains entered the Beira Railway and proceeded to Beira Port in Mozambique – the Benguela tracks were laid in both Angola and the Belgian Congo. The Benguela Railway had been established by Sir Robert Williams (1860–1938) in 1902, after a concession from the Portuguese government.[40] Williams, a Scottish engineer and a member of the Tanganyika Concessions board, had a close relationship with the activities of Union Minière and aimed to build the "shortest" route between Katanga and the coastline.[41]

The construction of the Benguela Railway was a lengthy process. The British contractors Pauling and Griffiths worked on the line for almost three decades. During this time, the transport network in Central Africa developed significantly, and the Benguela Railway faced strong competition from other railways. Nevertheless, when it opened in 1931, the railway transformed the Lobito Port into the "bridgehead" of the influential Benguela–Katanga system, even outlasting the geopolitical prominence attributed by European colonial powers to the Lourenço Marques railway and port in Mozambique, also under Portuguese rule. Both transportation systems in Angola and Mozambique served as strategic 'launchpads' or 'gateways' – a plurality of roles that emphasises their multifaceted contributions in

[36] Varian, *Some African Milestones*, 205–09.

[37] Álvaro Ferreira da Silva and Pedro Neves, "The Paradox of Nationality: Foreign Investment in Portuguese Africa (1890–1974)," *Business History* 64, no. 9 (2020): 1623–47. Silva and Neves questioned the struggles of Portuguese colonialism due to multinational foreign investment.

[38] ANTT, PT/TT/HB/C-2/5/1, *Rapport* 18, 1931.

[39] Union Minière, *Cinquantenaire*, 66.

[40] Emmanuel Esteves, *O Caminho-de-Ferro de Benguela e o Impacto Económico, Social e Cultural na Sua Zona de Influência (1902-1952)* (PhD diss., Universidade do Porto, 1999).

[41] *Caminho de Ferro de Benguela* (1929); Union Minière, *Cinquantenaire*, William's strategy for the Benguela Railway was mainly an economic decision, since the British Chartered Company was facing difficulties to secure funding to extend the railway line from South Africa to the north.

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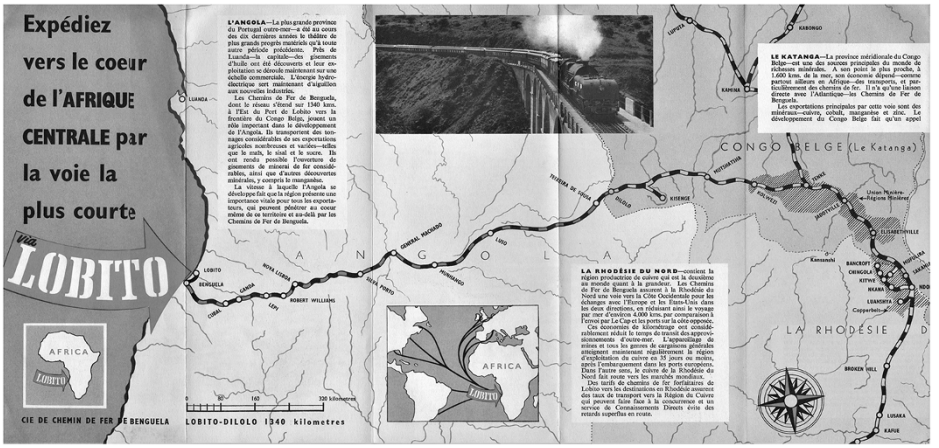


Figure 3. "Expo '58 pamphlet showing the Benguela Railway Company's main route between Lobito, in western Africa, and Tenke Junction in Congo, with connection to Northern Rhodesia and South Africa." Source: Historical Railway Images, Flickr Images.

supporting and controlling the flow of goods to and from extractive areas in the African hinterland, while arguably offering unique insight into the interdependency between imperial spaces (Fig. 3).[42] The migration of workers was a key aspect of these interconnections. In Lourenço Marques, the movement of Mozambican labourers to the Transvaal mines was pivotal.[43] In Angola, the construction works of the Benguela Railway required the CFB to recruit Africans to work on the final section of the line in the Belgian Congo, extending as far as the Katanga mines. The initial process was not smooth, as most men were reluctant to travel abroad, and the recruiters were said to lack knowledge of the region and its people – two aspects that highlighted the weight of local agency and know-how in labour relations. Despite these difficulties, by 1929, 5,400 men from Angola were working on the construction of the Belgian tracks.[44]

Railways also became crucial to manage mining activities at a local level. As soon as the prospecting work began in the Kasai, Forminière identified "three severe and immediate problems": transport, labour recruitment and provisioning.[45] To address these challenges, the construction of *decauville* lines was set forward as an essential system for supporting extractive operations from the 1920s onwards. This narrow-gauge railway system comprised ready-made tracks that could be dismantled and repositioned easily, offering a

[42] Andrew Primmer, "The Beira Bridgehead: The Beira Railway Company, 'Railway Imperialism' and Global Economic Integration," Conference Paper, *European Business History Association* (Lisbon, EBHA, 2024); William Hance and Irene S. Van Dongen, "Beira, Mozambique Gateway to Central Africa," *Annals of the Association of American Geographers* 47, no.4 (1957): 307.

[43] Charles van Onselen, *The Night Trains: Moving Mozambican Miners to and from South Africa, circa 1902–1955* (Johannesburg: Jonathan Ball, 2019); Gordon Pirie, "Railways and Labour Migration to the Rand Mines: Constraints and Significance," *Journal of Southern African Studies* 19, no. 4 (1993): 713–30; Felizardo Bouene and Maciel Santos, "O Modus Vivendi entre Moçambique e o Transvaal (1901-1909): Um caso de 'imperialismo ferroviário'," *Africana Studia* 9 (2006): 239–68.

[44] Arquivo Histórico Ultramarino [hereafter AHU], *Report*, 1929, File 567-N, OP18281. Benguela Railway Company. Reports by the Government Commissioner, 1927-1935.

[45] "Forminière 1906-1956" [Société Internationale Forestière e Miniére du Congo, à l'occasion du 50e anniversaire de sa creation] (Brussels: L. Cuypers, 1956), 101.

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groundbreaking level of portability.[46] It was frequently used in extractive contexts across the globe and enable a faster diamond mining and processing, while being presented by companies as part of a 'modernising' landscape. Between 1923 and 1926, Forminière built a 67 kilometre line. This route provided the mining company with a connection to Charlesville (now Djokupunda), where the Kasai River was no longer navigable, enabling goods to be transported more efficiently and reducing the need for them to be carried on people's backs.[47]

Following Forminière's experience, Diamang also stated the "improvement of the technical conditions of exploitation," as acquiring 20 kilometres of *decauville* lines and 600 wagons in 1933 meant that gravel could be transported by rail rather than by African labourers carrying it on their heads or in wheelbarrows, as had been the case in previous years.[48] Ten years later, with 30 mines in operation, the company had over 100 kilometres of *decauville*, with 1,750 wagons pulled mechanically by steel cables.[49] However, this celebrated "progress" came mainly at the expense of child labour,[50] similar to that seen in other neighbouring industrial concessions.[51]

Despite their shared background, the relationship between mining and railway companies was not always one of cooperation. As they all required large numbers of manual labourers to pursue and expand their activities, competition for African workers was common. The most evident result of this competition was the so-called 'stabilisation policies,' which were implemented under the guise of 'company paternalism,' and the promotion of corporate culture.[52] The multiple factors influencing railway construction and labour relations included various contract modalities, recruitment methods, and different levels of coercion. As Ian Kerr, Bruno Navarro, and Hugo Pereira argue, "effective railway construction always had the management of labour as its core requirement," thus qualifying as a "socio-technical process" blending different skills, knowledge, techniques, machines, contestation (often peaceful, such as desertion, and therefore invisible in reports) and bureaucratic procedures.[53] In the context of Central Africa, B.C.K sought to forge an "*esprit de cheminot,*" while Union Minière's workers regarded the company as the "mother."[54] The Benguela Railway Company praised the 'specialisation' of African workers, through which they were able to learn new tasks and earn better salaries. According to the company, African workers could become "track setters, great water pump operators, steady craftsmen and good telegraphists. Some work as stationmasters at less important stations along the

[46] The *decauville* system was invented by Paul Decauville in the late 19th century. M. Paul Decauville, "On Portable Railways," *Proceedings of the Institution of Mechanical Engineers* 35, no. 1 (1884): 126–149.

[47] "Forminière 1906-1956," 101.

[48] ANTT, PT/TT/AOS/D-N/2/2/1, "Report by the administrators in Diamang, 1933."

[49] DCV-UC/AD, "Programme for the visit of the Minister for the Colonies, Marcelo Caetano, July 1945."

[50] Todd Cleveland, "Minors in Name Only: Child Laborers on the Diamond Mines of the Companhia de Diamantes de Angola (Diamang), 1917-1975," *Journal of Family History* 35, no. 1 (2009): 98.

[51] Benoît Henriet, *Colonial Impotence: Virtue and Violence in a Congolese Concession (1911–1940)* (Berlin and Boston: De Gruyter Oldenbourg, 2021), 118.

[52] In relation to mining companies' labour policies, see, among others, Léopold Mottoulle, *Politique Sociale de L'Union Minière du Haut Katanga pour sa Main- d'Oeuvre et ses résultats au cours de vinght années d'application* (Brussels: Institute Royal Colonial Belge, 1946); Todd Cleveland, *Diamonds in the Rough: Corporate Paternalism and African Professionalism on the Mines of Colonial Angola, 1917-1975* (Athens: Ohio University Press, 2015).

[53] Ian Kerr, Bruni Navarro, and Hugo Pereira, "Labour Relations and the processes of railway construction in Portugal, Índia and Africa, c. 1850–c. 1910," in *Railroads in Historical Context: construction, costs and Consequences*, eds. Anne McCants *et al.* (V.N.Gaia: MIT Portugal, Inovatec, 2014): 319–42.

[54] Nkasa Yelengi, "Labor policies and household economic strategies among the railway workers in Katanga, Belgian Congo, 1928-1960," *Africa* 55, no. 4 (2000): 463–87; Daniela Waldburger, "'C'était bien à l'Époque': Work and Leisure among Retrenched Mineworkers in the Democratic Republic of the Congo," *African Studies* 82, no. 1 (2023): 24–42.

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line. An indigenous labourer is generally paid 3 *escudos* a day. Indigenous craftsmen have a higher salary and some earn 35 *escudos* a day."[55] These amounts were higher than those paid for road construction work in Mozambique during the same period, where African workers earned a maximum of 40 *escudos* a month; or 1 *escudo* per day.[56] However, the wages of non-specialised labourers on the Benguela Railway were much lower than the £3 (equivalent to around 360 *escudos*) paid per month in the Transvaal's mines, for instance.[57] Improved housing, family life, good health, and leisure activities were also some of the strategies adopted by private companies across their camps[58] –a consequence of, and a drive for, newer and larger infrastructures, including those for mobility.

These labour and social policies, which had their roots in the interwar period and were expanded after World War II, contrasted with earlier situations. In the case of the Benguela Railway, the initial construction work was carried out by floating labour contingents recruited from various regions of Africa and beyond. Between 1902 and 1907, British contractors Griffiths & Co. recruited men from Ghana, Liberia, Senegal – specifically the so-called "Kru," considered elite workers[59] – Cape Verde, the Belgian Congo, and South Africa (Fig. 4).[60] Thousands of Indian workers from British India and Natal were also employed.[61] Further research is needed to clarify whether some workers were engaged in both mining and railway-related activities. Given that these recruitment locations were also mineral extraction centres, and the high mobility of the contingents, it seems possible that several labourers may had both experiences. However, the major impact of the Benguela Railway on local populations was yet to come, following the conclusion of the construction work. The colonial government established the *Zona de Influência do CFB* [Benguela Railway's Influence Zone], covering more than 120,000.00 km^2, which became a 'reservoir' of workers to be employed in Angola and abroad.[62] At that time, thousands of men were engaged in public works services, and agriculture and industry. As early as the 1920s, this included the recruitment of workers from the Moxico region for the Union Minière mines, as evidenced by Charles Perrings.[63] This illustrates the multifaceted and complex connections between mining companies and the railway system in Africa, which changed over time and space.

The Construction of Multi-layered Mobilities: A Network of Rails and Roads

It would be inaccurate to consider the construction of colonial railways in isolation, given that such projects were invariably accompanied and supported by road construction. Both mobility systems significantly impacted the shaping of the physical territory, challenging

[55] *Caminho de Ferro de Benguela Lobito* (1929), 50. According to Mata, 1 pound was equal to 108 *escudos* in 1929; therefore, 3 escudos equalled 0.027 pounds (the equivalent of £2.21 today). Maria Eugénia Mata, "Exchange rate and exchange policy in Portugal 1891-1931 revisited," *Estudos de Economia* 12, no. 1 (1991): 33–42. From historical to present-day GBP: www.measuringworth.com/calculators/ukcompare.

[56] Valdemir Zamparoni, *De escravo a cozinheiro: colonialismo e racismo em Moçambique* (Salvador: EDUFBA, 2012), 211. Further research is needed on wages in colonial railways and public works in Angola during this period.

[57] Zamparoni, *De escravo a cozinheiro,* 212.

[58] Daniela Waldburger, "House, Home, Health and Hygiene – Social Engineering of Workers in Elisabethville/Lubumbashi (1940s to 1960s)," in *The Politics of Housing in (Post) Colonial Africa,* ed. Martina Barker-Ciganikova *et al.* (De Gruyter, 2020), 141–66; Serrazina, "Colonial enterprises"; Cuéllar, "Railway Towns."

[59] Jeffrey Gunn, *Outsourcing African Labor: Kru Migratory Workers in Global Ports, Estates and Battlefields until the End of the 19th Century* (Berlin/Boston: De Gruyter Oldenbourg, 2021).

[60] Varian, *Some African Milestones*, 165; Emmanuel Esteves, "O caminho-de-ferro de Benguela e o impacto económico, social e cultural na sua zona de influência (1902-1952)," *Africana Studia* 3 (2000): 68.

[61] AHU, "Benguela Railway: Engagement of coolies for construction work," 1907, OP19882.

[62] Esteves, "O caminho-de-ferro de Benguela," 68ff.

[63] Charles Perrings, "'Good Lawyers but Poor Workers': Recruited Angolan Labour in the Copper Mines of Katanga, 1917–1921," *The Journal of African History* 18, no. 2 (1977): 237–59.

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Figure 4. "Benguela Railway, Section 6, December 1905." Source: Portuguese Overseas Historical Archive (AHU), Album 45-CFB.

the social and cultural expectations of the local population, and altering old and new patterns of movement. Even before relying on rail lines to support their activities, mining companies built extensive road networks within their concessions. Like the railway system, roads were designed to fulfil two main goals: facilitating local circulation between mines and settlements and providing rapid access to major external routes. Furthermore, as in other colonial contexts, companies used roads as a form of "infrastructural propaganda" to visually transform the landscape in line with a modernisation agenda.[64] This section moves further in time and zooms in to examine the entanglements between mining companies in Central Africa and mobility routes in more detail, considering the construction processes, people and methods involved, particularly the significance of local agency. Recent scholarship has observed that colonial infrastructure operated at the intersection of "statehood and selfhood," by "facilitat[ing] the extraction and movement of things for global elites

[64] Andrew Denning, "Infrastructural Propaganda: The Visual Culture of Colonial Roads and the Domestication of Nature in Italian East Africa," *Environmental History* 24 (2019): 352–69.

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while defining the livelihoods and curtailing the mobility of racialized others."[65] As such, it was both ground for and an outcome of multiple power struggles.

Examining rails and roads together allows research to cross different scales at a territorial level and emphasises the enduring nature of mobility routes in Africa prior to European colonial rule. In fact, the path connecting Central Africa to the Benguela coast was not established developed to meet the needs of mining companies or the railway. On the contrary, the Benguela Railway largely followed a "great primitive road from the region of Lagos, Sambe and Barotze through which the large caravans of slaves and ivory came down to the coast." According to the reports from the Mission for the Demarcation of the Luso-Belgian Border, in 1915, the work of the Benguela Railway engineers was to be "guided by one of the most important roads in Africa," described as the "backbone" along which "the whole effort of colonialism advanced, following the instinct of the black man."[66] As previously mentioned, the Benguela Railway was promoted as "the shortest road to Central Africa," alluding to this continuity.[67]

The only challenge to the course of this earlier route was at the border between Angola and the Belgian Congo, which highlights the significant role played by the mining companies in this context. As the Border Mission's report indicates, the rail line cross bordering the Cassai River was relocated to a more northerly position due to competing British and Belgian interests. Despite the British government's intention to integrate Katanga into Northern Rhodesia, with a preliminary plan for a southern railway via Nana Candundo, the Benguela Railway route was ultimately determined by financial considerations and the "interference from the Belgian corporations," that were not interested in having to cross multiple colonial territories to dispatch goods from the Copperbelt.[68]

The co-creation of roads, railways and mining activities was also greatly influenced by African porters. Both Union Minière's and Frank Varian's memoirs recalled the crucial role these men played in supporting and completing the transport routes to and from the mines. In 1901, for example, a regular group of "carriers" travelled around 1,000 km from Bulawayo, where the South Africa Railway stopped, to Katanga. Porters were also essential to the construction of the railway lines themselves. Varian remarked that the material transportation along the Benguela Railway works was carried out by animals and men, with the latter performing the harder tasks: "The camels and other animal transport were used mostly for masonry and construction work. The heavy earthworks, mostly rock, were served by the more flexible system of native carriers." African porters were thus highly valued for their services, and have been considered by scholars elsewhere in Africa as a "specialised" workforce, with their own work culture and a high degree of professionalism.[69] While the Benguela Railway engineers praised them for their ability to adapt quickly to heavy tasks and their crucial contribution to the prospecting work, other accounts show that these

[65] Kenny Cupers and Prita Meier, "Infrastructure between Statehood and Selfhood: The Trans-African Highway," *JSAH* 79, no. 1 (2020): 61–81; Kenny Cupers and E Sasu Kwame Sewordor (2025), "How urban Africa challenges the coloniality of infrastructure," *Environment and Planning D: Society and Space* 43, no. 4 (2025): 567–74.

[66] AHU, "Part of the report on the demarcation of the border between the 24 EG. Cassai by the Luso-Belgian Border Demarcation Mission in Angola, 1914-1915," OP19948.

[67] *Caminho de Ferro de Benguela Lobito* (1929).

[68] AHU, "Part of the report," OP19948. César Braz, the Portuguese commissioner in charge of the Border Mission, criticised the "apathetic attitude" displayed by Angola. He described Angola as the "dead weight" in this international "game of interests", since the Portuguese colonial government did not present any plans or exert any political pressure regarding the railway route.

[69] Stephen Rockel, *Carriers of Culture: Labor on the Road in Nineteenth-Century East Africa* (Portsmouth: Heinemann), 26.

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men also stood up for their rights when their needs were not met, namely by demanding an increase in wages.[70]

The importance of African agency and the so-called "native paths" in formulating cross-border mobility strategies was also evident along the northern border between the Diamang and Forminière mines. As the interior regions were still sparsely controlled by the colonial apparatus when the mines were first opened, both companies designed a system of "*villages routiers* [road posts or villages]" along the concession roads. Circulation posed challenges to the recruitment of labour and the settlement of the population. Access to the mining area was complicated by numerous factors, including blocked roads (due to steep inclines, hazardous curves, and low-lying areas prone to flooding) and the threat of ambushes from local groups.[71] According to a report by Raymond Leslie Buell, Forminière built twenty "*villages routiers*" near its headquarters in Tshikapa in the early 1920s. Each village accommodated around nine African families, who were provided with brick houses. Their main duties were to plant fruit trees and maintain the roads on which the villages were built.[72] In other words, they were responsible for ensuring the circulation of people and goods to and from the mines. In the following years, Diamang also set up a network of twenty-four "*posts routiers*" along the south-north access road to Dundo, and to the mining sites.[73]

In 1933, Diamang conducted a feasibility study for a branch railway line between the Benguela Railway and its headquarters in Dundo, as mentioned earlier. The company's engineers presented various neighbouring "references," including Forminière's *decauville* tracks. The engineers aimed to demonstrate that the absence of a railway between Diamang's mines and Angola's central plateau was not a technical challenge, but rather the result of economic and security concerns. On the one hand, the Lunda region was not well-suited to agricultural activities and therefore could not meet the criteria for the highly valued "*mise en valeur agricole*" along rail lines.[74] On the other hand, constructing a railway could transform Lunda into a territorial intersection – or a "crossroads," like the Copperbelt itself[75] – but that situation was not entirely welcomed by Diamang's board. The company saw the railway as a means of encouraging new flows of people, businesses and goods, either via the Benguela line or through the potential expansion of the Luanda Railway, which was also under discussion. Ultimately, Lunda remained accessible via a road, which was considered one of the best in Angola.[76]

These plans indicated a shared mobility approach and a broad Angola–Congo perspective on the part of the companies involved, as they continued to use multiple routes on the ground. However, based on previous reasoning, they could be also be depicted as competing plans. Recognising the importance of spatial organisation, Forminière, Diamang, and Union Minière invested in constructing villages similar to those in which African families lived, positioning themselves as "good employers" in the eyes of prospective local workers. Their aforementioned "stabilisation" and "welfare" strategies attracted a lot of African labour,

[70] Pedro Almeida, "The Past is a Foreign Photo: Image and Travel Writing in the Benguela Railway Angola, 1920-1930," *e-Journal of Portuguese History* 16, no. 12 (2018): 91.

[71] DCV-UC/AD, "Transport routes between the mining area and the outside area," August 22, 1922.

[72] Raymond Buell, *The native problem in Africa* [vol. II] (New York: The Macmillan Company, 1928), 560.

[73] ANTT, PT/TT/HB/C-2/5/1/14, "Rapport 14," 1927.

[74] DCV-UC/AD, "Notes on the construction," 1929.

[75] Miles Larmer has pinpointed several "intersections" at the Copperbelt: political projects, intellectual imaginations of space, as well as notions of "progress" and "modernity." Miles Larmer, "At the Crossroads: Mining and Political Change on the Katangese-Zambian Copperbelt," *Oxford Handbooks Online* (2016).

[76] The road between Dundo and Mossuma was among the few classified as "1st class national roads" in Angola in the late 1940s [Portaria 5:823, 1947]. AHU, "Report for the Central and Southern Africa Transport Conference, Johannesburg, 1950," OP9394.

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including through cross-border movements.[77] A sharp remark about Diamang's settlements in the 1940s highlighted the potential afforded to the territorial dimension: "For the English to see? For the Belgians? To a certain extent, but primarily *for blacks to see.*"[78]

Competition for labour occurred at different levels of the labour hierarchy. In the early 1910s, Varian observed that some "specialised men" on the Benguela tracks were leaving to work in other industries: "In 1912, while the construction was proceeding, and the railhead was almost 180 miles [290 kilometers] inland, a party of German engineers came up from Southwest Africa to visit the line. I was then acting Chief Resident Engineer, and a couple of the visitors stayed with me, while two others stayed with Paulings, the contractors. After they returned to Southwest Africa, a number of our best trained plate-laying boys as well as a couple of my houseboys applied for leave."[79] African labourers must therefore be examined further as potential learners, carriers, and transferrers of knowledge at the intersection between skill and migration.[80]

Finally, although large infrastructures were often presented by colonial rule as the result of European technology alone, it is important to view them as multi-layered systems in which compound knowledge was applied.[81] Despite the socio-racial prejudice that pervaded colonial relationships, both European and African labourers contributed a variety of skills to the construction sites and acquired new competencies by performing novel and diverse tasks. As Nina Kleinöder showed for the German Africa case, the "workforce in railroad construction was by no means, without exception, an arbitrarily interchangeable labor force in terms of both quantity and quality." Kleinöder's study highlights the key role of local skills and know-how, examining the impact of training and expertise, the informal transfers of knowledge, the relationship between "normative knowledge" and "practical skills," the particular hierarchies of the construction site, and the multiple influences on the construction process, ranging from topographical expertise to material competence.[82] Similarly, Carlos Roma Machado (1861-1953), an experienced Portuguese engineer supervising the works in the Benguela Railway,[83] acknowledged the diverse skills of African labourers, including organisation, method, versatility, and precision. His account shows that tasks on the line included handling different materials and tools and mastering numerous techniques, some of which were quite specific to railway work (Fig. 5).[84]

Similar recognition of local knowledge was evident in road construction. In the Diamang concession, for example, the aim became to utilise "local methods," such as "'salalé" – a highly resistant compacted earth created by termites – as the company engineers realised that "macadamisation or other European methods" would not be "practical or justifiable"

[77] Jane L. Parpart, *Labor and Capital on the African Copperbelt* (Philadelphia: Temple University Press, 1983); Dácil Juif and Ewout Frankema, "From coercion to compensation: institutional responses to labour scarcity in the Central African Copperbelt," *Journal of Institutional Economics* 14, no. 2 (2018): 313–343.

[78] AHU, "Report: Higher Inspectorate of Colonial Administration," 1945, ISAU/A2.01.002/012.00067.

[79] Varian, *Some African Milestones*, 161.

[80] Gracia Liu-Farrer, Brenda Yeoh, and Michiel Baas, "Social construction of skill: an analytical approach toward the question of skill in cross-border labour mobilities," *Journal of Ethnic and Migration Studies* 47, no. 10 (2021): 2237–51.

[81] David Arnold, "Europe, Technology, and Colonialism in the 20th Century," *History and Technology* 21, no. 1 (2005): 85–106.

[82] Nina Kleinöder, "Skilled labour in colonial economies: Recruitment, education and employment in construction companies in German colonial West Africa, c. 1902–1912," *Labor History* 63, no. 5 (2022): 568–83.

[83] Carlos Roma Machado held numerous positions in Angola and Mozambique between 1897 and 1929. He authored several books on colonial topics, including geography and cartography. Besides his position in the Benguela Railway, he took part in the work to establish Angola's southern border along the Cunene River.

[84] Carlos Roma Machado Maia, "Construções irregulares e características em caminhos-de-ferro africanos," *Gazeta dos Caminhos de Ferro* (16 December 1925): 335–36, cf. Marçal, *Um império*, 421, footnote 1353.

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Figure 5. "Assembly of a Butterley bridge to cross the river in Lunda, 1950." Source: Torre do Tombo National Archives (ANTT), António Oliveira Salazar Collection, cx. 718.

in sandy regions like Lunda.[85] The Portuguese colonial authorities, particularly the Public Works Department, were even criticised by the mining company for their lack of preparation, specifically with regard to their insistence on gravelling roads across Angola. Following a similar line of reasoning to that used to justify railway plans, Diamang argued that "the problem with roads in the interior of Angola is not technical (...), but simply one of maintenance." Consequently, the construction and maintenance of the roads was assigned to permanent teams consisting of a few European foremen and thousands of African workers.[86]

Concluding Notes: The *Long-durée* Patterns of Mobility

Railways and roads were (re)presented as "milestones of civilisation" and "modernising" structures of colonialism, reflecting their perception as a significant improvement in transportation and as symbols of "progress."[87] Photographs and propaganda films depicted modern station buildings and trains with elegant interiors. Similarly, the colonial authorities praised the construction of *decauville* tracks and road networks near the mines due to the use of new technologies in the extraction processes and local transportation.

Against this backdrop, this article aimed for a historical approach to contribute to a more detailed and nuanced understanding of the mobility infrastructure in Central Africa. It emphasises that railways were primarily built for the exploitation of raw materials, and that mining companies' agendas were a major driver behind the design of rail and road routes under both cooperative and competing goals. The article therefore reframes mining sites

[85] DCV-UC/AD, "Transport routes," 1936-39 (84Y,4). "Salalé," also called white ant or termite, can make extremely weatherproof and mechanically resistant constructions. Salalé earth was thus considered an exceptional material for the sandy surfaces found in Angola, acting as a hard, compact cement.

[86] DCV-UC/AD, "Transport routes," 1936-39 (84Y,4).

[87] "Benguela Railway: a milestone in African civilisation" (1928) [Movie].

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and railways as interconnected spaces rather than self-contained locations, foregrounding the transimperial interactions that influenced and enabled their historical formation during imperial expansion. In doing so, it highlights a specific type of mobility – international, transnational and transimperial – that formed the basis of these developments, effectively turning mining sites into "globalising portals."

The construction of a branch line to Diamang's mines from the CFB, briefly discussed in the introduction, summarises these interconnected views. Although supported by the top echelons of the colonial government in Angola, the project was hindered by opposing agendas. On the one hand, some Portuguese colonialists sought to use the thriving operations of the mining company to advocate for the Luanda Railway to be extended to Lunda. This route represented the realisation of a long-standing and desired plan to build an extensive railway from the Angolan capital. On the other hand, some Diamang agents invoked the scarcity of agricultural opportunities in Lunda – a crucial condition assumed for the viability of colonial railways – to hide a geopolitical concern, given the perception that the railway could compromise Diamang's much-valued privacy and peripheral nature in Angola. As a result, the cross-border link with Forminière remained the primary route for transporting diamonds, while a road from Dundo to Saurimo provided a connection to Angola.

Furthermore, studying mobility infrastructures sheds light on the complex and long-lasting effects of colonialism in Africa, involving a multitude of players, transitions, and transformations. Although these networks were created during the colonial period, they still exert a strong influence on the ground, and the concepts of "development" and "modernisation" remain watchwords in supporting railway ventures in Africa. In addition to the visual impact and durability of railways in the landscape, these structures present significant challenges in terms of maintenance and administration. The Benguela Railway is noteworthy due to its forthcoming renovation under the "Lobito Corridor Development Project." The project, comprising the railway and road network between Lobito and Lubumbashi, has been under discussion since the early 2000s but has recently received renewed attention in the news and from scholars due to investment from the United States and Europe in 2023.[88] Recent headlines in international news describe the process as a "geopolitical battleground" as Western countries are significantly funding the Lobito Corridor to counter Chinese economic progress in Africa.[89]

These accounts reflect the historical efforts of colonial empires and corporations to promote *their* railways and ports as key "bridgeheads" in Africa. Hélène Blaszkiewicz has recently observed that "[private companies'] ideologies have informed the development of colonial infrastructures and have survived to this day."[90] Her work shows the enduring legacies of mining corporations in the Copperbelt, emphasising that "development corridors" are not a novel geopolitical strategy. Drawing on colonial narratives, the prefeasibility study of the Lobito Corridor, published in 2006, presented the line as a "strategic gateway" with a "strong regional unifying and integrating factor" prior to the outbreak of the civil war in Angola.[91] However, the analysis of the competing agendas of the companies and states involved reveals that this was not always the case. Current debates about the

[88] Ana Duarte and Regina Santos, "The rehabilitation of the Benguela Railway and the reactivation of the Lobito Corridor," in *Africa's Railway Renaissance: The Role and Impact of China*, eds. Tim Zajontz *et al.* (London: Routledge, 2023).

[89] Patrik Berlinger, "Lobito Corridor: A Geopolitical Battleground for Critical Raw Materials," Helvetas (May 6, 2014). Accessed online.

[90] Hélène Blaszkiewicz, "From a Colonial to a Mineral Flow Regime: The Mineral Trade and the Inertia of Global Infrastructures in the Copperbelt," in *Across the Copperbelt: Urban & Social Change in Central Africa's Borderland Communities*, ed. Miles Larmer *et al.* (Boydell and Brewer, 2021), 209.

[91] "Lobito Corridor Project (Prefeasibility Study)," International Conference on the Great Lakes Region, Regional Programme of Action for Economic Development and Regional Integration (2006), 1.

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Benguela Railway–Lobito Corridor say very little about the mining companies' past and present influence on the railway's design and operations. For example, the Trafigura commodity trader – involved in the Lobito Corridor's consortium along with the Portuguese Mota-Engil engineering company and Vecturis railway operator – has presented the project as "a major *new* trade route between the Congolese Copperbelt and the Atlantic Ocean," without acknowledging the long history behind the rail line construction. Nevertheless, the reasoning behind the plan again resembles previous colonial discourse: "[The project] is not just about building physical pathways; it is about creating a strategic commercial corridor transcending borders, benefiting local populations, and seamlessly integrating them into the global economy."[92] Even if this supposed "newness" is merely a marketing strategy, it demonstrates the pervasiveness of the Saint-Simonian ideology of "technological determinism" and the "technical fix," which were foundational to railway construction since the nineteenth century, in colonial Africa and elsewhere.[93]

In this context, current mining ventures and investment in rail lines across Angola and the DRC appear to play a vital role in serving contemporary regimes of railway nationalisms and internationalisms in Africa, driven by economic goals that are "translated" into old and new flows of capital, power struggles, technological transfers and sovereignty dynamics.[94] However, in their material and social dimensions, railways tend to be considered through the lens of "disavowal," as Nick Shepherd argues with regard to Rhodes' legacies in South Africa: "The thing hidden in plain sight, the thing that cannot be named, because to do so would be to be confronted by uncomfortable truths or realizations."[95] Therefore, questioning mobility infrastructures in Africa as "morphological scars," with conflicting pasts of inequalities, struggles, and (post)colonial biases in territories and populations,[96] remains crucial to address the *long-durée* patterns of "development" projects – in both their interwar roots and enduring post-colonial legacies.[97]

Similarly, cross-border mobility between Lunda Norte and Central Kasai provinces continues to be considered pivotal for the region's economic and social development. Also using the concept of a "corridor," local governments were recently given a grant to improve transport infrastructure, including the construction of a road between Dundo and Mbuji-Mayi, where a highway to the Copperbelt can be accessed. This project is expected to be completed soon and is anticipated to provide "the two border provinces [with] free transit facilities for goods imported by their economic operators from Central Kasai via the ports of Lobito and Luanda to the Shikolondo/Kalamba Mbuji border posts" and "strengthen

[92] Ellington Arnold, "The Lobito Corridor: Building Africa's Most Important Railway," U.S. Chamber of Commerce (February 15, 2024). Accessed online.

[93] Alain de Benoist, "A Brief History of the Idea of Progress," *The Occidental Quarterly* 8, no. 1 (2008): 7–16; Hugo Silveira Pereira, "When Portugal believed in progress: Portuguese railways in the 1880s," *Boletim do Arquivo da Universidade de Coimbra* 31 (2018): 105–27.

[94] Tim Zajontz, "Railway imperialisms in East Africa: Laying the tracks for exploitation," in *The Oxford Handbook of Economic Imperialism*, eds. Zak Cope and Immanuel Ness (New York: Oxford University Press, 2022), 515–34; Divall, "Railway Imperialisms."

[95] Nick Shepherd, "Spectres of Cecil Rhodes at the University of Cape Town," in *Decolonizing Colonial Heritage: New agendas, actors and practices in and beyond Europe*, ed. John Oldfield and Britta Timm Knudsen (Abingdon: Routledge, 2022), 67.

[96] Tomà Berlanda, Maxwell Mutanda, and Sunniva Viking, "Of(f) the Tracks: The Legacy of Colonial Railway Infrastructures in Harare, Zimbabwe," *Solitude Journal* 3 (2021): 100–105.

[97] Frederick Cooper and Randal Packard, eds., *International Development and the Social Sciences* (Berkeley: University of California Press, 1997); Joseph Hodge, "Writing the History of Development (Part 2: Longer, Deeper, Wider)," *Humanity* 7 (2016): 125-174; Iris Borowy, Corinna Unger, Nicholas Ferns, Jack Loveridge, eds., *Perspectives on the History of Global Development* (Berlin and Boston: De Gruyter Oldenbourg, 2022).

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socio-economic integration in Central Africa."[98] The proposal also mentions the "mining potential" of these areas, the "urban development of towns and settlements" and the "increase[d] tax revenue of the Lobito port," hinting at the long-lasting legacies of imperial structures.

Finally, further studies on the role of African labourers in constructing and maintaining railways and roads are still needed. Both transportation systems required thousands of workers to lay tracks and open routes. Mining labourers were not only transported along these lines or affected by their presence; they also played a crucial role in their construction, as they did in other colonial contexts.[99] Adopting the dynamic lens of mobility – including the mutual constitution and active shaping of flows of people, materials, ideas, aspirations, policies, and landscapes – may also shed light on different research dimensions and possibilities.

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[98] "The DRC-Angola Trans-National Economic Corridor Construction Project: Project Appraisal Report," Africa Development Fund (2022). Accessed online.

[99] Aparajita Mukhopadhyay, *Imperial Technology and 'Native' Agency: A Social History of Railways in Colonial India, 1850–1920* (London: Routledge, 2018); Gunnel Cederlöf, ed., *The Imperial Underbelly: Workers, Contractors, and Entrepreneurs in Colonial India and Scandinavia* (London: Routledge, 2023).

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